Ohio Environmental Protection Agency

Appendices to the Biological and Water Quality Study of The Cuyahoga River Watershed, 2017 & 2018.

Cuyahoga, Summit, and Portage counties

Cuyahoga River near Scranton Road habitat restoration (RM 2.7, 200005)

Ohio EPA Technical Report AMS/2018-CUYAH-2

Division of Surface Water
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Appendix A - Components of an Ohio EPA Biological and Water Quality Survey

Components of an Ohio EPA Biological and Water Quality Survey

What is a Biological and Water Quality Survey?

A biological and water quality survey (biosurvey) estimates the biological, physical and chemical condition of waters within a specified sampling frame. The sampling frame may range from a relatively simple setting focusing on one or two small streams, one or two principal stressors, and a handful of sampling sites; or a much more complex effort including entire drainage basins, multiple and overlapping stressors, and tens of sites.

Ohio EPA employs biological, chemical and physical monitoring to meet three major objectives:

1) determine the extent to which use designations assigned in the Ohio Water Quality Standards (WQS) are either attained or not attained;
2) determine if use designations assigned to a given water body are appropriate and attainable; and
3) determine if any changes in key ambient biological, chemical, or physical indicators have taken place over time, particularly before and after the implementation of point source pollution controls or best management practices.

The data gathered by a biosurvey is processed, evaluated and synthesized in a biological and water quality report. Each biological and water quality study contains a summary of major findings and recommendations for revisions to WQS, future monitoring needs or other actions that may be needed to resolve existing impairment of designated uses. While the principal focus of a biosurvey is the status of aquatic life uses, the status of other uses such as recreation and water supply, as well as human health concerns are also addressed.

The findings and conclusions of a biological and water quality study may factor into regulatory actions taken by Ohio EPA (for example, NPDES permits, Director's Orders, the Ohio WQS [OAC 3745-1] and Water Quality Permit Support Documents [WQPSDs]), and are eventually incorporated into State Water Quality Management Plans, the Ohio Nonpoint Source Assessment, and the biennial Integrated Water Quality Monitoring and Assessment Report (305[b] and 303[d]).

Hierarchy of Indicators

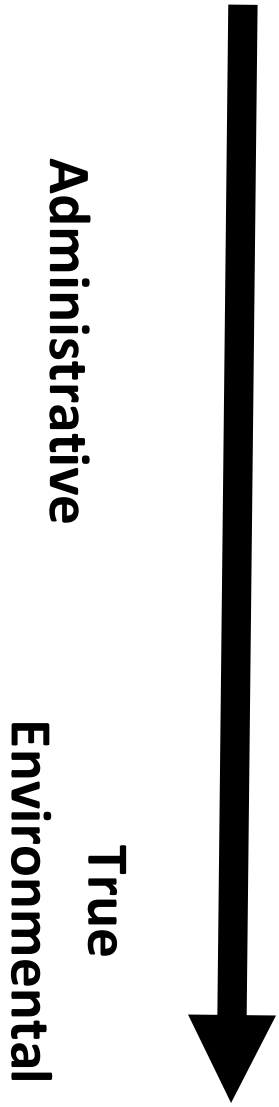
A carefully conceived ambient monitoring approach, using cost-effective indicators consisting of ecological, chemical and toxicological measures, helps ensure that all relevant pollution sources are judged objectively on the basis of environmental results. Ohio EPA relies on a tiered approach in attempting to link the results of administrative activities with true environmental measures. This integrated approach includes a hierarchical continuum from administrative to true environmental indicators (Figure 1). The six levels of indicators include:

1) actions taken by regulatory agencies (permitting, enforcement, grants);
2) responses by the regulated community (treatment works, pollution prevention);
3) changes in discharged quantities (pollutant loadings);
4) changes in ambient conditions (water quality, habitat);
5) changes in uptake and/or assimilation (tissue contamination, biomarkers, wasteload allocation); and,
6) changes in health, ecology, or other effects (ecological condition, pathogens).

The results of administrative activities (levels 1 and 2) can be linked to efforts to improve water quality (levels 3, 4 and 5) which should translate into the environmental results (level 6). Thus, the aggregate effect of billions of dollars spent on water pollution control since the early 1970s can now be determined with quantifiable measures of environmental condition.

Superimposed on this hierarchy is the concept of stressor, exposure and response indicators. Stressor indicators generally include activities which have the potential to degrade the aquatic environment such as pollutant discharges (permitted and unpermitted), land use effects and habitat modifications. Exposure indicators are those which measure the effects of stressors and can include whole effluent toxicity tests, tissue residues and biomarkers, each of which provides evidence of biological exposure to a stressor or bioaccumulative agent. Response indicators are generally composite measures of the cumulative effects of stress and exposure and include the more direct measures of community and population response that are represented here by the biological indices which comprise Ohio's biological criteria. Other response indicators could include target assemblages (rare, threatened, endangered, special status and declining species) or bacterial levels which serve as surrogates for the recreational uses. These indicators represent the essential technical elements for watershed-based management approaches. The key, however, is to use the different indicators within the roles which are most appropriate for each.

Describing the causes and sources associated with observed impairments revealed by the biological criteria and linking this with pollution sources involves an interpretation of multiple lines of evidence including water chemistry data, sediment data, habitat data, effluent data, biomonitoring results, land use data and patterns within the biological data itself. Thus, the assignment of principal causes and sources of impairment represents the association of impairments (defined by response indicators) with stressor and exposure indicators. The principal reporting venue for this process on a watershed or sub-basin scale is a biological and water quality report. These reports then provide the foundation for aggregated assessments such as the Integrated Report, the Ohio Nonpoint Source Assessment and other technical bulletins.



LEVEL 1	Actions by U.S. EPA and States	NPDES Permit Issuance Compliance/Enforcement Pretreatment Program Actual Funding CSO Requirements Storm Water Permits 319 NPS Projects 404/401 Certification Stream/Riparian Protection
LEVEL 2	Responses by the Regulated Community	POTW Construction Local Limits Storm Water Controls BMPs for NPS Control Pollution Prevention Measures
LEVEL 3	Changes in Discharge Quantities	Point Source Loadings - Effluent and Influent Whole Effluent Toxicity (WET) NPDES Violations Toxic Release Inventory Spills and Other Releases Fish Kills
LEVEL 4	Changes in Ambient Conditions	Water Column Chemistry Sediment Chemistry Habitat Quality Flow Regime
LEVEL 5	Changes in Uptake and/or Assimilation	Assimilative Capacity - TMDL/WLA Biomarkers Tissue Contamination
LEVEL 6	Changes in Health and Ecology, or Other Effects	Biota (Biocriteria) Bacterial Contamination Target Assemblages (RT&E, Declining Species)

Figure 1 — Hierarchy of administrative and environmental indicators which can be used for water quality management activities such as monitoring and assessment, reporting, and the evaluation of overall program effectiveness. This is patterned after a model developed by U.S. EPA.

Ohio Water Quality Standards: Designated Aquatic Life Use

The Ohio Water Quality Standards (WQS; OAC 3745-1) consist of designated uses and chemical, physical and biological criteria designed to represent measurable properties of the environment that are consistent with the goals specified by each use designation. Use designations consist of two broad groups — aquatic life and non-aquatic life uses. In applications of the Ohio WQS to the management of water resource issues in Ohio's rivers and streams, the aquatic life use criteria frequently result in the most stringent protection and restoration requirements, hence their emphasis in biological and water quality reports. Also, an emphasis on protection for aquatic life generally results in water quality suitable for all uses. The five aquatic life uses currently defined in the Ohio WQS are:

7) **Warmwater Habitat (WWH)** — this use designation defines the typical warmwater assemblage of aquatic organisms for Ohio rivers and streams; this use represents the principal restoration target for the majority of water resource management efforts in Ohio.

a high diversity of species, particularly those which are highly intolerant and/or rare, threatened, endangered or special status (declining species); this designation represents a protection goal for water resource management efforts dealing with Ohio's best water resources.

9) **Coldwater Habitat (CWH)** — this use is intended for waters that support assemblages of coldwater organisms or those which are sanctioned by the Ohio Department of Natural Resources (ODNR), Division of Wildlife and stocked with salmonids with the intent of providing a put-and-take fishery on a year round basis. This use should not be confused with the Seasonal Salmonid Habitat (SSH) use which applies to the Lake Erie tributaries that support periodic runs of salmonids during the spring, summer, and/or fall.

10) **Modified Warmwater Habitat (MWH)** — this use applies to streams and rivers which have been subjected to extensive, maintained and essentially permanent hydromodifications such that the biocriteria for the WWH use are not attainable and where the activities have been sanctioned by state or federal law; the representative aquatic assemblages are generally composed of species which are tolerant to low dissolved oxygen, silt, nutrient enrichment and poor quality habitat.

11) **Limited Resource Water (LRW)** — this use applies to small streams (usually less than three mi^2 drainage area) and other water courses which have been irretrievably altered to the extent that no appreciable assemblage of aquatic life can be supported.

Chemical, physical and/or biological criteria are generally assigned to each use designation in accordance with the broad goals defined by each. As such, the system of use designations employed in the Ohio WQS constitutes a tiered approach in that varying and graduated levels of protection are provided by each. This hierarchy is especially apparent for parameters such as dissolved oxygen, ammonia-nitrogen, temperature and the biological criteria. For other parameters such as heavy metals, the technology to construct an equally graduated set of criteria has been lacking, thus the same water quality criteria may apply to two or three different aquatic life use designations.

Ohio Water Quality Standards: Non-Aquatic Life Uses

In addition to assessing the appropriateness and status of aquatic life uses, each biological and water quality survey also addresses non-aquatic life uses such as recreation, water supply and human health concerns as appropriate. The recreation uses most applicable to rivers and streams are the Primary Contact Recreation (PCR) and Secondary Contact Recreation (SCR) uses. All surface waters of the state are designated as primary contact recreation unless otherwise designated as bathing waters or secondary contact recreation. Primary contact waters are surface waters that, during the recreation season, are suitable for one or more full body contact recreation activities such as, but not limited to, wading, swimming, boating, water skiing, canoeing, kayaking and scuba diving. Secondary contact waters are surface waters that result in minimal exposure potential to water-borne pathogens because the waters are: rarely used for water-based recreation such as, but not limited to, wading; situated in remote, sparsely populated areas; have restricted access points; and have insufficient depth to provide full body immersion, thereby greatly limiting the potential for water-based recreation activities. The SCR designation applies only to water bodies specifically designated as such in the WQS. Recreational use designations only apply seasonally from May 1 through October 31. Recreational use designation attainment status is determined using bacterial indicators (*E. coli*) and the criteria associated with each recreation use is specified in the Ohio WQS. The presence of indicator bacteria such as *E. coli* indicates that the water body is contaminated with fecal matter of warm-blooded origin, which could include birds and mammals, including humans.

Attainment of recreation uses are evaluated based on a comparison of measured bacteria levels in the water body to the applicable criterion as reflected in OAC 3745-1-37, which are intended to minimize potential exposure to pathogenic organisms and thereby protect the health of recreational uses of the water.

Water supply uses include Public Water Supply (PWS), Agricultural Water Supply (AWS) and Industrial Water Supply (IWS). The PWS designation applies within 500 yards of a potable (drinking) water supply or food processing industry intake. The Agricultural Water Supply (AWS) and Industrial Water Supply (IWS) use designations are usually applied to all waters unless it can be clearly shown that they are not applicable. A hypothetical example of this might be within an urban area where livestock watering or pasturing does not take place or could not be supported, thus a recommendation may be made that the AWS use not be applied to a particular water body. The limited number of applicable chemical criteria associated with these uses are specified in the Ohio WQS for each use and attainment status is based primarily on chemical-specific indicators. Ohio EPA also measures chemical concentrations in fish tissue to support Ohio's sport fish consumption advisory program and to assess whether water quality is sufficient to support human health water quality goals intended by Ohio's WQS.

Mechanisms for Water Quality Impairment

The following paragraphs present the varied causes of impairment that affect the resource quality of lotic systems in Ohio. While the various issues are presented under separate headings, it is important to remember that they are often interrelated and cumulative in terms of the detrimental impact that can result.

Habitat and Flow Alterations

Habitat alteration, such as channelization, negatively impacts biological communities directly by limiting the complexity of living spaces available to aquatic organisms. Consequently, fish and macroinvertebrate communities are not as diverse compared to unimpacted systems. Indirect impacts may include the removal of riparian trees and field tiling to facilitate drainage. Following a rain event, most of the water is quickly removed from tiled fields rather than filtering through the soil, recharging ground water, and reaching the stream at a lower volume and more sustained rate. As a result, baseflow of small streams can be reduced, causing them to go dry more frequently or to become intermittent. Urbanization impacts include removal of riparian trees, influx of storm water runoff by increasing the area of impervious surfaces, straightening and piping of stream channels and riparian vegetation removal.

Tree shade is important because it limits the energy input from the sun, moderates water temperature and limits evaporation. Removal of the tree canopy further degrades conditions because it eliminates an important source of coarse organic matter essential for a balanced ecosystem. Riparian vegetation aids in nutrient uptake, may decrease runoff rate into streams and helps keep soil in place. Erosion impacts channelized streams more severely due to the lack of a riparian buffer zone to slow runoff, trap sediment and stabilize banks. Additionally, deep trapezoidal channels lack a functioning flood plain and therefore cannot expel sediment as would normally occur during flood events along natural watercourses. The confinement of flow within an artificially deep channel accelerates the movement of water downstream, exacerbating flooding of downstream properties.

Siltation and Sedimentation

Whenever the natural flow regime is altered to facilitate drainage, increased amounts of sediment are likely to enter streams either by overland transport or increased bank erosion. The removal of wooded riparian areas accelerates the erosion process. Channelization excludes all but the highest flow events to confinement within the artificially high banks. As a result, former flood plain areas that allowed for the removal of sediment from the primary stream channel no longer serve this function. As water levels fall following a rain event, interstitial spaces between larger rocks fill with sand and silt and the diversity and quality of available habitat to support fish and macroinvertebrates is reduced. Silt can also clog the gills of both fish and macroinvertebrates, reduce visibility thereby excluding site feeding fish species and smother the nests of lithophilic fishes. Lithophilic spawning fish require clean substrates with interstitial voids in which to deposit eggs. Conversely, pioneering species benefit. They are generalists and best suited for exploiting disturbed and less heterogeneous habitats. The net result is a lower diversity of aquatic species compared with a typical warmwater stream with natural habitats.

Excessive sedimentation can also adversely impact water quality, recreational value, aesthetic quality and drinking water. Nutrients absorbed to soil particles remain trapped in the watercourse. Likewise, bacteria, pathogens and pesticides which also attach to suspended or bedload sediments become concentrated in waterways where the channel is functionally isolated from the landscape. Community drinking water systems must address these issues with more expensive advanced treatment technologies.

Nutrient Enrichment

The assessment of the impact of nutrients on aquatic life uses a weight-of-evidence approach. The objective of the weight-of-evidence approach is to evaluate the trophic state of the stream. Similar to lakes, trophic status in streams can be described by position along the familiar oligotrophic-eutrophic continuum; however, trophic status in streams is additionally described by a continuum defined at one end by heterotrophy, and at the other by autotrophy (Dodds, 2007). In general, oligotrophic systems are described as having low nutrients, low algal biomass and high clarity. Conversely, eutrophic systems are rich in nutrients, have high algal biomass and have large dissolved oxygen (D.O.) swings. Mesotrophic systems have intermediate characteristics between oligotrophic and eutrophic systems. The transition from oligotrophy to eutrophy is often accompanied by a shift from a heterotrophic status to an autotrophic status; and the process is commonly referred to as eutrophication. The amount of dissolved oxygen produced during the day by autotrophs relative to the amount of oxygen consumed at night by the entire microbial community, informs position along both continuums. For the purposes of this evaluation, eutrophication will be defined as the process by which a stream becomes enriched with nutrients, resulting in high chlorophyll-a concentrations or wide diel D.O. swings (USGS 2014). Therefore, the focus for identifying eutrophication requires effective monitoring of the trophic state, which is dictated by primary production and respiration. Ohio EPA considers the performance of the biology relative to the available habitat, diel (24-hour) range of dissolved oxygen, algal biomass and finally nutrient concentrations to perform this assessment.

Ohio and other states have been developing nutrient reduction strategies in recent years to address cultural eutrophication (U.S. EPA, 2015; Ohio EPA, 2014; Miltner, 2010; Heiskary and Markus, 2003). Wide diel D.O. ranges associated with eutrophication are caused by excessive photosynthesis (O_2 production) during daylight hours and respiration at night. The most recent investigations by Ohio EPA have identified a diel D.O. range of 6.5 mg/L as a threshold generally protective of biological and stream quality; diel D.O. ranges greater than 6.5 mg/l are indicative of eutrophication in Ohio streams and are likely over-enriched (Ohio EPA, 2014).

Chlorophyll concentrations from benthic algae (attached to bottom substrates) are measured as a proxy for algal community biomass in wadeable streams and small rivers, while chlorophyll concentrations measured from sestonic algae (suspended in the water column) serve as a proxy for algal abundance in large rivers. Physical factors such as width-depth ratio, time of travel and longitudinal gradient may largely determine whether sestonic or benthic algae drive production and respiration. However, sestonic algae typically dominate streams defined as large rivers, and benthic algae typically dominate small streams. Miltner (2010) identified benthic chlorophyll levels that broadly demarcate enrichment status relative to Ohio. Streams with less than ~90 mg/m^2 can be considered least disturbed for Ohio. Benthic chlorophyll levels between 90 ~ 183 mg/m^2 are typical for Ohio streams with modest amounts of agriculture or wastewater loadings. Levels between 183-320 mg/m^2 are typical of streams draining agricultural landscapes or that are effluent dominated. Chlorophyll levels exceeding 320 mg/m^2 characterize over-enrichment or nuisance conditions. A review of studies on sestonic chlorophyll-a by Dodds (2006), which included some Midwestern streams, suggest that concentrations of 40-100 µg/l sestonic chlorophyll-a identify eutrophic conditions while concentrations >100 µg/l indicate hypertrophic conditions. Miltner (2018) identified essentially identical boundaries based on associations between chlorophyll concentrations and various water quality and biological indicators.

Organic Enrichment and Low Dissolved Oxygen

Relative to atmospheric oxygen, the amount of oxygen soluble in water is low and it decreases as temperature increases. This is one reason why tree shade is so important. The two main sources of oxygen

in water are diffusion from the atmosphere and plant photosynthesis. Turbulence at the water surface is critical because it increases surface area and promotes diffusion. Drainage practices such as channelization eliminate turbulence produced by riffles, meanders and debris snags. Although plant photosynthesis produces oxygen by day, it is consumed by the reverse process of respiration at night. Oxygen is also consumed by bacteria that decay organic matter, so it can be easily depleted unless it is replenished from the air. Sources of organic matter include poorly treated wastewater, sewage bypasses and dead plants and algae. Dissolved oxygen criteria are established in the Ohio WQS to protect aquatic life. The minimum and average limits are tiered values related to the applicable aquatic life use designation of the stream (OAC 3745 -1-35, Table 35-1).

Ammonia

Ammonia enters streams as a component of fertilizer and manure run-off and wastewater effluent. Ammonia gas (NH_3) readily dissolves in water to form the compound ammonium hydroxide (NH4OH). In aquatic ecosystems, equilibrium is established as ammonia shifts from a gas to undissociated ammonium hydroxide to the dissociated ammonium ion (NH4+). Under normal conditions (neutral pH 7.0 and temperature 25° C), almost none of the total ammonia is present as gas, only 0.55 percent is present as ammonium hydroxide, and the rest is ammonium ion. Alkaline pH shifts the equation toward gaseous ammonia production, so the amount of ammonium hydroxide increases. This is important because while the ammonium ion is almost harmless to aquatic life, ammonium hydroxide is very toxic and can reduce growth and reproduction or cause mortality.

Ammonia criteria are established in the Ohio WQS to protect aquatic life. The maximum and average limits are tiered values based on sample pH and temperature and vary based upon the aquatic life use designation that applies to the water body (OAC 3745-1-35, Tables 35-2 through 35-8).

Metals

Metals can be toxic to aquatic life and hazardous to human health. Although they are naturally occurring elements, many are extensively used in manufacturing and are byproducts of human activity. Certain metals like copper and zinc are essential in the human diet, but excessive levels are usually detrimental. Lead and mercury are of particular concern because they can trigger fish consumption advisories. Mercury is used in the production of chlorine gas and caustic soda, in the manufacturing of batteries and fluorescent light bulbs and in the burning of fossil fuels. In the environment, it forms inorganic salts, but bacteria convert these to methyl-mercury and this organic form builds up in the tissues of fish. Extended exposure can damage the brain, kidneys and developing fetus. The Ohio Department of Health (ODH) issued a statewide mercury advisory in 1997 primarily for women of child-bearing age and children age 15 and under. They are advised to eat no more than one meal per week of fish (any species) from any Ohio water body unless there is a more or less restrictive advisory. Although the one-meal-per-week advice applies mainly to these sensitive populations, the general advisory recommends that everyone follow that advice. Lead is used in batteries, pipes and paints and is emitted from burning fossil fuels. It can affect the central nervous system and damage the kidneys and reproductive system. Copper is mined extensively and used to manufacture wire, sheet metal and pipes. Ingesting large amounts can cause liver and kidney damage. Zinc is a by-product of mining, steel production and coal burning and used in alloys such as brass and bronze. Ingesting large amounts can cause stomach cramps, nausea and vomiting.

Water quality criteria for various metals are established in the Ohio WQS (Administrative Code 3745-1) to protect human health, wildlife and aquatic life from both acute and chronic exposures. Aquatic life criteria, which are contained in OAC 3745-1-35, vary for some of the metals based on water hardness (OAC 3745-1-35, Table 35-9). Different human health and wildlife criteria apply to the Lake Erie (OAC 3745-1-33, Table 33-2) or Ohio River (OAC 3745-1-34, Table 34-1) drainage basins. The drainage basins also have Tier I criteria and Tier II values for additional metals not established elsewhere that are developed following the procedures outlined in OAC 3745-1-40 and 3745-1-42.

Bacteria

High concentrations of *Escherichia coli* (*E. coli*) in a lake or stream may indicate possible contamination of the water with human pathogens. People can be exposed to contaminated water while wading, swimming, fishing or boating. *E. coli* bacteria are present in large numbers in the feces and intestinal tracts of humans and other warm-blooded animals, such as mammals and birds. While *E. coli* bacteria are harmless in most cases, their presence indicates that the water has been contaminated with fecal material originating from a warm-blooded animal entering the water body either directly or from surface runoff. Indicator bacteria such as *E. coli* can potentially coincide with the presence of pathogenic organisms entering the water through the same pathways but are typically present in the environment in such small amounts that it is impractical to monitor them directly, hence the use of fecal bacteria such as *E. coli* as indicators. While indicator bacteria such as *E. coli* by themselves are usually not pathogenic, some strains of *E. coli* can cause serious illness. Although intestinal organisms eventually perish outside the body, some will remain virulent for a period of time while in the water and may be dangerous sources of infection. This is especially a problem if the fecal material contains pathogens or disease-producing bacteria and viruses. Reactions to exposure can range from an isolated illness such as skin rash, sore throat or ear infection to a more serious wide-spread epidemic. Some types of bacteria that are a concern include *Escherichia*, which cause diarrhea and urinary tract infections, *Salmonella*, which cause typhoid fever and gastroenteritis (food poisoning), and *Shigella*, which cause severe gastroenteritis or bacterial dysentery. Some types of viruses that are a concern include polio, hepatitis A, and encephalitis. Disease-causing microorganisms may also be transmitted through fecal contamination of surface waters and include organisms such as cryptosporidium and giardia.

Since *E. coli* bacteria are associated with warm-blooded animals, there are both human and animal sources. Human sources, including effluent from sewage treatment plants or discharges by on-lot septic systems can present a continuous source. Bacterial contamination from combined sewer overflows are associated with wet weather events. Animal sources are usually more intermittent and are also associated with rainfall, except when domestic livestock have access to the water. Large livestock farms store manure in holding lagoons creating the potential for an accidental spill. Liquid manure applied as fertilizer is a runoff problem if not managed properly and it can seep into field tiles.

Bacteria criteria for the recreational use are established in the Ohio WQS to protect human health during water recreation based upon the quantities of *E. coli* present in the water column. The criteria are seasonal, applying from May 1 through October 31 (OAC 3745-1-37, Table 37-2). The water quality standards also state that streams must be free of any public health nuisance associated with raw or poorly treated sewage during dry weather conditions (OAC 3745-1-04, Part F).

Sediment Contamination

Chemical quality of sediment is relevant because some pollutants can bind strongly to soil particles and are persistent in the environment. Some of these compounds accumulate in the aquatic food chain and may trigger fish consumption advisories, but others are simply a contact hazard because they can cause skin cancer and tumors. The physical and chemical nature of sediment is determined by local geology, land use and contribution from manmade sources. As some materials enter the water column they are attracted to the surface electrical charges associated with suspended silt and clay particles. Others simply sink to the bottom due to their high specific gravity. Sediment layers form as suspended particles settle, accumulate and combine with other organic and inorganic materials. Sediment is the most physically, chemically and biologically reactive at the water interface because this is where it is affected by sunlight, current, wave action and benthic organisms. Assessment of the chemical nature of this layer can be used to predict ecological impact.

Sediment data are evaluated using Ohio Sediment Reference Values (SRVs; Ohio EPA, 2008), along with guidelines established in *Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems* (MacDonald et.al., 2000), and *Ecological Screening Levels* (ESLs) (U.S. EPA, 2003). Ohio EPA's Sediment Reference Value system was derived from samples collected at ecoregional reference sites. SRVs are site-specific ecoregional-based metals concentrations and are used to identify contaminated

stream reaches. The MacDonald guidelines are consensus-based using previously developed values. The system predicts that sediments below the threshold effect concentration (TEC) are absent of toxicity and those greater than the probable effect concentration (PEC) are toxic. ESL values, considered protective benchmarks, were derived by U.S. EPA Region 5 using a variety of sources and methods.

Sediment samples collected by Ohio EPA are measured for a number of physical and chemical properties. Physical attributes analyzed include percent particle size distribution (sand ≥60µ, silt 5-59µ, clay ≤4µ), percent solids and percent organic carbon. Chemical attributes analyzed can include metals, volatile and semi-volatile organic compounds, pesticides and polychlorinated biphenyls (PCBs).

Materials and Methods

All biological, chemical and physical habitat data collection, processing and analysis methods and procedures adhere to those specified in the *Surface Water Field Sampling Manual* for water column chemistry, bacteria and flows (Ohio EPA, 2018), *Biological Criteria for the Protection of Aquatic Life*, Volumes II - III (Ohio EPA, 1987b, 1989a, 1989b, 2015a, 2015b), and the *Qualitative Habitat Evaluation Index (QHEI): Rationale, Methods and Application* (Rankin, 1989).

Determining Use Attainment Status

Use attainment status, also referred to as condition status, is a term describing the degree to which environmental indicators are either above or below criteria specified by the Ohio WQS. Assessing aquatic use attainment status involves a primary reliance on Ohio EPA's biological criteria (OAC 3745-1-07; Table 7-1). These are confined to ambient assessments and apply to rivers and streams outside of mixing zones. Numerical biological criteria are based on multi-metric biological indices including the IBI and MIwb, indices measuring the response of the fish community, and the ICI, which indicates the response of the macroinvertebrate community. Three attainment status results are possible at each sampling location - full, partial or non-attainment. Full attainment means that all of the applicable indices meet the biocriteria. Partial attainment means that one or more of the applicable indices fails to meet the biocriteria. Non-attainment means that none of the applicable indices meet the biocriteria or one of the organism groups reflects poor or very poor performance. An aquatic life use attainment table is constructed based on the sampling results and is arranged from upstream to downstream and includes the sampling locations indicated by river mile, the applicable biological indices, the use attainment status (full, partial or non), the Qualitative Habitat Evaluation Index (QHEI) and a sampling location description.

Habitat Assessment

Physical habitat is evaluated using the QHEI developed by Ohio EPA for streams and rivers in Ohio (Rankin, 1989 and 1995; Ohio EPA, 2006). Various attributes of the habitat are scored based on the overall importance of each to the maintenance of viable, diverse and functional aquatic faunas. The type(s) and quality of substrates, amount and quality of instream cover, channel morphology, extent and quality of riparian vegetation, pool, run and riffle development and quality, and gradient are some of the habitat characteristics used to determine the QHEI score which generally ranges from 20 to less than 100. The QHEI is used to evaluate the characteristics of a stream segment, as opposed to the characteristics of a single sampling site. As such, individual sites may have poorer physical habitat due to a localized disturbance yet still support aquatic communities closely resembling those sampled at adjacent sites with better habitat, provided water quality conditions are similar. QHEI scores from hundreds of segments around the state have indicated that values greater than 60 are generally conducive to the existence of warmwater faunas whereas scores less than 45 generally cannot support a warmwater assemblage consistent with the WWH biological criteria. Scores greater than 75 frequently reflect habitat quality sufficient to support exceptional warmwater faunas.

Sediment and Surface Water Assessment

Fine grain sediment samples are collected following the procedures outlined in Ohio EPA's sampling guidance manual, Appendix III (Ohio EPA, 2018). They are shipped to Ohio EPA's Division of Environmental Services for evaluation. Sediment data is reported on a dry weight basis. Sediment evaluations were conducted using guidelines established in MacDonald et al. (2000), U.S. EPA (2003) and Ohio EPA (2008).

Surface water samples are collected according to Ohio EPA's *Surface Water Field Sampling Manual* (Ohio EPA, 2018) and delivered to Ohio EPA's Division of Environmental Services for analysis. Surface water samples are evaluated using comparisons to Ohio WQS criteria, reference conditions or published literature.

Recreation Use Assessment

Recreational use assessments are made at select locations within the study area. Five or more samples are collected within a 90-day period during the recreation season. Most sampling occurs between Memorial Day and Labor Day. Sample locations are generally located toward the downstream end of each HUC-12 watershed. Recreational use assessments are based upon a comparison of the *E. coli* content measured in the surface water against both the applicable geometric mean criteria and statistical threshold values (STV) found in OAC 3745-1-37. Any location where either the geometric mean of the measured values is higher than the applicable geometric mean criterion or where more than 10 percent of the measured values collected at the site are greater than the applicable STV fail to support the recreational use.

Macroinvertebrate Community Assessment

Macroinvertebrates are collected from artificial substrates and from the natural habitats. The artificial substrate collection provides quantitative data and consists of a composite sample of five modified Hester-Dendy multiple-plate samplers colonized for six weeks. At the time of the artificial substrate collection, a qualitative multi-habitat composite sample is also collected. This sampling effort consisted of an inventory of all observed macroinvertebrate taxa from the natural habitats at each site with no attempt to quantify populations other than notations on the predominance of specific taxa or taxa groups within major macrohabitat types (for example, riffle, run, pool, margin). Detailed discussion of macroinvertebrate field and laboratory procedures is contained in *Biological Criteria for the Protection of Aquatic Life*: Volume III, Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities (Ohio EPA, 1989b, 2015b).

Fish Community Assessment

Fish are sampled using pulsed DC electrofishing methods. Fish are processed in the field, and each individual species is identified. Fish are counted, weighed and any external abnormalities are recorded. Discussion of the fish community assessment methodology used in this report is contained in *Biological Criteria for the Protection of Aquatic Life*: Volume III, Standardized Biological Field Sampling and Laboratory Methods for Assessing Fish and Macroinvertebrate Communities (Ohio EPA, 1989b, 2015b).

Causal Associations

Using the results, conclusions and recommendations of the biological and water quality report requires an understanding of the methodology used to determine the use attainment status and assignment of probable causes and sources of impairment. The identification of impairment in rivers and streams is straightforward — the numerical biological criteria are used to judge aquatic life use attainment and impairment (partial and non-attainment). The rationale for using the biological criteria, within a weight of evidence framework, has been extensively discussed elsewhere (Karr et al., 1986; Karr, 1991; Ohio EPA, 1987a; Ohio EPA, 1987b; Yoder, 1989; Miner and Borton, 1991; Yoder, 1991; Yoder, 1995). Describing the causes and sources associated with observed impairments relies on an interpretation of multiple lines of evidence including water chemistry data, sediment data, habitat data, effluent data, land use data and biological results (Yoder and Rankin, 1995a, 1995b and 1995c). Thus, the assignment of principal causes and sources of impairment in this report represent the association of impairments (based on response indicators) with stressor and exposure indicators. The reliability of the identification of probable causes and sources is increased where many such prior associations have been identified or have been experimentally or statistically linked together. The ultimate measure of success in water resource management is the restoration of lost or damaged ecosystem attributes including aquatic community structure and function.

Appendix B - NPDES Facility Descriptions, Comprehensive NPDES Summary List, and Illicit Discharges

To protect Ohio's water resources, Ohio EPA issues wastewater discharge, or National Pollutant Discharge Elimination System (NPDES), permits. These permits authorize the discharge of substances that meet water quality standards and establish other conditions related to the management of the discharge and related processes such as sludge disposal. NPDES permits regulate wastewater discharges by limiting the quantities of pollutants to be discharged and imposing monitoring requirements and other conditions. The limits and/or requirements in the permit help ensure compliance with Ohio's Water Quality Standards and federal regulations, all of which were written to protect public health and the environment.

There are two types of **NPDES permits**; individual and general. An individual NPDES permit is unique to each facility. The limitations and requirements in an individual permit are based on the facility's operations, type and amount of discharge and receiving stream among other factors. Because some of the individual permits contain very similar or, in many cases, identical effluent limitations and requirements, their contents have been compiled into one permit that can be applied to certain categories of discharges. This is a general permit.

A general permit is one permit that covers facilities that have similar operations and type of discharge. A general NPDES permit is a potential alternative to an individual NPDES permit and affords coverage to new and existing dischargers that meet the eligibility criteria given in the general permit. General permits are used to cover discharges that will have a minimal effect on the environment.

NPDES permits are usually issued for up to five years. Upon expiration, the permit is revised if necessary and renewed. More information about Ohio EPA's NPDES permit program can be found at **epa.ohio.gov/dsw/permits/index.aspx**

A comprehensive list of NPDES-permitted facilities located within the Cuyahoga River watershed project area is found in Table 1. Detailed descriptions of major NPDES-permitted facilities and other, significant minor facilities are provided as well. These descriptions provide general background information about the industry or community, an overview of wastewater treatment system components, a table of numeric effluent violations reported by the entity, and a brief discussion of the facility's two-year compliance history leading up to the survey year.

For more information regarding any NPDES-permitted facility, please search Ohio EPA's **eDocument search engine (eDocs)**. To conduct the search for facilities located in the Cuyahoga River watershed, type the associated Ohio EPA permit number, shown in the table below, in the Secondary ID field. There is no need to include the suffix in the search (for example, for City of Kent WRF use 3PD00031 not 3PD00031*PD).

Also, feel free to contact the Division of Surface Water in the Northeast District Office and speak directly with a compliance inspector. The general office number is (330) 961-1200.

For facilities that are a significant source of phosphorus and nitrogen to the receiving stream, such as sanitary wastewater treatment facilities, nutrient loading tables are provided. Nutrient loadings are a product of discharge concentrations and discharge flows; therefore, the long-term loading profiles provided in the charts illustrate: 1) facility nutrient loading trends; and 2) the magnitude of a facility's contribution to the receiving stream when compared to other sources of nutrients.

Table 1 - Individual NPDES permitted facilities in the Cuyahoga River watershed (2018).

Ohio EPA Permit Number	Facility Name	Design Discharge (MGD)[1]	Receiving Stream	RM	County
3PD00019*PD	City of Solon Water Reclamation Facility	5.8	Beaver Meadow Run	0.95	Cuyahoga
3IE00014*KD	Zircoa Inc	001-0.190 MGD, Storm, NCCW-003	Beaver Meadow Run	2.8	Cuyahoga
3PR00492*BD	DA Potter-Special Residence	0.00045	Black Brook Ditch	5.2	Portage
3PT00107*CD	Mantua Twp Trustees	0.004	Black Brook Ditch	6.0	Portage
3GU00242*DG	Marathon Gas & Beverage	Petroleum-Related Corrective Action	Black Brook Ditch	5.2	Portage
3PR00625*AD	BP Gas Station #36248	0.0015	Boston Run	3.5	Summit
3PR00085*FD	Budget Inn Hudson	0.0035	Boston Run	3.5	Summit
3PR00345*FD	Girl Scouts of Northeast Ohio - Camp Ledgewood	0.013	Boston Run	1.8	Summit
3PR00481*BD	Boston Mills - Brandywine Ski Resort	0.016	Brandywine Creek	0.9	Summit
3PK00015*HD	Franklin Hills WWTP	1.5	Breakneck Creek	2.52	Portage
3PR00614*AD	KKR Inc - The Patio Lounge	0.003	Bridge Creek	9.0	Geauga
3PT00124*CD	New Hope Christian Fellowship	0.0085	Bridge Creek	7.0	Geauga
3PR00513*BD	Cabana Island Restaurant	0.00263	Butternut Creek	0.9	Geauga
3PR00525*BD	Circle K #5685	0.002	Butternut Creek	2.2	Geauga
3PR00295*CD	Claridon Plaza	0.0041	Butternut Creek	0.8	Geauga
3PT00140*BD	Munson Elementary School	0.007	Butternut Creek	2.4	Geauga
3PR00416*CD	Munson Sun Mart	0.0005	Butternut Creek	1.45	Geauga
3PR00665*AD	Rosewood Diesel Shop	0.0005	Butternut Creek	2.1	Geauga
3PH00059*CD	Randolph WWTP	0.3	Congress Lake Outlet	11.5	Portage
3PR00385*DD	Congress Lake Clubhouse	0.015	Congress Lake Outlet	19.4	Stark
3PR00263*DD	St Joseph Parish WWTP	0.015	Cranberry Creek	2.0	Portage
3GB00006*BG	Arc Terminals Holdings LLC - Cleveland	Petroleum Bulk Storage	Cuyahoga River Ship Channel	3.5	Cuyahoga
3GH00025*BG	Marathon Petroleum Company LP	Hydrostatic Test Water	Cuyahoga River Ship Channel	3.8	Cuyahoga
3IE00005*KD	Zaclon LLC	NCCW	Cuyahoga River Ship Channel	4.3	Cuyahoga
3PV00102*ED	M & M MHP	0.011	Eckerts Ditch	1.3	Portage
3PH00003*HD	Richfield Hills WWTP	0.13	Furnace Run	4.8	Summit
3PV00000*ED	Mantua MHP	0.028	Harper Ditch	0.90	Portage
3PD00006*PD	Bedford Hts WWTP	3.6	Hawthorne Creek	0.05	Cuyahoga

Ohio EPA Permit Number	Facility Name	Design Discharge (MGD)[1]	Receiving Stream	RM	County
3PD00018*OD	Ravenna WWTP	2.8	Hommon Ditch	0.85	Portage
3PR00233*DD	Camp Burton	0.009	Hopsons Creek (Dierich CK)	4.0	Geauga
3GB00007*BG	Western Reserve Farm Cooperative Inc	Petroleum Bulk Storage	Hopsons Creek (Dierich Ck)	1.3	Geauga
3PG00079*ID	Troy Oaks WWTP	0.06	LaDue Reservoir (Bridge Creek)	4.2	Geauga
3GN00028*EG	Ken-Tool	Non-Contact Cooling Water	Little Cuyahoga River	3.9	Summit
3IR00030*HD	RCA Rubber Co	Cooling Water, Filter backwash, Storm	Little Cuyahoga River	7.4	Summit
3IQ00014*GD	Saint-Gobain Performance Plastics Akron	NCCW, 601 – 0.375 MGD	Little Cuyahoga River	9.0	Summit
3IG00086*DD	Sunoco Pipeline LP Hudson Pump Station	Storm	Little Cuyahoga River	4.0	Summit
3IK00005*CD	Thistledown Racetrack	Storm, CAFO	Mill Creek	9.0	Cuyahoga
3PR00161*DD	JL Excavating Services LLC	0.00525	Mogadore Reservoir	15	Portage
3PV00095*DD	Indian Springs Trailer Park	0.0225	Ohio Canal to Cuyahoga River	1.6 (33.5)	Summit
3PT00091*FD	Old Trail School	0.005	Ohio Canal to Cuyahoga River	2.5 (33.5)	Summit
3GN00022*EG	Nook Industries Inc	Non-Contact Cooling Water	Ohio Erie Canal	NA	Cuyahoga
3IQ00057*DD	Parker Hannifin Corp Brass Products Div	NCCW	Plum Creek	0.2	Portage
3PR00248*DD	Kozent LLC dba OME	0.0007	Pond Brook	2.0	Geauga
3PG00030*JD	Aurora Shores WWTP No 29	0.5	Pond Brook	3.8	Summit
3PR00316*DD	Welshfield Inn	0.00525	Sawyer Brook	2.5	Geauga
3PR00446*DD	Church of Saint Helens Parish School	0.0035	Silver Lake	NA	Geauga
3IH00025*GD	Rothenbuhler Cheesemakers, Inc	0.400	Tare Creek	1.0	Geauga
3IY00164*BD	Troyer Water System	0.00145	Tare Creek	1.6	Geauga
3PK00014*HD	Streetsboro Hudson Regional WWTP	4.0	Tinkers Creek	26.1	Portage
3PR00188*DD	Gregg Apts	0.00175	Tinkers Creek	23.7	Summit
3IN00319*CD	Tri-County Concrete Co Inc	Storm, Truck Rinse	Tinkers Creek	16.5	Summit
3PD00039*LD	City of Twinsburg WWTP	5.8	Tinker's Creek	15.5	Summit
3PB00066*GD	Burton WWTP	0.400	UT East Branch Cuyahoga River	0.2 (86.54)	Geauga

Ohio EPA Permit Number	Facility Name	Design Discharge (MGD)[1]	Receiving Stream	RM	County
3IF00010*ID	Johnsonite	Storm, NCCW	UT of Bridge Creek	0.9 (10.6)	Geauga
3IN00376*AD	Mar-Bal Inc	0.006185	UT of Bridge Creek	0.6 (10.6)	Geauga
3PP00009*FD	Punderson State Park Campground Plant	0.0602	UT of Bridge Creek	3.8 (0.50)	Geauga
3PR00516*BD	Debord Plumbing	0.01	UT of Butternut Creek	2.2	Geauga
3PT00105*CD	Claridon Properties	0.004	Ut of East Branch of Cuyahoga River	0.5 (93.0)	Geauga
3PR00518*BD	Blossom Hill Care Center	0.01425	UT of East Branch Reservoir	0.5 (92.6)	Geauga
3IG00038*HD	MPLX Terminals LLC - Brecksville Terminal	Storm	UT of Furnace Run	0.7	Cuyahoga
3PG00154*ED	Auburn Corners WWTP	0.07	UT of LaDue Reservoir	4.03	Geauga
3PY00003*FD	Hudson Estates	0.04	UT of Mud Brook	1.2 (8.9)	Summit
3PR00360*CD	Clearview Inn Steak and Chop House	0.003	UT of North Fork into Yellow Creek	1.2 (2.3)	Summit
3PR00504*BD	Jadlyn Management LLC (DBA Todays Bride Magazine)	0.0015	UT of North Fork Yellow Creek	0.5 (2.1)	
Summit3PR00286*CD	Ken Stewarts Lodge	0.0079	UT of North Fork Yellow Creek	0.7 (1.67)	Summit
3PR00159*CD	Ohio Motel	0.004	UT of North Fork Yellow Creek	0.8 (2.5)	Summit
3PD00046*FD	Aurora Westerly WWTP	1.4	UT of Pond Brook	0.6 (1.57)	Portage
3IT00013*HD	Norfolk Southern- Bedford Yard	Storm	UT of Tinkers Creek	2.0 (3.75)	Summit
3IN00314*DD	Northfield Park Assoc LLC	Storm, CAFO	UT of Tinkers Creek	2.1 (3.75)	Summit
3PR00267*CD	Camp Anisfield	0.005	UT of West Branch Cuyahoga	0.2 (7.2)	Geauga
3PG00100*GD	Aquilla Village WWTP	0.07	UT of West Branch Cuyahoga River	0.2 (10.6)	Geauga

Ohio EPA Permit Number	Facility Name	Design Discharge (MGD)[1]	Receiving Stream	RM	County
3PV00132*AD	Deer Lake MHP	0.01	UT of West Branch Cuyahoga River	0.5 (4.0)	Geauga
3PW00014*FD	Granger Lake Condominiums No 1 Assn Inc	0.06	UT of Yellow Creek	1.5 (7.0)	Medina
3PR00306*CD	D'Agnes Bistro & Bar	0.0025	UT of Yellow Creek	0.4 (2.1)	Summit
3PR00651*AD	Oak Knoll Condominiums	0.015	UT of Yellow Creek	0.3 (1.7)	Summit
3PG00096*ID	Fairlane WWTP	0.03	UT Potters Creek	0.4 (2.5)	Portage
3PG00102*GD	Burton Lakes WWTP	0.05	UT to Bridge Creek	1.3 (0.50)	Geauga
3PH00038*KD	Twin Lakes WWTP	0.456	UT to Cuyahoga	0.6 (57.82)	Portage
3IV00000*KD	Akron WTP	0.600	UT to Cuyahoga	0.2 (57.82)	Portage
3PW00023*CD	Benttree Condominium Assoc	0.0125	Ut to Cuyahoga River	0.3 (70.3)	Portage
3PR00146*GD	Hattie Larlham Center for Children w/ Disabilities	0.03	UT to Cuyahoga River	0.8 (65.1)	Portage
3IY00151*ED	Shalerville WTP	0.2135	UT to Cuyahoga River	0.2 (66.1)	Portage
3PR00530*BD	Wayside Farm Nursing Home & Rehab Center	0.0075	UT to Dickerson Run	0.6 (3.2)	Summit
3PV00078*ED	Evergreen Village MHP	0.02	UT to Harper Ditch	1.18 (0.61)	Portage
3PG00011*HD	Broadwood Hills WWTP	0.0275	UT to Hopsons Creek	0.3 (0.7)	Geauga
3IG00026*JD	CITGO Petroleum Corp	Storm	UT to Little Cuyahoga	0.6 (11.60)	Summit
3PR00496*BD	Paradise Lake Golf & Banquet Center	0.0029	UT to Mogadore Reservoir	1.0 (16.3)	Portage
3PR00507*BD	Don-El Motel	0.002	UT to Mud Brook	1.3 (8.9)	Summit
3PR00565*BD	Mac's Convenience Store LLC DBA Circle K #5592	0.00035	UT to North Fork Yellow Creek	0.8	Summit

Ohio EPA Permit Number	Facility Name	Design Discharge (MGD)[1]	Receiving Stream	RM	County
				(1.67)	
3IY00153*DD	Brimfield WTP	0.027	UT to Plum Creek	0.5 (4.0)	Portage
3PV00129*AD	Alexanders MHP	0.0075	UT to Springfield Lake	0.2 (4.2)	Summit
3IN00291*DD	Melzerland of Middlefield-(Middlefield Bulk Plant)	Storm	UT to Tare Creek	2.8 (0.5)	Geauga
3IR00037*KD	Middlefield Warehouse	004-0.0576 MGD, Storm	UT to Tare Creek	3.7 (0.5)	Geauga
3PB00034*JD	Middlefield WWTP	1.0	UT to Tare Creek	1.8 (0.5)	Geauga
3IG00033*ID	Guttman Realty dba Bulk Terminal Storage	Storm	UT to Tinkers Creek	3.3 (26.80)	Portage
3PT00060*CD	Hambden Elem Sch	0.008	Ut to West Branch Cuyahoga River	2.1 (13.8)	Geauga
3PV00079*ED	Leaders Properties LLC	0.05	Ut to West Branch Cuyahoga River	1.1 (12.15)	Geauga
3PT00090*DD	St Nicholas Orthodox Church	0.005	UT to Wingfoot Lake Outlet	1.8	Portage
3IR00032*ED	Colonial Rubber Co	0.002	Wahoo Ditch	2.6	Portage
3PR00297*CD	Newbury Industrial Park	0.01	West Branch of Cuyahoga River	3.55	Geauga
3IC00022*JD	Goodyear Tire & Rubber Airship Operations	0.002	Wingfoot Lake	4.2	Portage
3PR00241*CD	ODNR - Wingfoot Lake State Park	0.005	Wingfoot Lake	3.9	Portage
3IF00029*HD	Omnova Solutions Inc	NCCW	Wingfoot Lake Outlet	0.8	Portage
3PG00127*ID	Rivermoor Estates WWTP	0.0425	Wingfoot Lake Outlet	2.3	Portage
3PD00005*ID	Bedford WWTP	3.2	Wood Creek	1.1	Cuyahoga
3PR00532*BD	Camp Christopher	0.015	Yellow Creek	2.8	Summit
3PR00355*CD	Ghent Square Ltd	0.0025	Yellow Creek	4.4	Summit

[1] Certain data are calculated from reported DMR information.

Cuyahoga River Basin Major and Significant Minor NPDES - Permitted Dischargers

Rothenbuhler Cheesemakers, Inc. (aka Middlefield Swiss Cheese) (3IH00025)

Rothenbuhler Cheesemakers, Inc. (formerly known as Middlefield Cheese), located at 15815 Nauvoo Road, Middlefield, Geauga County, Ohio, discharges to an unnamed tributary to Tare Creek at RM 0.38. The tributary enters Tare Creek at RM 1.09, which then flows into the Cuyahoga River at RM 88.55. Rothenbuhler Cheesemakers is a manufacturer of Swiss and other natural cheeses.

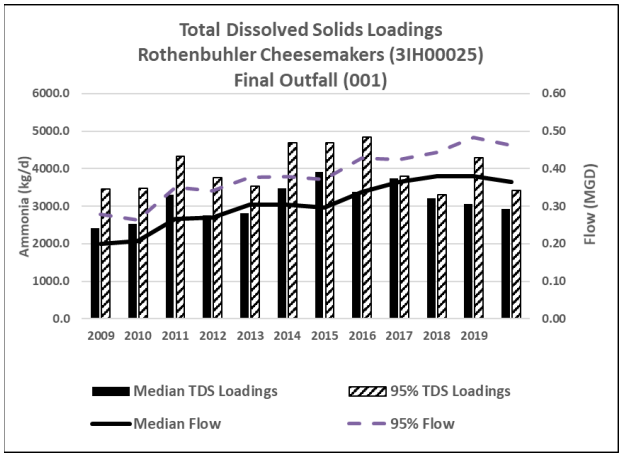
The wastewater treatment plant (WWTP) handles the discharge of process wastewater generated by the cheesemaking operations. The 400,000 gpd treatment system, last upgraded in 2015-2016, consists of grit removal, mechanical screening, flow equalization, anaerobic reactor/bulk volume fermenter, aerated lagoon, chemical phosphorus removal, membrane bioreactor (MBR), pH adjustment, and post-aeration.

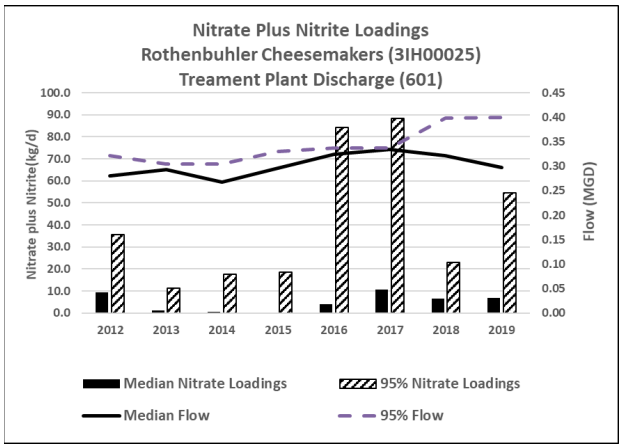
Compliance Summary

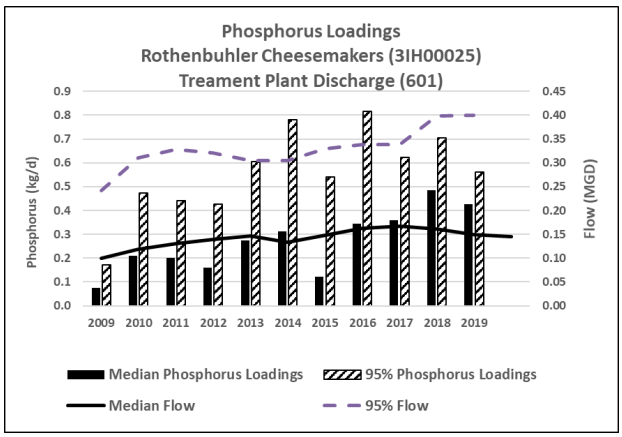
A review of DMR data for 2017-2019 revealed no effluent limitation violations during the study period.

The most recent inspection of the facility was performed by Ohio EPA staff on May 22, 2017. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the discharge was also determined to be satisfactory.

Pollutant Loadings







Village of Middlefield WWTP (3PB00034)

The Village of Middlefield WWTP, located at 14680 Tare Creek Parkway, Middlefield, Geauga County, Ohio, discharges to an unnamed tributary and subsequently to the Cuyahoga River at RM 88.02. The WWTP was last upgraded in 2007, replacing an aging aerated lagoon system. The facility serves a population of approximately 2,700.

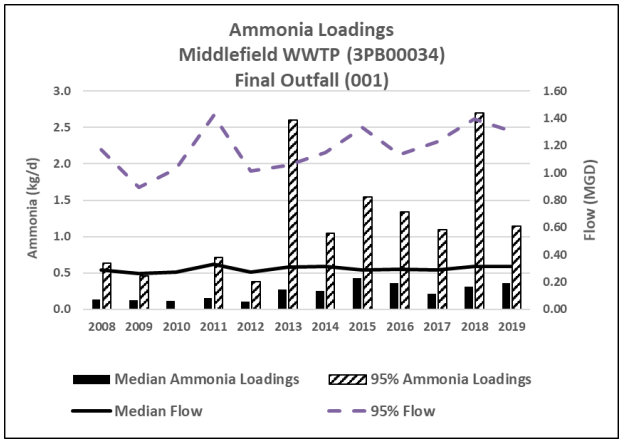
The advanced treatment plant is designed to treat 1.0 MGD with a peak flow capacity of 3.0 MGD. The wet-stream processes consist of influent bar screening, 2.3 MG off-line flow equalization (EQ), grit removal, activated sludge biological treatment process, phosphorus removal (ferric chloride addition), secondary clarification, tertiary sand filtration, and ultraviolet (UV) light disinfection.

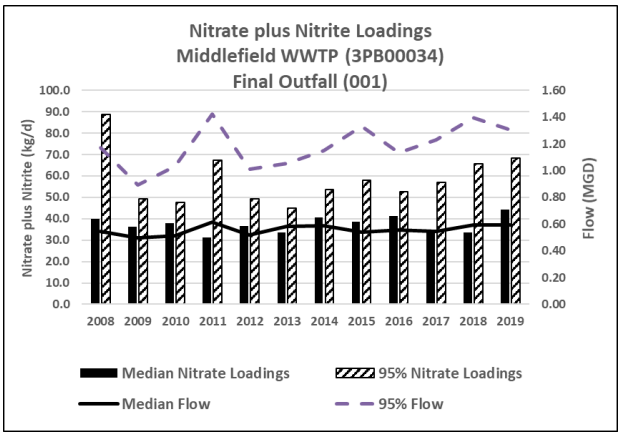
Compliance Summary

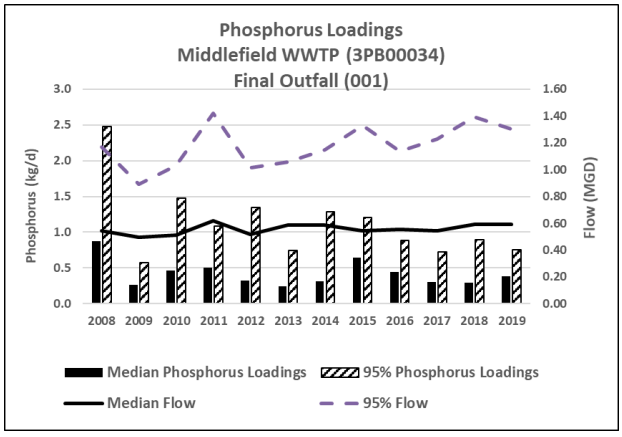
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2017	001	Copper, Total Recoverable	30D Conc	17	18	6/1/2017
July 2018	001	Copper, Total Recoverable	30D Conc	17.0	18	7/1/2018
August 2018	001	Copper, Total Recoverable	30D Conc	17.0	19	8/1/2018
September 2018	001	Copper, Total Recoverable	30D Conc	17.0	18	9/1/2018

Pollutant Loadings







Village of Burton WWTP (3PB00066)

The Village of Burton WWTP, located at 13875 Memorial Drive, Burton, Geauga County, Ohio, discharges to the Cuyahoga River at RM 86.54 via an unnamed tributary. In 2020, the Burton WWTP was expanded from 0.270 MGD to 0.400 MGD, with a peak hydraulic capacity of 1.3 MGD. The facility serves a population of approximately 1,500.

The wet-stream processes of the advanced treatment plant consist of influent bar screening, off-line flow equalization (EQ), grit removal, extended aeration activated sludge biological treatment process, phosphorus removal (ferric chloride addition), secondary clarification, tertiary disk filtration, and ultraviolet (UV) light disinfection.

Compliance Summary

A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

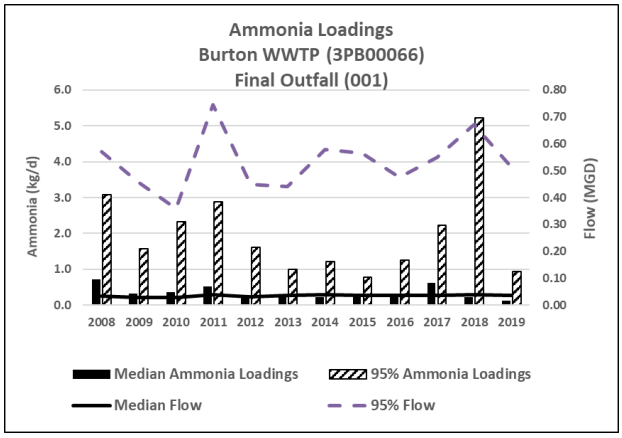
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2017	001	Phosphorus, Total (P)	30D Qty.	1.03	1.46763	1/1/2017
January 2017	001	Phosphorus, Total (P)	1D Qty.	1.54	1.7271	1/19/2017
March 2017	001	Mercury, Total (Low Level)	30D Conc.	14	18.8	3/1/2017
March 2017	001	Mercury, Total (Low Level)	30D Qty.	0	0.00003	3/1/2017
June 2017	001	Mercury, Total (Low Level)	30D Conc.	14	17.5	6/1/2017
June 2017	001	Mercury, Total (Low Level)	30D Qty.	0	0.00002	6/1/2017
August 2017	001	CBOD 5 day	30D Qty.	15.4	43.5483	8/1/2017
August 2017	001	CBOD 5 day	30D Conc.	15	46.25	8/1/2017
August 2017	001	Nitrogen, Ammonia (NH3	30D Conc.	1.9	2.13226	8/1/2017
August 2017	001	Total Suspended Solids	30D Qty.	20.5	22.4108	8/1/2017
August 2017	001	Total Suspended Solids	30D Conc.	20	24.1	8/1/2017
August 2017	001	Phosphorus, Total (P)	1D Qty.	1.54	1.56782	8/2/2017
August 2017	001	CBOD 5 day	7D Qty.	23.6	120.809	8/8/2017
August 2017	001	CBOD 5 day	7D Conc.	23	127	8/8/2017
August 2017	001	Total Suspended Solids	7D Qty.	30.7	45.9347	8/8/2017
August 2017	001	Total Suspended Solids	7D Conc.	30	48.5	8/8/2017
August 2017	001	Nitrogen, Ammonia (NH3	7D Conc.	2.85	4.85143	8/15/2017
August 2017	001	Nitrogen, Ammonia (NH3	7D Qty.	2.92	4.29337	8/15/2017
September 2017	001	Phosphorus, Total (P)	30D Conc.	1	2.05625	9/1/2017
September 2017	001	Phosphorus, Total (P)	30D Qty.	1.03	1.68718	9/1/2017
September 2017	001	Phosphorus, Total (P)	1D Conc.	1.5	3.29	9/14/2017
September 2017	001	Phosphorus, Total (P)	1D Qty.	1.54	2.5777	9/14/2017
September 2017	001	Phosphorus, Total (P)	1D Conc.	1.5	6.4	9/21/2017
September 2017	001	Phosphorus, Total (P)	1D Qty.	1.54	5.11126	9/21/2017

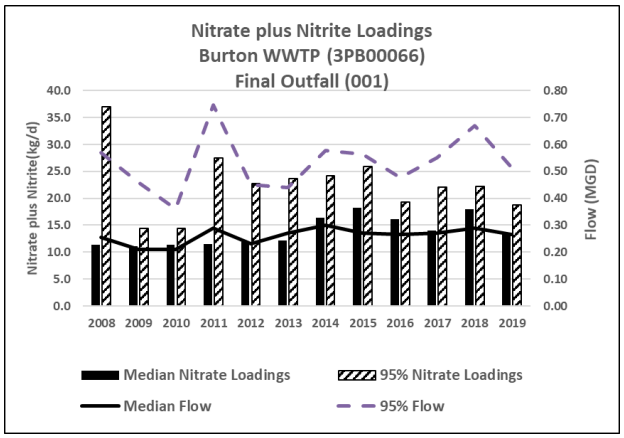
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2017	001	Phosphorus, Total (P)	30D Conc.	1	1.11	10/1/2017
February 2018	001	Total Suspended Solids	30D Qty.	20.5	81.3793	2/1/2018
February 2018	001	Total Suspended Solids	30D Conc.	20.0	39.75	2/1/2018
February 2018	001	Total Suspended Solids	7D Qty.	30.7	61.6633	2/15/2018
February 2018	001	Phosphorus, Total (P)	1D Qty.	1.54	1.95215	2/20/2018
February 2018	001	Total Suspended Solids	7D Conc.	30.0	122.5	2/22/2018
February 2018	001	Total Suspended Solids	7D Qty.	30.7	241.963	2/22/2018
March 2018	001	Total Suspended Solids	7D Conc.	30	34.	3/1/2018
March 2018	001	Total Suspended Solids	30D Qty.	20.5	33.9784	3/1/2018
March 2018	001	Total Suspended Solids	7D Qty.	30.7	69.1216	3/1/2018
March 2018	001	Total Suspended Solids	7D Qty.	30.7	32.0211	3/8/2018
April 2018	001	CBOD 5 day	7D Qty.	23.6	26.6755	4/15/2018
April 2018	001	Total Suspended Solids	7D Qty.	30.7	51.9907	4/15/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Qty.	2.92	5.21327	5/1/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Conc.	2.85	3.885	5/1/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	30D Conc.	1.9	4.11125	5/1/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	30D Qty.	1.95	5.13556	5/1/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Qty.	2.92	6.6425	5/8/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Conc.	2.85	5.355	5/8/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Conc.	2.85	3.13	5/15/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Qty.	2.92	4.46034	5/15/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Qty.	2.92	4.22614	5/22/2018
May 2018	001	Nitrogen, Ammonia (NH3-N)	7D Conc.	2.85	4.075	5/22/2018
June 2018	001	Mercury, Total	30D Conc.	14.0	93.3	6/1/2018
June 2018	001	Nitrogen, Ammonia (NH3-N)	30D Qty.	1.95	2.57963	6/1/2018
June 2018	001	Nitrogen, Ammonia (NH3-N)	30D Conc.	1.9	2.28	6/1/2018
June 2018	001	Mercury, Total	30D Qty.	0.0000	.0001	6/1/2018
June 2018	001	Nitrogen, Ammonia (NH3-N)	7D Qty.	2.92	3.34089	6/8/2018
June 2018	001	Nitrogen, Ammonia (NH3-N)	7D Conc.	2.85	3.3	6/8/2018
June 2018	001	Nitrogen, Ammonia (NH3-N)	7D Conc.	2.85	2.96	6/15/2018
June 2018	001	Nitrogen, Ammonia (NH3-N)	7D Qty.	2.92	3.31927	6/15/2018
July 2018	001	Total Suspended Solids	30D Qty.	20.5	22.7946	7/1/2018

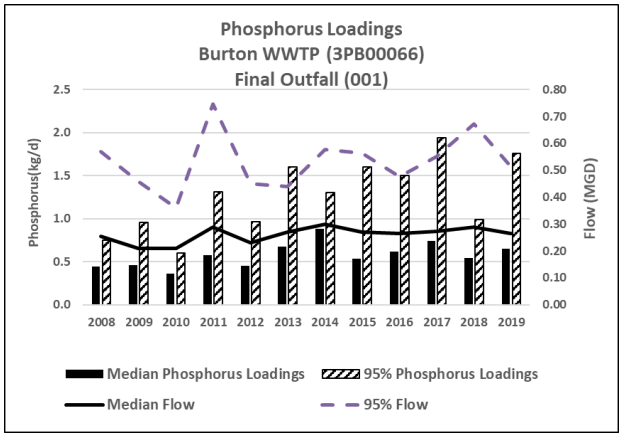
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2018	001	Total Suspended Solids	7D Qty.	30.7	75.0830	7/15/2018
July 2018	001	Total Suspended Solids	7D Conc.	30	49.	7/15/2018
June 2019	001	Total Suspended Solids	30D Qty.	20.5	46.3260	6/1/2019
June 2019	001	Phosphorus, Total (P)	30D Conc.	1.0	2.86	6/1/2019
June 2019	001	Total Suspended Solids	7D Qty.	30.7	170.483	6/1/2019
June 2019	001	Phosphorus, Total (P)	30D Qty.	1.03	5.87194	6/1/2019
June 2019	001	Total Suspended Solids	7D Conc.	30	83.	6/1/2019
June 2019	001	Total Suspended Solids	30D Conc.	20	23.125	6/1/2019
June 2019	001	Phosphorus, Total (P)	1D Qty.	1.54	10.8531	6/6/2019
June 2019	001	Phosphorus, Total (P)	1D Conc.	1.5	5.31	6/6/2019
July 2019	001	Phosphorus, Total (P)	30D Qty.	1.03	1.1081	7/1/2019
August 2019	001	Phosphorus, Total (P)	30D Qty.	1.03	1.19352	8/1/2019
August 2019	001	Phosphorus, Total (P)	30D Conc.	1.0	1.25	8/1/2019
August 2019	001	Phosphorus, Total (P)	1D Qty.	1.54	1.54678	8/7/2019
September 2019	001	Phosphorus, Total (P)	30D Qty.	1.03	1.29559	9/1/2019
September 2019	001	Phosphorus, Total (P)	30D Conc.	1.0	1.685	9/1/2019
September 2019	001	Phosphorus, Total (P)	1D Conc.	1.5	2.3	9/5/2019
September 2019	001	Phosphorus, Total (P)	1D Qty.	1.54	1.79333	9/5/2019
October 2019	001	Phosphorus, Total (P)	30D Qty.	1.03	1.16268	10/1/2019
October 2019	001	Phosphorus, Total (P)	30D Conc.	1.0	1.34	10/1/2019

It is anticipated that the recent treatment plant improvements will resolve the above compliance issues.

Pollutant Loadings







Village of Mantua WWTP (3PB00031)

The Village of Mantua WWTP, located at 4500 Orchard Street, Mantua, Portage County, Ohio, discharges to the Cuyahoga River at RM 69.18. The original Mantua WWTP was constructed in 1965. The current 0.500 MGD advanced treatment plant was last upgraded in 2002.

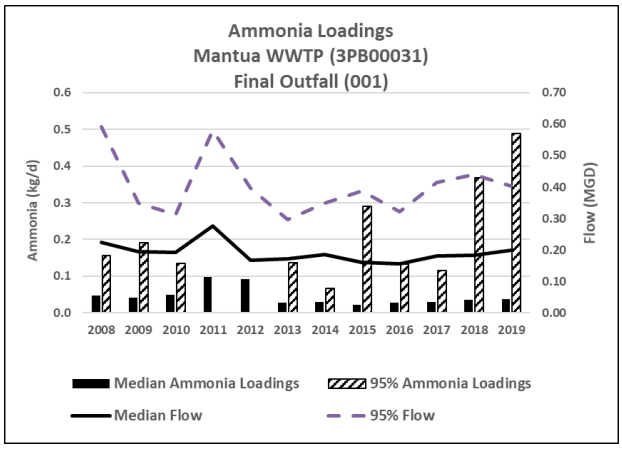
The wet-stream processes consist of comminution/preliminary screening, influent pumping, off-line flow equalization (EQ), grit removal, oxidation ditch activated sludge biological treatment process, secondary clarification, post aeration, and ultraviolet (UV) light disinfection. Ferric chloride is added for phosphorus removal.

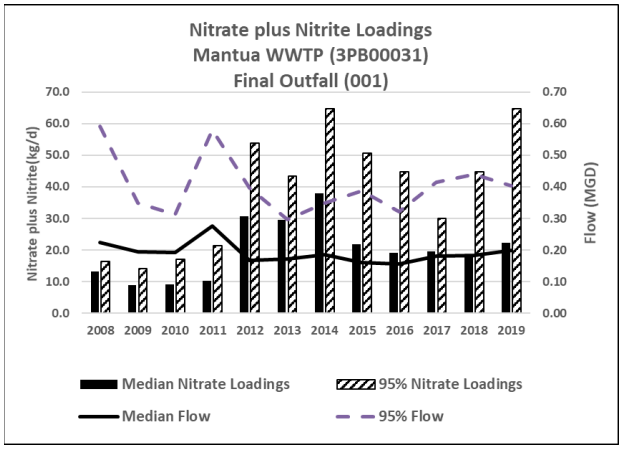
Compliance Summary

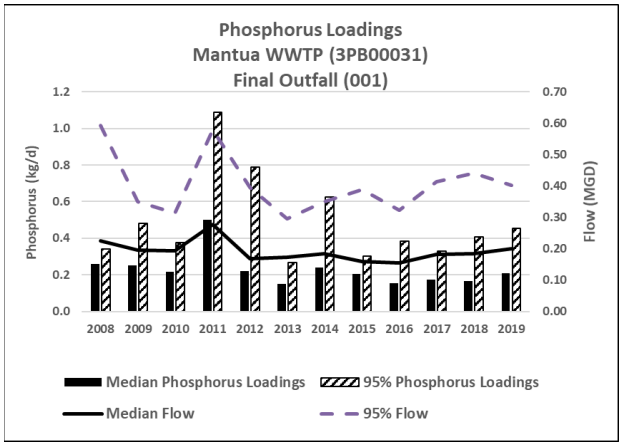
A review of DMR data for 2017-2019 revealed the following effluent limitation violation during the study period:

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
September 2017	001	*E. coli*	7D Conc.	284	605.44	9/8/2017
September 2017	001	Nitrogen, Ammonia (NH3	7D Conc.	2.1	3.725	9/8/2017
March 2019	001	Nitrogen, Ammonia (NH3	7D Conc.	2.5	4.46667	3/1/2019

Pollutant Loadings







Portage County Twin Lakes WWTP (3PH00038)

The Portage County Twin Lakes WWTP, located at 7240 State Route 43, Franklin Township, Portage County, Ohio, discharges to the Twin Lakes Outlet at RM 0.6 and subsequently the Cuyahoga River at RM 57.82. The Twin Lakes WWTP was constructed in 1970. The most recent modification was completed in 2007. The 0.456 MGD facility serves a population of approximately 870 people in Franklin Township, Portage County.

The advanced wastewater treatment facility consists of mechanical screening, activated sludge biological treatment process, secondary clarification, tertiary disk filtration, and ultraviolet (UV) light disinfection.

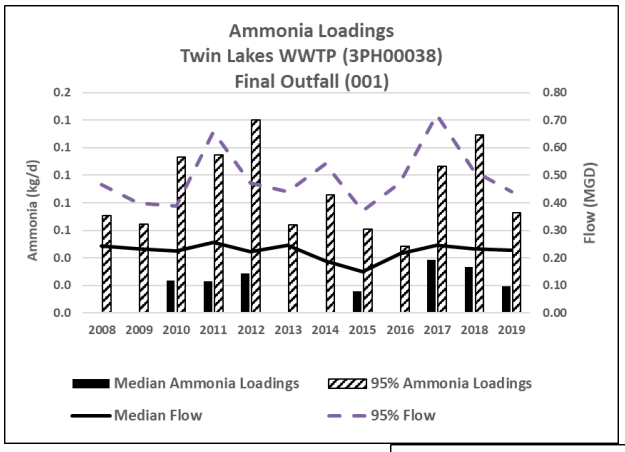
Compliance Summary

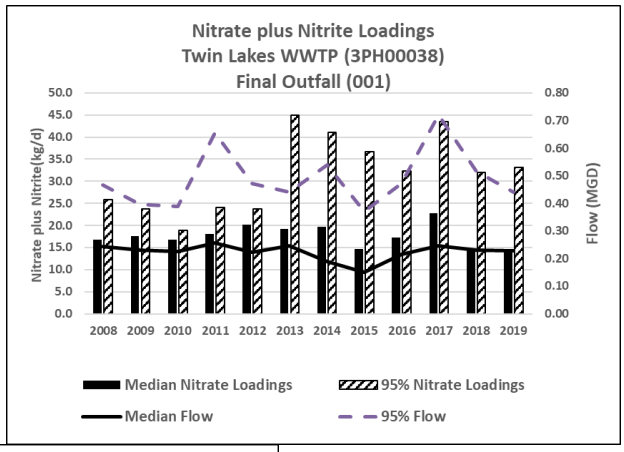
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period.

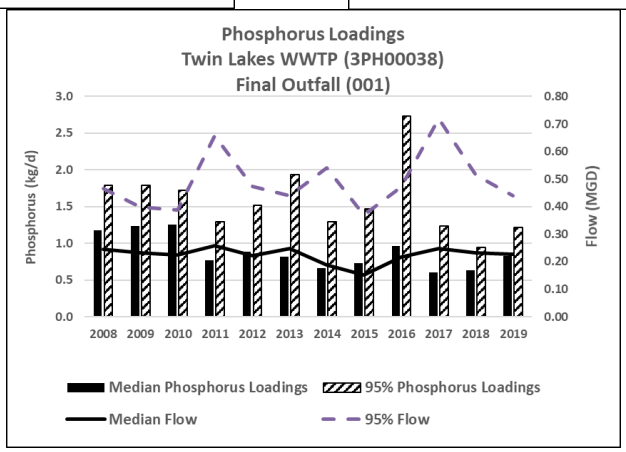
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2017	001	Dissolved Oxygen	1D Conc.	8	7.7	6/13/2017
June 2017	001	Dissolved Oxygen	1D Conc.	8	7.8	6/14/2017
June 2017	001	Dissolved Oxygen	1D Conc.	8	7.8	6/16/2017
July 2017	001	Dissolved Oxygen	1D Conc.	8	7.6	7/14/2017

The most recent inspection of the Twin Lakes WWTP was performed by Ohio EPA staff on July 12, 2017. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the discharge was also determined to be satisfactory.

Pollutant Loadings







City of Akron WTP (3IV00000)

The City of Akron Water Treatment Plant, located at 1570 Ravenna Road, Franklin Township, Portage County, Ohio, discharges to the Twin Lakes Outlet at RM 0.2 and subsequently the Cuyahoga River at RM 57.82. The water plant has been in service since 1915. Surface water is obtained from the Upper Cuyahoga River via three impounding reservoirs. The primary water supply reservoir, Lake Rockwell, is supplemented by Ladue Reservoir and East Branch Reservoir. The facility utilizes coagulation, flocculation, sedimentation, filtration, and disinfection processes to produce a finished water. The average daily production pumping rate is 35 MGD, with a plant capacity rating of 67 MGD. The facility serves a population of approximately 300,000 in the City of Akron and surrounding communities.

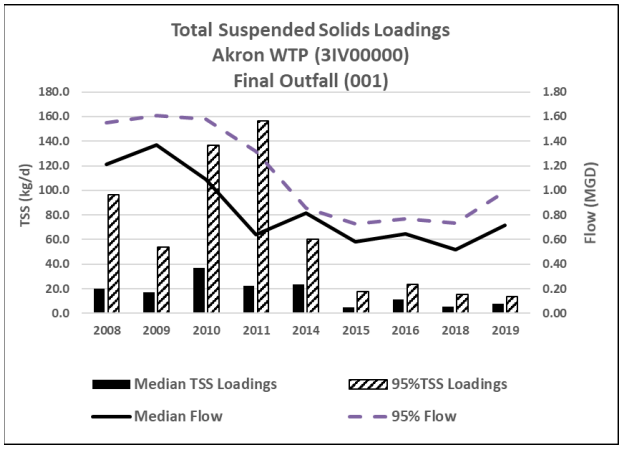
Sludge from the sedimentation basins is pumped to 12 drying basins and dewatered for agronomic reuse. The decant from these drying basins and filter backwash water generated during the process are collected and pumped to two lagoons to allow solids to settle out. The settled solids are periodically dredged from the lagoons and transferred to the drying basins. The resultant 0.6 MGD clarified overflow from the lagoons is discharged via two outfalls.

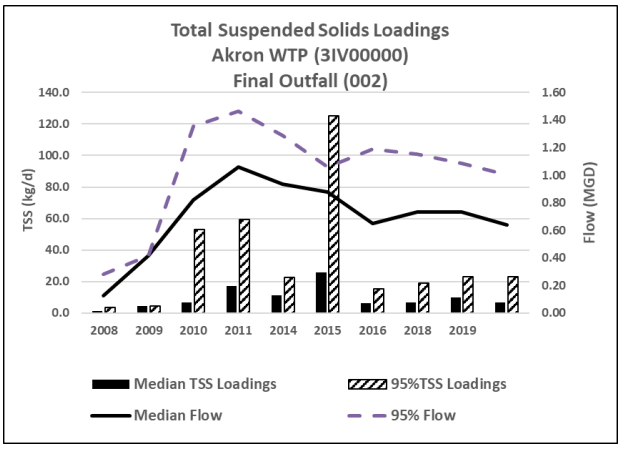
Compliance Summary

A review of DMR data for 2017-2019 revealed no effluent limitation violations during the study period.

An inspection of the Akron WTP was performed by Ohio EPA staff on February 12, 2019. At the time of the inspection, the visual quality of the discharge was determined to be satisfactory.

Pollutant Loadings





City of Ravenna WWTP (3PD00018)

The City of Ravenna WWTP, located at 3722 Hommon Road, Ravenna, Portage County, Ohio, discharges to Hommon Road Ditch at RM 0.85 and then to Wahoo Ditch at RM 0.5. Wahoo Ditch flows to Breakneck Creek at RM 4.8, which then enters the Cuyahoga River at RM 56.82. The Ravenna WWTP was initially constructed in 1907. The most recent modification was initiated in 2004. The plant serves the City of Ravenna and outlying parts of the unincorporated areas of Ravenna, Rootstown, and Shalersville townships in Portage County.

The tertiary treatment facility provides treatment to an average design flow of 2.8 MGD with a peak hydraulic capacity of 6.02 MGD. The existing wet-stream treatment processes and/or equipment include screening, grit removal, flow equalization, primary clarification, activated sludge secondary treatment process, secondary clarification, tertiary disk filtration, phosphorus removal (alum addition), ultraviolet disinfection, and cascade post aeration.

Waste sludge from the treatment process is anaerobically digested for pathogen and vector control. The digested sludge is dewatered using a belt filter press, stored either in the sludge storage building or on sludge drying beds, and land applied for agronomic benefit.

The City of Ravenna implements an Ohio EPA-approved industrial pretreatment program. Based on NPDES application information submitted by the City of Ravenna, there are 4 categorical and 3 non-categorical significant industrial users presently discharging to the Ravenna WWTP. The total industrial flow is approximately 0.275 MGD.

Compliance Summary

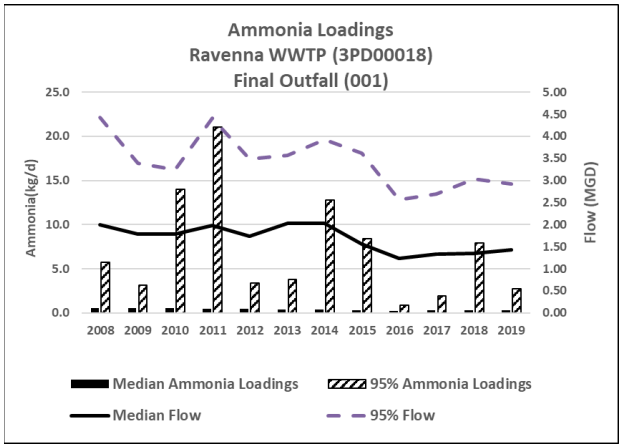
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

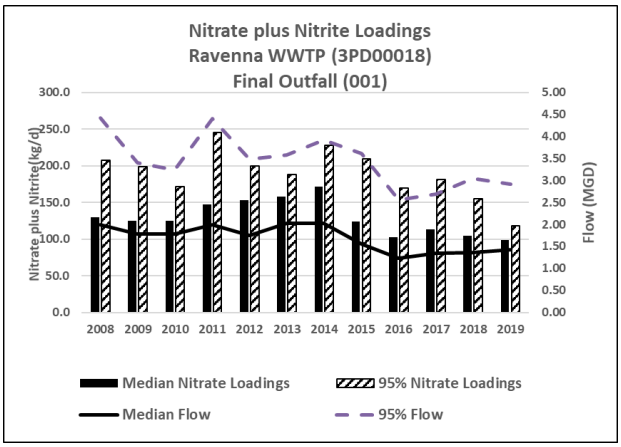
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2018	001	Chronic Toxicity, *P. promelas*	30D Conc	1.0	1.01	2/1/2018
November 2018	001	Chronic Toxicity, *P. promelas*	30D Conc	1.0	4.7	11/1/2018
February 2019	001	Chronic Toxicity, *P. promelas*	30D Conc	1.0	2.78	2/1/2019
May 2019	001	Chronic Toxicity, *P. promelas*	30D Conc	1.0	1.08	5/1/2019

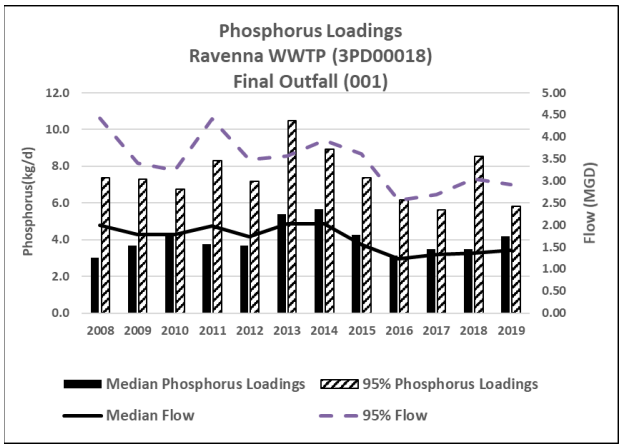
At the time of the above violations, the City maintained routine contact with Ohio EPA staff while evaluating possible causes of the violations. While no definitive source was identified, the violations were subsequently resolved.

The most recent inspection of the Ravenna WWTP was performed by Ohio EPA staff on May 17, 2017. At the time of the inspection, the operation and maintenance of the treatment plant appeared to be satisfactory. The visual quality of the discharge was also determined to be satisfactory.

Pollutant Loadings







Portage County Franking Hills WWTP (3PK00015)

The Franklin Hills WWTP, located at 5756 Hodgeman Lane, Franklin Township, Portage County, Ohio, discharges to Breakneck Creek at RM 2.52 and subsequently to the Cuyahoga River at RM 56.82, was initially constructed in 1970. The most recent modification was initiated in 2004. The 1.5 MGD plant serves parts of the unincorporated areas of Franklin, Rootstown, and Brimfield townships in Portage County. The total population within the service area is approximately 9,400.

The existing wet-stream treatment processes and/or equipment include influent pumping, mechanical screening, grit removal, flow equalization, pre-aeration, extended aeration activated sludge process, secondary clarification, tertiary disk filtration, phosphorus removal (ferric chloride addition), ultraviolet disinfection, and post aeration.

Sludge management consists of aerobic digestion and sludge holding. Presently, all digested liquid sludge from the facility is hauled to the Portage County Streetsboro WWTP (3PK00014) for further treatment and reuse/disposal.

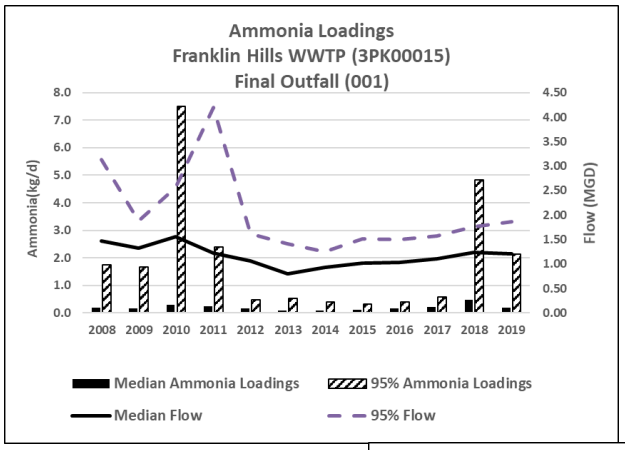
Portage County implements an Ohio EPA-approved industrial pretreatment program. Based on NPDES application information submitted by Portage County, there are no significant industrial users presently discharging to the Franklin Hills WWTP.

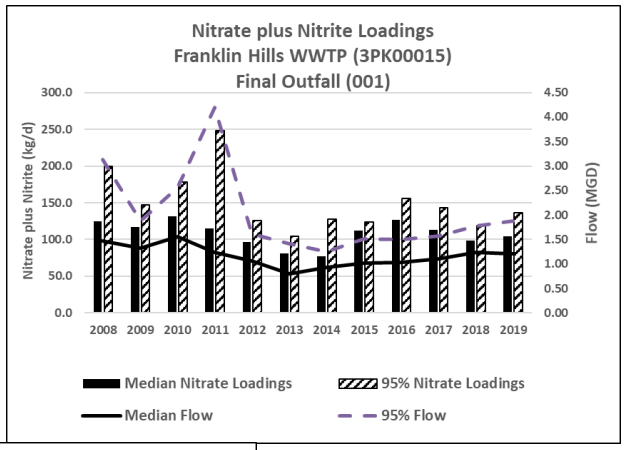
Compliance Summary

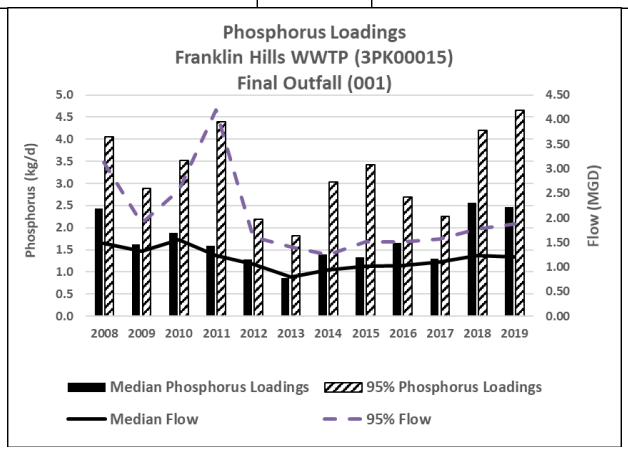
A review of DMR data for 2017-2019 revealed no effluent limitation violations during the study period:

The most recent inspection of the Franklin Hills WWTP was performed by Ohio EPA staff on May 10, 2017. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the discharge was also determined to be satisfactory.

Pollutant Loadings







City of Kent WRF (3PD00031)

The City of Kent Water Reclamation Facility (WRF), located at 641 Middlebury Road, Kent, Portage County, Ohio, discharges to the Cuyahoga River at RM 53.85. The Kent WRF was originally constructed in 1916. Facility upgrades were implemented in 1953, 1967, 1986, 2004, and 2014. The current average design capacity is 5.0 million gallons per day (MGD) and the peak hydraulic capacity is 15.0 MGD. The facility serves a population of approximately 29,915.

The wet-stream processes include influent bar screening, grit removal, pre-aeration, primary settling, activated sludge with combined biological nitrification, ferric chloride and polymer addition, final settling, chlorination, de-chlorination, and post-aeration.

Sludge management consists of anaerobic digestion and mechanical dewatering via a filter press. Presently, the processed sludge biosolids are land applied for agronomic use.

The City of Kent implements an Ohio EPA-approved industrial pretreatment. Based on NPDES application information submitted by the city, there is one categorical user that discharges 0.027 MGD of flow and two significant non-categorical users that discharge 0.835 MGD of flow.

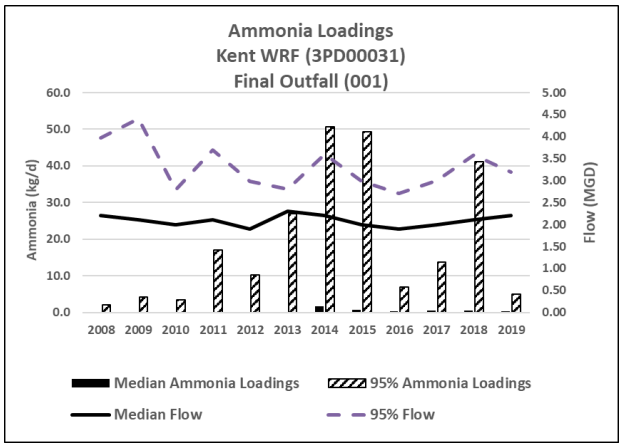
Compliance Summary

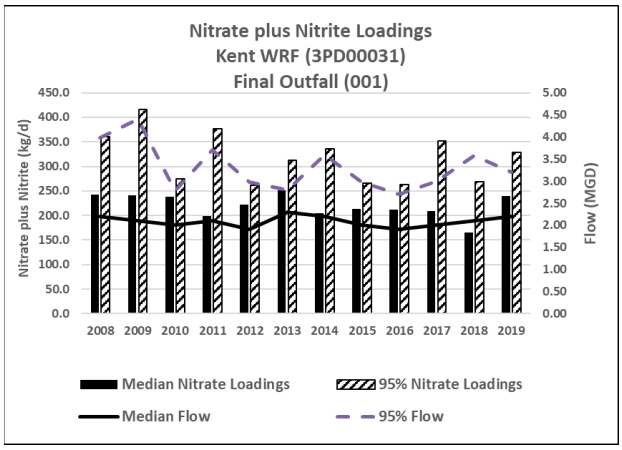
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

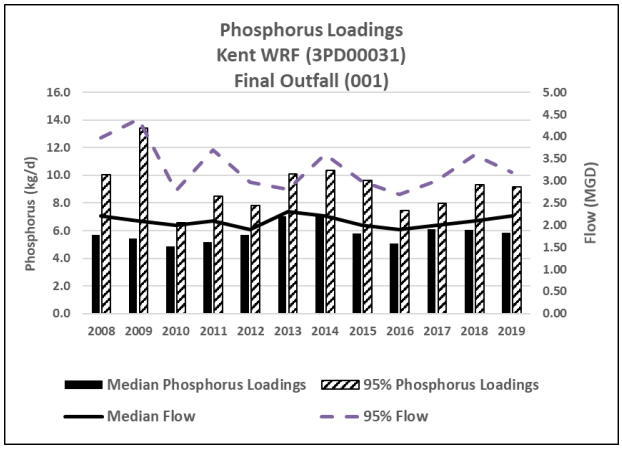
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2018	001	Nitrogen, Ammonia (NH3)	30D Conc.	1.0	1.23451	10/1/2018
October 2018	001	Nitrogen, Ammonia (NH3)	7D Qty.	28.4	47.6518	10/22/2018
October 2018	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	5.03417	10/22/2018
December 2019	001	Chronic Toxicity, *P. promelas*	30D Conc.	1.94	17.42	12/1/2019

An inspection of the Kent WWTP was performed by Ohio EPA staff on August 23, 2018. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







Summit County Fishcreek WWTP (3PK00012)

The Fishcreek WWTP, located at 2910 North River Drive, Stow, Summit County, Ohio, discharges to the Cuyahoga River at RM 51.82. The WWTP was originally constructed in 1979. The treatment plant was expanded to 8.0 million gallons per day (MGD) in 2001. The Facility Planning Area (FPA) includes portions of the cities of Munroe Falls, Stow, Tallmadge, and Hudson, as well as parts of western Portage County. Currently, the facility serves a population of approximately 13,747.

The current treatment system includes bar screening and grit removal of the entire influent flow. The flow then splits into two parallel 4.0 MGD treatment trains:

- The primary train is comprised of an oxidation ditch activated sludge treatment basin, flow equalization tank, and final clarifiers. Ferric chloride is added for phosphorus removal.
- The secondary train includes primary clarifiers, rotating biological contactors (RBC), secondary clarifiers, and chemical/final clarifiers. Due to a combination of factors, however, this line of processes is often not utilized for treatment.

The recombined flow is processed through tertiary sand filtration, ultraviolet (UV) disinfection, and post aeration prior to discharge to the Cuyahoga River.

Fishcreek WWTP utilizes the following sewage sludge treatment processes: sludge blending, aerobic digestion, sludge holding, and mechanical dewatering using a filter press. Presently, the preferred method of sludge management is hauling to a licensed/authorized landfill.

Summit County currently implements an Ohio EPA-approved pretreatment program at the Fishcreek WWTP. Presently, there is one categorical user that discharges approximately 0.004 MGD and one significant non-categorical users that discharge approximately 0.031 MGD of flow.

Compliance Summary

A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2017	001	Total Suspended Solids	30D Qty.	242.2	342.381	1/1/2017
January 2017	001	Total Suspended Solids	30D Conc.	12	16	1/1/2017
January 2017	001	Phosphorus, Total (P)	30D Conc.	0.7	1.075	1/1/2017
January 2017	001	CBOD 5 day	7D Conc.	15	21.3333	1/15/2017
January 2017	001	Phosphorus, Total (P)	7D Conc.	1.1	3.8	1/15/2017
January 2017	001	Total Suspended Solids	7D Qty.	363.4	682.637	1/15/2017
January 2017	001	Phosphorus, Total (P)	7D Qty.	33.3	71.3396	1/15/2017
January 2017	001	Total Suspended Solids	7D Conc.	18	34	1/15/2017
January 2017	001	Total Suspended Solids	7D Conc.	18	26	1/22/2017
January 2017	001	Total Suspended Solids	7D Qty.	363.4	620.348	1/22/2017
July 2017	001	Nitrogen, Ammonia (NH3)	30D Qty.	30.3	54.0453	7/1/2017
July 2017	001	Nitrogen, Ammonia (NH3)	30D Conc.	1	3.31667	7/1/2017
July 2017	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	2.96667	7/1/2017
July 2017	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	104.322	7/8/2017

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2017	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	6.2	7/8/2017
July 2017	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	3.26667	7/15/2017
July 2017	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	60.319	7/15/2017
August 2017	001	Nitrogen, Ammonia (NH3)	30D Conc.	1	1.23583	8/1/2017
August 2017	001	Dissolved Oxygen	1D Conc.	7	6.9	8/13/2017
August 2017	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	2.56667	8/15/2017
January 2018	001	Phosphorus, Total (P)	30D Conc.	0.70	.8125	1/1/2018
January 2018	001	Total Suspended Solids	30D Conc.	12.	26.2857	1/1/2018
January 2018	001	Total Suspended Solids	30D Qty.	242.2	527.131	1/1/2018
January 2018	001	Total Suspended Solids	7D Qty.	363.4	1326.31	1/22/2018
January 2018	001	Phosphorus, Total (P)	7D Conc.	1.1	3	1/22/2018
January 2018	001	Phosphorus, Total (P)	7D Qty.	33.3	73.5804	1/22/2018
January 2018	001	CBOD 5 day	7D Conc.	15	18.3333	1/22/2018
January 2018	001	Total Suspended Solids	7D Conc.	18	63	1/22/2018
March 2018	001	Total Suspended Solids	7D Conc.	18	26.3333	3/1/2018
March 2018	001	Total Suspended Solids	7D Qty.	363.4	815.087	3/1/2018
March 2018	001	Total Suspended Solids	30D Qty.	242.2	249.519	3/1/2018
March 2018	001	Phosphorus, Total (P)	7D Conc.	1.1	2.5	3/8/2018
March 2018	001	Phosphorus, Total (P)	7D Qty.	33.3	51.9491	3/8/2018
April 2018	001	Total Suspended Solids	30D Qty.	242.2	2286.50	4/1/2018
April 2018	001	Total Suspended Solids	7D Qty.	363.4	773.133	4/1/2018
April 2018	001	CBOD 5 day	30D Conc.	10	17.9285	4/1/2018
April 2018	001	CBOD 5 day	30D Qty.	302.8	587.594	4/1/2018
April 2018	001	Total Suspended Solids	30D Conc.	12	72.8666	4/1/2018
April 2018	001	Total Suspended Solids	7D Conc.	18	25.5	4/1/2018
April 2018	001	CBOD 5 day	7D Conc.	15	43.	4/15/2018
April 2018	001	Total Suspended Solids	7D Conc.	18	196.8	4/15/2018
April 2018	001	CBOD 5 day	7D Qty.	454.2	1383.51	4/15/2018
April 2018	001	Total Suspended Solids	7D Qty.	363.4	6187.08	4/15/2018
April 2018	001	pH, Minimum	1D Conc.	6.5	6.45	4/17/2018
May 2018	001	CBOD 5 day	30D Conc.	10	10.4545	5/1/2018
May 2018	001	Nitrogen, Ammonia (NH3)	30D Conc.	1.0	3.4225	5/1/2018

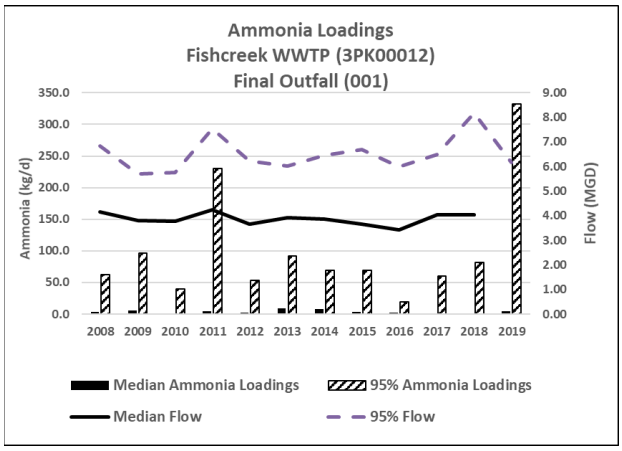
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2018	001	Nitrogen, Ammonia (NH3)	30D Qty.	30.3	67.4259	5/1/2018
May 2018	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	2.03333	5/15/2018
May 2018	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	10.1333	5/22/2018
May 2018	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	208.053	5/22/2018
June 2018	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	2.325	6/1/2018
September 2018	001	Dissolved Oxygen	1D Conc.	7.0	6.73	9/26/2018
November 2018	001	CBOD 5 day	7D Conc.	15	16.5	11/8/2018
January 2019	001	Phosphorus, Total (P)	7D Conc.	1.1	1.2	1/8/2019
January 2019	001	Total Suspended Solids	7D Qty.	363.4	377.112	1/22/2019
February 2019	001	Nitrogen, Ammonia (NH3)	30D Conc.	10.1	10.5166	2/1/2019
February 2019	001	CBOD 5 day	7D Conc.	15	15.3333	2/8/2019
February 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	15.6	2/22/2019
March 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	19.7666	3/1/2019
March 2019	001	Nitrogen, Ammonia (NH3)	30D Conc.	10.1	20.1333	3/1/2019
March 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	20.6333	3/8/2019
March 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	17.8666	3/15/2019
March 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	22.2666	3/22/2019
April 2019	001	Nitrogen, Ammonia (NH3)	30D Qty.	305.8	454.853	4/1/2019
April 2019	001	Nitrogen, Ammonia (NH3)	30D Conc.	10.1	17.9833	4/1/2019
April 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	25.6666	4/8/2019
April 2019	001	Nitrogen, Ammonia (NH3)	7D Qty.	460.3	928.860	4/8/2019
April 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	16.8666	4/15/2019
April 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	15.2	18.7333	4/22/2019
May 2019	001	CBOD 5 day	30D Conc.	10	15.0090	5/1/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	255.034	5/1/2019
May 2019	001	Nitrogen, Ammonia (NH3)	30D Qty.	30.3	231.939	5/1/2019
May 2019	001	Nitrogen, Ammonia (NH3)	30D Conc.	1.0	14.8083	5/1/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	13.0333	5/1/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	268.984	5/8/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	17.6	5/8/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	251.485	5/15/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	16.1	5/15/2019

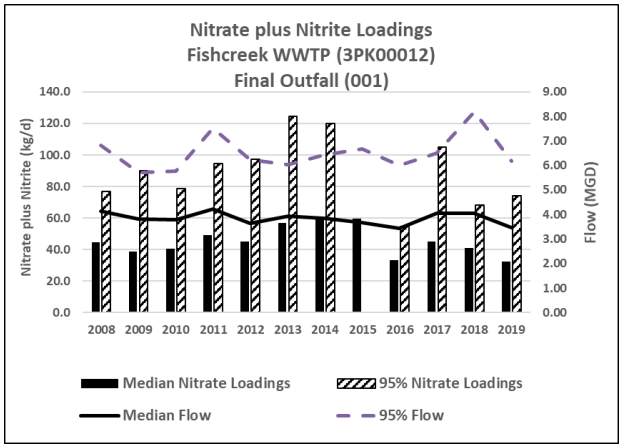
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2019	001	CBOD 5 day	7D Conc.	15	16.	5/15/2019
May 2019	001	CBOD 5 day	7D Conc.	15	20.0333	5/22/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.4	152.251	5/22/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	12.5	5/22/2019
June 2019	001	Mercury, Total (Low Level)	30D Conc.	2.6	6.865	6/1/2019
June 2019	001	Mercury, Total (Low Level)	30D Qty.	0.0000	.00016	6/1/2019
September 2019	001	Nitrogen, Ammonia (NH3)	30D Conc.	1.0	1.12667	9/1/2019
September 2019	001	Mercury, Total (Low Level)	30D Qty.	0.0000	.00013	9/1/2019
September 2019	001	Mercury, Total (Low Level)	30D Conc.	2.6	12.75	9/1/2019
September 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	1.5	2.66667	9/8/2019
October 2019	001	Mercury, Total (Low Level)	30D Conc.	2.6	4.47	10/1/2019

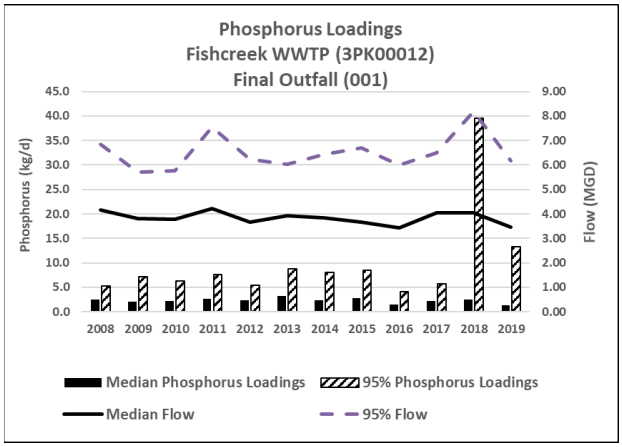
Many of the violations, particularly those associated with ammonia and CBOD5, are directly related to the existing limitations in the operational control of the oxidation ditch process as well as the lack of adequate wet-weather treatment capacity. Summit County has identified a number of in-plant projects that should improve plant performance in the immediate future. Long-term wet-weather improvements may also need to be instituted at the facility to fully address all of the compliance issues.

An inspection of the Fishcreek WWTP was performed by Ohio EPA staff on September 14, 2018. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







City of Akron WRF (3PF00000)

The City of Akron Water Reclamation Facility (WRF), located at 2460 Akron Peninsula Road, Akron, Summit County, Ohio, discharges to the Cuyahoga River at RM 37.45. The Akron WRF was originally constructed in 1928. The present average design flow is 130 million gallons per day (MGD) and the peak hydraulic capacity is 280 MGD. Akron WWTP serves the City of Akron, Bath, Copley Township, Coventry Township, Cuyahoga Falls, Fairlawn, Lakemore, Mogadore, Montrose, Munroe Falls, Silver Lake, Springfield, Stow, and Tallmadge for a total of approximately 363,897 customers. The collection system is comprised of approximately 80% separate sanitary sewers and 20% combined sewers.

The treatment processes include fine screening, grit removal, scum removal, primary settling, activated sludge biological treatment process, secondary clarification, chlorination, and de-chlorination.

The City of Akron sewer collection system includes both separate sanitary sewers and combined sewers (i.e. sewers that carry both sanitary flows and storm water in the same pipe). The combined sewers are located within the older parts of the city. The combined sewer system (CSS) includes combined sewer overflow (CSO) outfalls that discharge to the Cuyahoga River and its tributaries when the flow exceeds the capacity of the CSS. Regulator structures on the local combined sewers, referred to as "racks", function as static control devices which intercept all dry-weather flow while limiting flow to the larger interceptor sewers during wet-weather events. These "limiting" pipes consist of a small diameter conduit connecting the drop inlet to the interceptor sewer and serves as a connection between the interceptor sewers and the combined sewer system. The NPDES permit currently authorizes the discharges of CSOs at certain locations within the system.

The City of Akron is in the process of installing controls to reduce the impacts from wet-weather related treatment plant bypasses and CSOs. These controls are being installed in accordance with a federal Consent Decree and a CSO Long Term Control Plan that have been approved by both the U.S. Environmental Protection Agency (US EPA) and Ohio EPA. The major improvements completed (or under construction) to date include, but are not limited to, the following:

- Expansion of the wet-weather capacity of the Akron WRF to 280 MGD in 2019.
- Construction of a 60 MGD BioCEPT high-rate treatment (HRT) system for wet-weather flows exceeding the capacity of the Akron WRF. The HRT is expected to be operational in 2021.
- Construction of the Ohio Canal Interceptor Tunnel, a 6,240 lineal feet, 27-foot diameter storage tunnel, in 2020.
- Construction of various sewer separation projects.
- Installation of CSO storage basins throughout the collection system.
- Installation of various Green Infrastructure (GI) projects within the service area.

Thickened sludge from the Akron WRF is pumped to the Akron Renewable Energy Facility for additional processing. The facility utilizes a two-stage "high solids" anaerobic digestion process: dewatering using a centrifuge, and paddle drying. The processed sludge is distributed as an Exceptional Quality Biosolids for unrestricted end-use and are primarily utilized in the wholesale topsoil and planting materials industries. Biogas generated during the digestion process is used to fuel three 600kW combined heat and power units. The electricity generated is utilized to meet the power requirements of the Renewable Energy Facility and the Akron WRF.

The City of Akron has an Ohio EPA-approved pretreatment program for its industrial users. The City of Akron has 27 categorical users that discharge 1.27 MGD of flow, 1204 non-categorical users that discharge 1.06 MGD of flow, and 27 significant non-categorical users that discharge 0.68 MGD of flow.

Compliance Summary

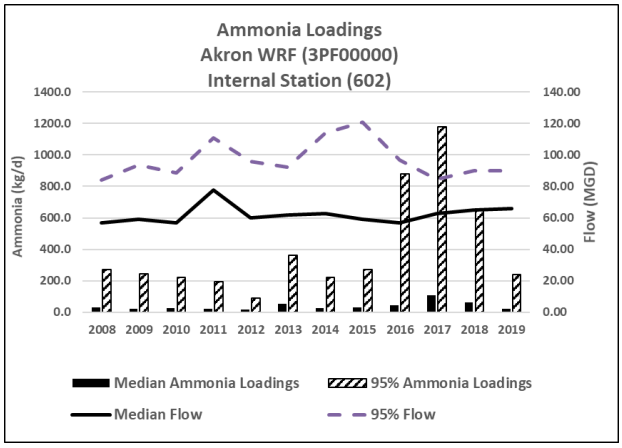
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

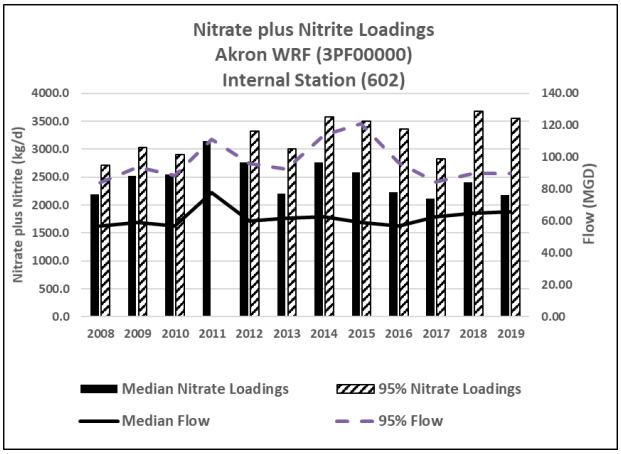
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2017	001	*E. coli*	7D Conc.	284	2112.93	5/1/2017
July 2017	602	Mercury, Total (Low Level)	30D Conc.	5.6	6.87	7/1/2017
July 2017	602	pH, Minimum	1D Conc.	6.5	6.4	7/1/2017
March 2018	602	Mercury, Total (Low Level)	30D Conc.	5.6	6.46	3/1/2018
March 2018	602	Mercury, Total (Low Level)	30D Qty.	0.0019	.0021	3/1/2018
July 2018	602	pH, Minimum	1D Conc.	6.5	6.4	7/26/2018
September 2019	001	Chlorine, Total Residual	1D Conc.	0.024	.725	9/18/2019

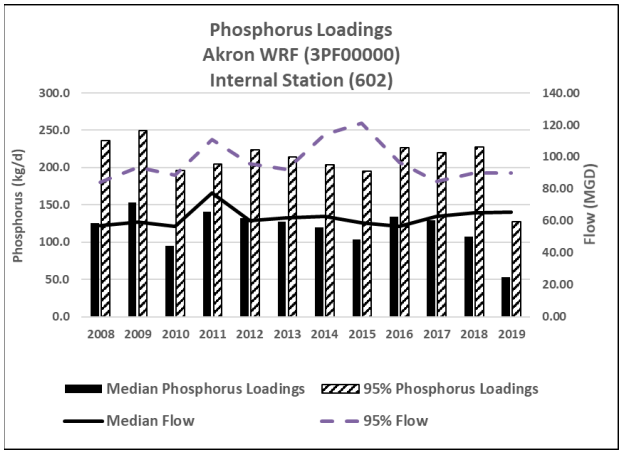
An inspection of the Akron WRF was performed by Ohio EPA staff on April 23, 2019. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings

Loadings graphs were constructed utilizing data from monitoring station 602 which represents the discharge from the WRF. This station combines with the secondary bypass (station 603) to discharge to the Cuyahoga River via outfall 001.







Portage County Streetsboro WWTP (3PK00014)

The Streetsboro-Hudson WWTP, located at Jefferson, Streetsboro, Portage County, Ohio, discharges to Tinkers Creek at RM 26.2; Tinkers Creek subsequently flows to the Cuyahoga River at RM 16.36. The WWTP is an advanced wastewater treatment facility that was originally constructed in 1985, and last upgraded in 2013. The plant is designed to treat an average daily hydraulic flow of 4.0 MGD (million gallons per day), with a peak hydraulic capacity of 10.0 MGD. The separate sanitary sewer collection system serves a population of approximately 26,272 people in the City of Streetsboro, as well as parts of the City of Hudson, Twinsburg Township, Freedom Township, and Shalersville Township. The source water for the service area is treated ground water from both public and private wells, e.g. Portage County Shalersville Water Treatment Plant.

The treatment plant processes and/or equipment include influent pumping, mechanical screening, aerated grit removal, contact stabilization activated sludge biological treatment process, phosphorus removal (ferric chloride addition), secondary clarification/settling, nitrification towers, tertiary sand filtration, ultraviolet (UV) disinfection, and post aeration.

Waste activated sludge (WAS) from the secondary clarifiers, as well as sludges hauled from the other County WWTPs, is aerobically digested and dewatered using a belt filter press and centrifuge. A sludge dryer was installed in 2009 to produce Exceptional Quality (EQ) sludge. The EQ sludge is ultimately disposed/reused via agronomic land application.

Portage County currently implements an Ohio EPA-approved pretreatment program. The County has identified two categorical industrial users and one noncategorical industrial user discharging to the Streetsboro-Hudson WWTP. The combined flow from all commercial and industrial users is approximately 0.836 MGD.

Compliance Summary

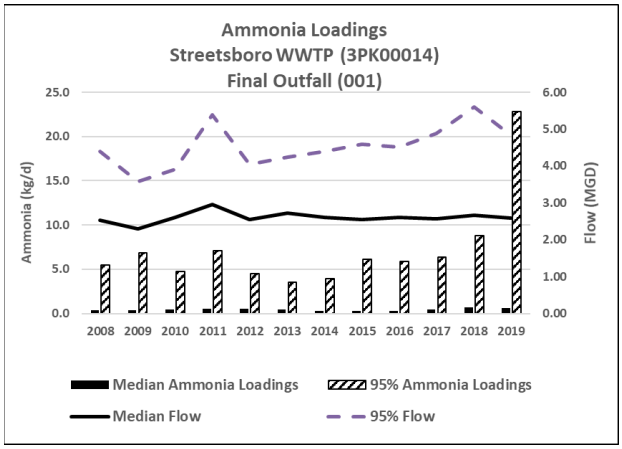
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

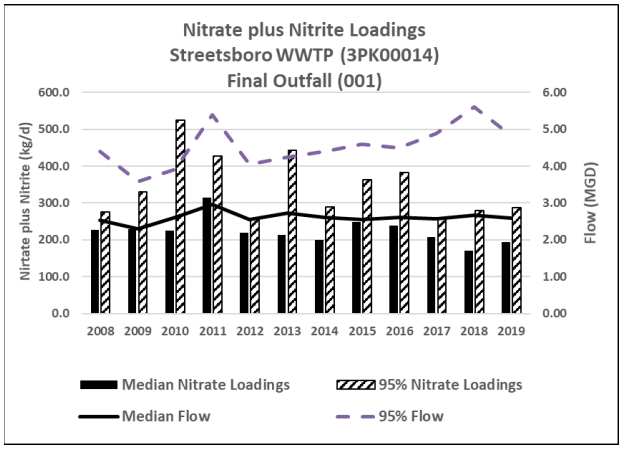
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2017	001	Nitrogen, Ammonia (NH3)	7D Qty.	45.5	111.541	3/1/2017
March 2017	001	Nitrogen, Ammonia (NH3)	7D Conc.	3.0	6.36667	3/1/2017
March 2017	001	Dissolved Oxygen	1D Conc.	6.0	5.7	3/6/2017
May 2017	001	Dissolved Oxygen	1D Conc.	6.0	5.5	5/1/2017
May 2017	001	Dissolved Oxygen	1D Conc.	6.0	5.	5/17/2017
August 2017	001	Dissolved Oxygen	1D Conc.	6.0	5.7	8/7/2017
August 2017	001	Dissolved Oxygen	1D Conc.	6.0	5.1	8/8/2017
April 2018	001	Phosphorus, Total (P)	7D Qty.	10.6	17.3056	4/1/2018
April 2018	001	pH, Minimum	1D Conc.	6.5	5.38	4/12/2018
April 2018	001	Dissolved Oxygen	1D Conc.	6.0	5.7	4/18/2018
June 2018	001	Chronic Toxicity, *C. dubia*	30D Conc.	1.0	1.4	6/1/2018
July 2018	001	pH, Maximum	1D Conc.	9.0	9.14	7/4/2018
January 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	3.0	3.03333	1/15/2019
August 2019	001	Chronic Toxicity, *C. dubia*	30D Conc.	1.0	2.98	8/1/2019

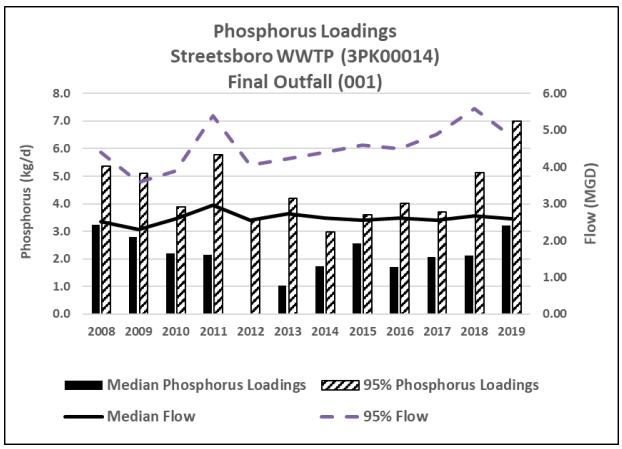
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
August 2019	001	pH, Minimum	1D Conc.	6.5	6.49	8/15/2019
October 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	2.22	3.35	10/15/2019
December 2019	001	pH, Maximum	1D Conc.	9.0	9.4	12/20/2019

An inspection of the Streetsboro-Hudson WWTP was performed by Ohio EPA staff on May 1, 2019. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







City of Aurora Westerly WWTP (3PD00046)

The City of Aurora Westerly WWTP, located at 1230 West Garfield Road, Aurora, Portage County, Ohio, discharges to an unnamed tributary at RM 0.45 and subsequently to Pond Brook at RM 1.57. Pond Brook flows to Tinkers Creek at RM 22.51 and the Cuyahoga River at RM 16.36. The Aurora Westerly WWTP is an advanced treatment facility with an average design flow of 1.4 million gallons per day (MGD) and a peak hydraulic capacity of 2.6 MGD. The original plant was replaced by a new plant in 1989, with the last major modification in 2009. The separate sanitary sewer collection system serves a population of approximately 8500 people.

The treatment plant processes and/or equipment include influent pumping, mechanical screening, grit removal, flow equalization, oxidation ditch activated sludge biological treatment process, phosphorus removal (ferric chloride addition), secondary clarification, tertiary sand filtration, and ultraviolet (UV) light disinfection.

Solid stream processes include sludge treatment via aerobic digestion, dewatering using a belt filter press, and covered sludge storage. The primary means of disposal of the Class "B" sludge is by agronomic land application.

Aurora Westerly WWTP does not have an Ohio EPA-approved pretreatment program. Based on the NPDES application, there are no identified significant industrial users (SIUs) tributary to the treatment plant.

Compliance Summary

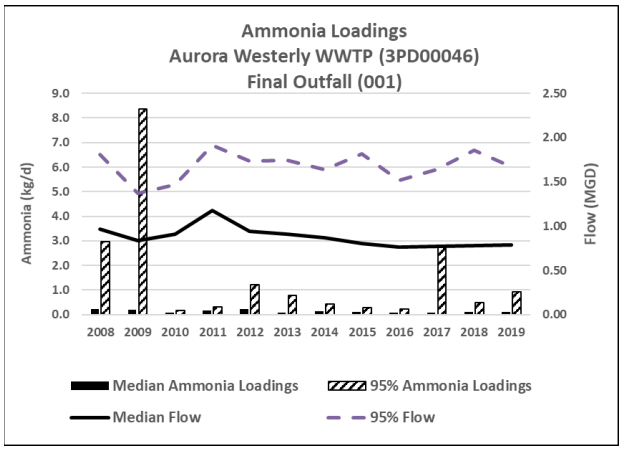
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

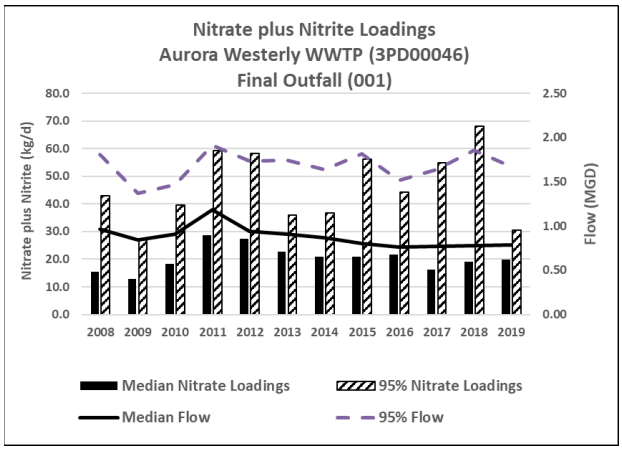
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2017	001	Mercury, Total (Low Level)	30D Qty.	0.0000	.00001	2/1/2017
February 2018	001	Cyanide, Free	30D Qty.	0.0276	3.53898	2/1/2018
February 2018	001	Cyanide, Free	30D Conc.	0.0052	1.87	2/1/2018
February 2018	001	Cyanide, Free	1D Conc.	0.022	1.87	2/6/2018
February 2018	001	Cyanide, Free	1D Qty.	0.117	3.53898	2/6/2018
March 2018	001	Mercury, Total (Low Level)	30D Qty.	0.0000	.00001	3/1/2018
June 2018	001	Dissolved Oxygen	1D Conc.	5.0	4.6	6/4/2018
June 2018	001	Oil and Grease, Hexane	1D Conc.	10	565.	6/16/2018
August 2018	001	Oil and Grease, Hexane	1D Conc.	10	500.	8/21/2018
September 2018	001	Copper, Total Recoverable	30D Qty.	0.106	.42014	9/1/2018
September 2018	001	Copper, Total Recoverable	30D Conc.	20	75.	9/1/2018
September 2018	001	Copper, Total Recoverable	1D Conc.	32	75.	9/11/2018
September 2018	001	Copper, Total Recoverable	1D Qty.	0.17	.42014	9/11/2018
October 2018	001	Copper, Total Recoverable	30D Qty.	0.106	.36336	10/1/2018
October 2018	001	Copper, Total Recoverable	30D Conc.	20	150.	10/1/2018
October 2018	001	Copper, Total Recoverable	1D Qty.	0.17	.36336	10/2/2018
October 2018	001	Copper, Total Recoverable	1D Conc.	32	150.	10/2/2018

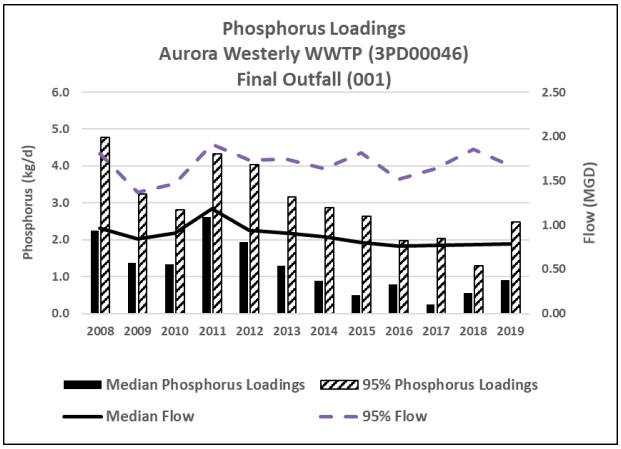
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
November 2018	001	Cyanide, Free	30D Qty.	0.0276	3.1752	11/1/2018
November 2018	001	Cyanide, Free	30D Conc.	0.0052	.717	11/1/2018
November 2018	001	Cyanide, Free	1D Qty.	0.117	3.1752	11/6/2018
November 2018	001	Cyanide, Free	1D Conc.	0.022	.717	11/6/2018
May 2019	001	Nitrogen, Ammonia (NH3)	30D Conc.	1.5	1.9825	5/1/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Conc.	2.3	6.37667	5/22/2019
May 2019	001	Nitrogen, Ammonia (NH3)	7D Qty.	12.2	20.8920	5/22/2019
August 2019	001	Chronic Toxicity, *C. dubia*	30D Conc.	1.0	1.07	8/1/2019

An inspection of the Aurora Westerly WWTP was performed by Ohio EPA staff on May 1, 2019. At the time of the inspection, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the discharge was also determined to be satisfactory.

Pollutant Loadings







City of Twinsburg WWTP (3PD00039)

The City of Twinsburg WWTP, located at 10231 Ravenna Road, Twinsburg, Cuyahoga County, Ohio, discharges to Tinkers Creek at RM 15.65 and subsequently to the Cuyahoga River (RM 16.36). The Twinsburg WWTP is an advanced wastewater treatment facility. The plant is designed to treat an average daily hydraulic flow of 5.8 MGD, with a peak hydraulic capacity of 10.2 MGD. The plant was originally constructed in 1956, and its last major modification was in 2001. The separate sanitary sewer collection system serves a population of approximately 22,238 people in the City of Twinsburg, as well as portions of the Village of Reminderville and Twinsburg Township.

The treatment plant processes and/or equipment include flow equalization, influent pumping, mechanical screening, grit removal, primary clarification/settling, trickling filter/roughing tower biological treatment process, activated sludge biological treatment process, phosphorus removal (alum addition), secondary clarification/settling, tertiary microscreens, chlorination, and de-chlorination (sodium bisulfite addition).

During 2020, the 0.500 MGD Summit County Aurora Shores WWTP #29 (3PG00030) is scheduled to be abandoned and connected to the Twinsburg WWTP collection system. This may be delayed due to construction scheduling due to the pandemic.

Waste activated sludge (WAS) from the secondary clarifiers are co-settled with the primary sludge in the primary settling tanks. The co-settled sludge is processed via anaerobic digestion and dewatered using a belt filter press. The primary means of disposal/reuse of the Class "B" sludge cake is by agronomic land application. The City of Twinsburg currently implements an Ohio EPA-approved pretreatment program. Based on NPDES application information submitted by the city, there are four categorical industrial users and five noncategorical industrial users discharging to the WWTP. The industrial users contribute approximately 0.271 MGD of flow.

Compliance Summary

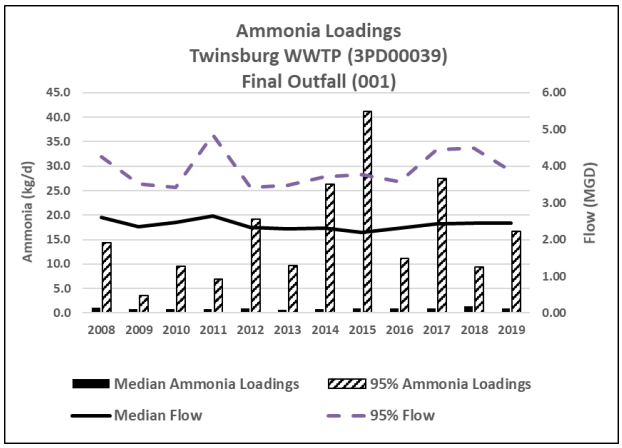
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

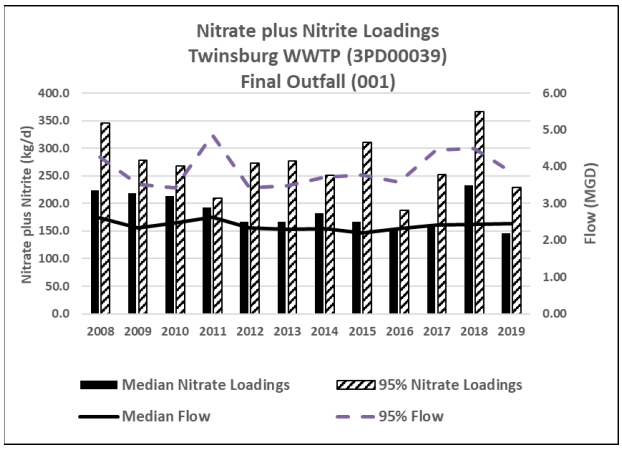
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2017	001	Mercury, Total (Low Level)	30D Conc.	1.8	2.09	7/1/2017
July 2017	001	Phosphorus, Total (P)	30D Conc.	0.60	.64111	7/1/2017
July 2017	001	Phosphorus, Total (P)	7D Conc.	0.60	.72	7/8/2017
July 2017	001	*E. coli*	7D Conc.	362	538.321	7/8/2017
July 2017	001	Phosphorus, Total (P)	7D Conc.	0.60	.63	7/15/2017
September 2017	001	Phosphorus, Total (P	7D Conc.	0.60	.62	9/1/2017
December 2017	001	Total Suspended Solids	7D Conc.	18	20.	12/1/2017
December 2017	001	Phosphorus, Total (P)	30D Conc.	0.60	.61167	12/1/2017
December 2017	001	Phosphorus, Total (P)	7D Conc.	0.60	.73	12/22/2017
January 2018	001	Phosphorus, Total (P)	7D Conc.	0.60	.8	1/1/2018
January 2018	001	Mercury, Total (Low Level)	30D Conc.	1.8	2.345	1/1/2018
May 2018	001	Chlorine, Total Residual	1D Conc.	0.02	08	5/3/2018
May 2018	001	Chlorine, Total Residual	1D Conc.	0.02	.09	5/11/2018
August 2018	001	Phosphorus, Total (P)	7D Conc.	0.60	.62333	8/22/2018

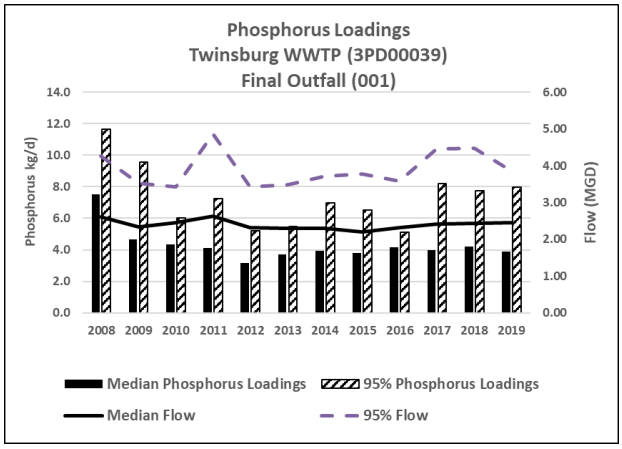
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
November 2018	001	Phosphorus, Total (P)	7D Conc.	0.60	.60333	11/1/2018
November 2018	001	Total Suspended Solids	7D Conc.	18	19.3333	11/1/2018
November 2018	001	Total Suspended Solids	30D Conc.	12	16.25	11/1/2018
November 2018	001	Total Suspended Solids	7D Conc.	18	38.	11/8/2018
December 2018	001	Phosphorus, Total (P)	30D Conc.	0.60	.61833	12/1/2018
December 2018	001	Total Suspended Solids	30D Conc.	12	15.	12/1/2018
December 2018	001	Total Suspended Solids	7D Conc.	18	32.3333	12/15/2018
December 2018	001	Phosphorus, Total (P)	7D Conc.	0.60	.92667	12/22/2018
December 2018	001	Total Suspended Solids	7D Conc.	18	18.3333	12/22/2018
January 2019	001	Total Suspended Solids	30D Conc.	12	46.8	1/1/2019
January 2019	001	Total Suspended Solids	30D Qty.	263	827.915	1/1/2019
January 2019	001	phosphorus, Total (P)	30D Conc.	0.60	.66125	1/1/2019
January 2019	001	Total Suspended Solids	7D Conc.	18	41.6666	1/15/2019
January 2019	001	Phosphorus, Total (P)	7D Qty.	13	22.3124	1/22/2019
January 2019	001	Total Suspended Solids	7D Conc.	18	144.	1/22/2019
January 2019	001	Total Suspended Solids	7D Qty.	39	3173.85	1/22/2019
January 2019	001	Phosphorus, Total (P)	7D Conc.	0.6	1.215	1/22/2019
February 2019	001	Mercury, Total (Low Level)	30D Conc.	1.8	2.3	2/1/2019
August 2019	001	*E. coli*	7D Conc.	362	698.500	8/22/2019

Inspections of the Twinsburg WWTP were performed by Ohio EPA staff on September 26, 2018, May 3, 2019, and August 30, 2019. At the time of the inspections, the treatment plant appeared to be operating satisfactorily.

Pollutant Loadings







City of Solon WRF (3PD00019)

The City of Solon Water Reclamation Facility (WRF), located at 6951 Cochran Road, Solon, Cuyahoga County, Ohio, discharges to Beaver Meadow Run at RM 0.97. Beaver Meadow Run flows to Tinkers Creek (RM 10.62) and the Cuyahoga River (RM 16.36). The Solon WRF is an advanced treatment facility with an average design flow of 5.8 million gallons per day (MGD) and a peak hydraulic capacity of 30 MGD. This facility was originally built in 1962 with expansion occurring in 1970 and again in 1980. The current capacity expansion to 5.8 MGD was completed in 1996 -1997. Subsequent process modifications to the facility were completed in 2007 and 2019, respectively. The separate sanitary sewer collection system serves a population of approximately 25,968 people in the City of Solon, as well as limited portions of the Village of Bentleyville.

The treatment plant processes and/or equipment include mechanical screening, grit removal, scum removal, flow equalization, primary clarification/settling, trickling filter/roughing tower biological treatment process, activated sludge biological treatment process, phosphorus removal (ferric chloride addition), secondary clarification/settling, tertiary sand filtration, ultraviolet (UV) disinfection, and post-aeration.

Primary sludge is anaerobically digested before combining with thickened waste activated sludge (WAS). The combined sludge is dewatered using a belt filter press. Presently, the primary means of disposal of the sludge is via landfill disposal.

Solon implements an Ohio EPA-approved pretreatment program. Based on the NPDES application, there are. The industrial users contribute approximately 0.87 MGD of flow to the treatment plant.

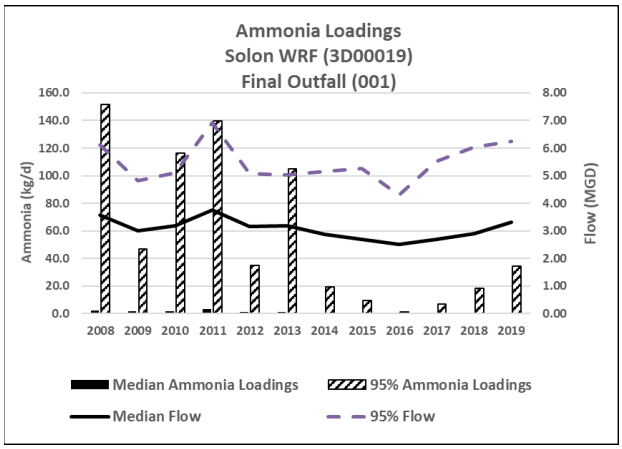
Compliance Summary

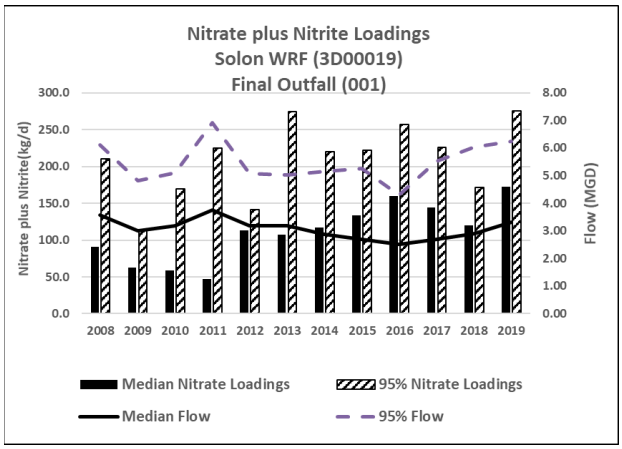
A review of DMR data for 2017-2019 revealed the following effluent limitation violation during the study period:

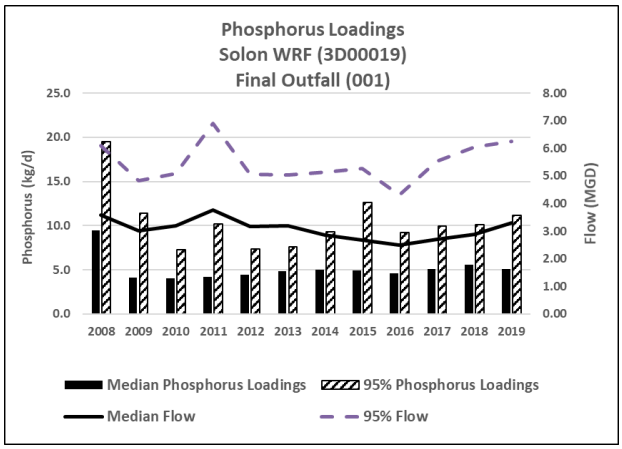
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2018	001	Dissolved Oxygen	1D Conc.	5.0	4.8	10/18/2018

Inspections of the Solon WRF were performed by Ohio EPA staff on September 26, 2018, May 3, 2019, and September 10, 2019. At the time of the inspections, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







City of Bedford Heights WWTP (3PD00006)

The City of Bedford Heights WWTP, located at 25301 Solon Road, Bedford Heights, Cuyahoga County, Ohio, discharges to an unnamed tributary at RM 0.04 to Hawthorne Creek (RM 0.1). Hawthorne Creek subsequently flows to Tinkers Creek (RM 7.83) and the Cuyahoga River (RM 16.36). The Bedford Heights WWTP is an advanced treatment facility with an average design flow of 3.6 million gallons per day (MGD) and a peak hydraulic capacity of 7.5 MGD. The plant was originally constructed in 1958, and its last major modification was in 1984. The separate sanitary sewer collection system serves a population of approximately 21,850 people in the City of Bedford Heights, as well as portions of the City of Warrensville, City of Solon, Village of Glenwillow, and Village of Oakwood.

The treatment plant processes and/or equipment include screening, aerated grit removal, influent pumping, pre-aeration, primary settling, activated sludge biological treatment process, phosphorus removal (ferric chloride addition), secondary settling, tertiary sand filtration, chlorination, de-chlorination, and post-aeration.

Sludge handling processes consist of thickening and dewatering using a belt filter press. Presently, the primary means of sludge management is landfill disposal or hauling to another NPDES-permitted facility.

Bedford Heights implements an Ohio EPA-approved pretreatment program. Based on the NPDES application, there are three (3) identified significant industrial users (SIUs) that discharge to the treatment plant. The industrial users contribute approximately 0.064 MGD of flow.

The Bedford Heights WWTP has experienced a number of secondary treatment system bypass events, i.e. partially-treated bypass after primary settling, during the past 5 years. The frequency and magnitude of events suggests excessive weather-related flows to the treatment plant. The current NPDES permit requires the facility is to evaluate feasible alternatives for elimination and/or reduction of these bypasses.

Compliance Summary

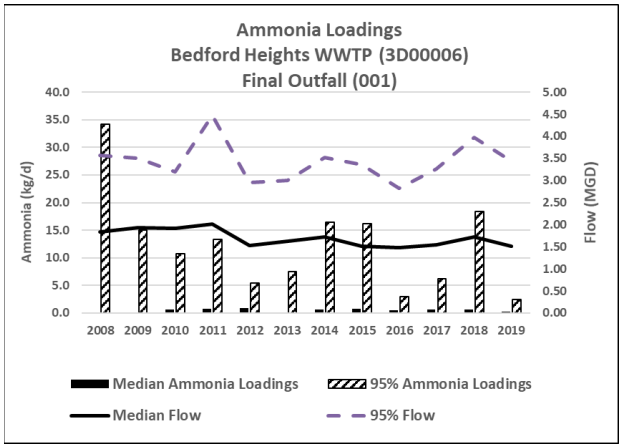
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

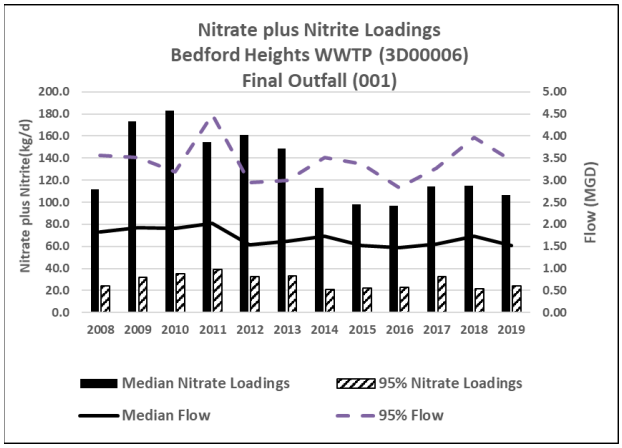
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2017	001	Copper, Total Recoverable	30D Conc.	18	19.9	2/1/2017
March 2017	001	Copper, Total Recoverable	1D Conc.	29	32.5	3/6/2017
May 2017	001	Phosphorus, Total (P)	7D Conc.	0.7	.747	5/22/2017
September 2017	001	Phosphorus, Total (P)	7D Conc.	0.7	.985	9/1/2017
October 2017	001	Copper, Total Recoverable	30D Conc.	18	25.2	10/1/2017
December 2017	001	Chronic Toxicity, *P. promelas*	30D Conc.	1.0	3.24	12/1/2017
February 2018	001	pH, Maximum	1D Conc.	9.0	9.62	2/24/2018
March 2018	001	Chronic Toxicity, *C. dubia*	30D Conc.	1.0	1.49	3/1/2018
June 2018	001	Phosphorus, Total (P)	7D Conc.	0.7	.8365	6/1/2018
June 2018	001	Copper, Total Recoverable	30D Conc.	18	18.8	6/1/2018
August 2018	001	Phosphorus, Total (P)	7D Conc.	0.7	.754	8/22/2018
September 2018	001	Acute Toxicity, *P. promelas*	1D Conc.	1.0	1.41	9/14/2018
July 2019	001	Phosphorus, Total (P)	7D Conc.	0.7	.8	7/1/2019

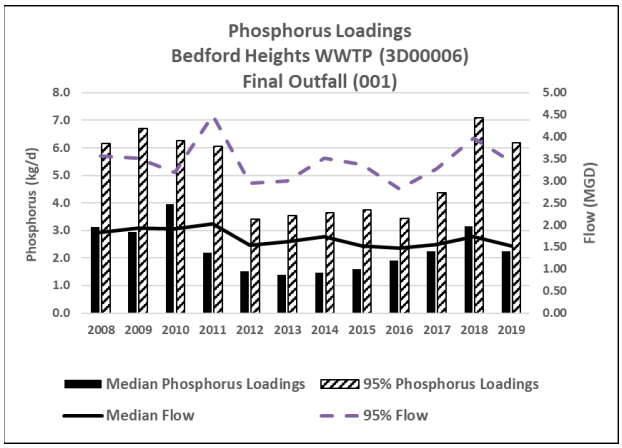
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2019	001	Phosphorus, Total (P)	7D Conc.	0.7	.73	7/8/2019

Inspections of the Bedford Heights WWTP were performed by Ohio EPA staff on September 13, 2018 and May 7, 2019. At the time of the inspections, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







City of Bedford WWTP (3PD00005)

The City of Bedford WWTP, located at 705 West Glendale Street, Bedford, Cuyahoga County, Ohio discharges to Wood Creek at RM 1.35. Wood Creek flows to Tinkers Creek (RM 2.43) and the Cuyahoga River (RM 16.36). The WWTP is an advanced treatment facility with an average design flow of 3.2 million gallons per day (MGD) and a peak hydraulic capacity of 6.4 MGD. The plant was originally constructed in 1937, and its last major modification was in 2012. The separate sanitary sewer collection system serves a population of approximately 13,274 people in the City of Bedford and a small portion of the Village of Oakwood.

The treatment plant processes and/or equipment include screening, grit removal, flow equalization, primary clarification, trickling filters, phosphorus removal (ferric chloride addition), secondary clarification, tertiary sand filtration, and ultraviolet (UV) disinfection.

Solid stream processes include sludge treatment via anaerobic digestion and dewatering using a belt filter press. Presently, the primary means of disposal of the Class "B" sludge is landfill disposal or hauling to another NPDES-permitted facility.

Bedford WWTP does not have an Ohio EPA-approved pretreatment program. Based on the NPDES application, there are three (3) identified significant industrial users (SIUs) tributary to the treatment plant.

The Bedford WWTP has experienced a significant number of secondary treatment bypass events, i.e. untreated overflows from the EQ Basin, during the past 5 years. The frequency and magnitude of events suggests excessive weather-related flows to the treatment plant. The current NPDES permit requires the Bedford WWTP is to evaluate feasible alternatives for elimination and/or reduction of these bypasses.

Compliance Summary

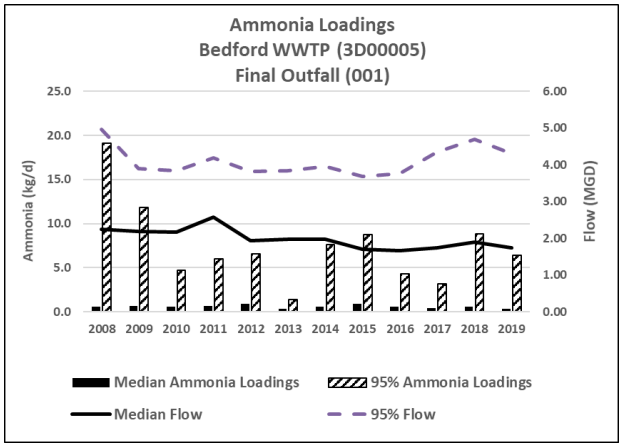
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

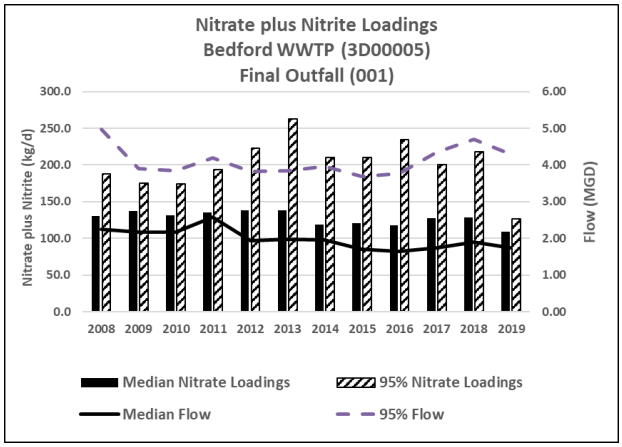
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2017	001	Phosphorus, Total (P)	7D Conc.	0.7	.72533	3/1/2017
March 2017	001	Phosphorus, Total (P)	7D Qty.	8.48	11.8018	3/1/2017
March 2017	001	Copper, Total Recoverable	30D Conc.	16	22.	3/1/2017
March 2017	001	Mercury, Total (Low Level)	30D Qty.	0.0001	.00016	3/1/2017
March 2017	001	Copper, Total Recoverable	30D Qty.	0.194	.31892	3/1/2017
March 2017	001	Mercury, Total (Low Level)	30D Conc.	7.0	11.38	3/1/2017
March 2017	001	Copper, Total Recoverable	1D Qty.	0.303	.31892	3/8/2017
June 2017	001	pH, Minimum	1D Conc.	6.5	6.4	6/14/2017
February 2018	001	Total Suspended Solids	7D Conc.	18	21.6666	2/15/2018
February 2018	001	Total Suspended Solids	7D Qty.	218	321.919	2/15/2018
April 2018	001	Phosphorus, Total (P)	7D Qty.	8.48	8.78939	4/1/2018
May 2018	001	Copper, Total Recoverable	30D Conc.	16	17.	5/1/2018

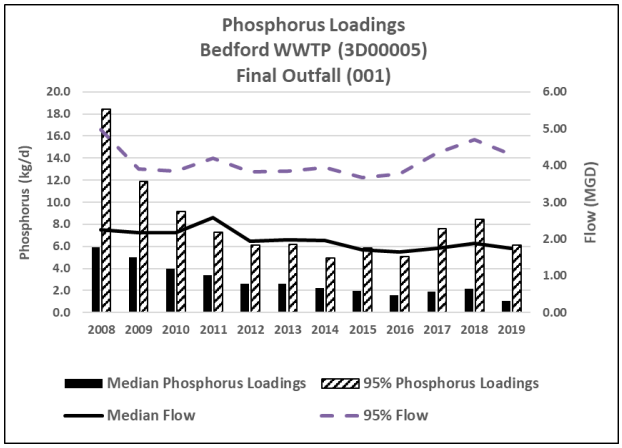
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
December 2018	001	Copper, Total Recoverable	30D Conc.	16	30.	12/1/2018
December 2018	001	Chronic Toxicity, *P. promelas*	30D Conc.	1.0	2.1	12/1/2018
December 2018	001	Copper, Total Recoverable	1D Conc.	25	30.	12/11/2018
February 2019	001	Total Suspended Solids	7D Qty.	218	297.418	2/8/2019
April 2019	001	Total Suspended Solids	7D Qty.	218	229.243	4/1/2019
April 2019	001	Phosphorus, Total (P)	7D Qty.	8.48	9.60306	4/1/2019
December 2019	001	Chronic Toxicity, *P. promelas*	30D Conc.	1.0	5.61	12/1/2019

Inspections of the Bedford WWTP were performed by Ohio EPA staff on September 13, 2018 and May 7, 2019. At the time of the inspections, the operation and maintenance of the treatment plant appeared be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







Northeast Ohio Regional Sanitary Sewer District (NEORSD) Combined Sewer Overflow Permit (3PA00002) - Various Locations

NEORSD serves all or parts of 62 communities and maintains approximately 326 miles of interceptor and inter-community relief sewers. Local sewers are operated and maintained by the respective communities. The entire collection is comprised of approximately 23 percent combined sewer and 77 percent separate sanitary sewers, with the majority of the combined sewers situated in the City of Cleveland. The NEORSD collection system is divided into three service areas, covering a total area of approximately 348.6 square miles, and tributary to the following treatment plants: Easterly Wastewater Treatment Plant (WWTP) Southerly Wastewater Treatment Center (WWTC), and Westerly WWTC. Both the Easterly WWTP and Westerly WWTC discharge directly to Lake Erie.

The NPDES permit currently authorizes the discharges of CSOs at certain locations within the combined sewer system. Of the existing 115 CSOs, 65 are located within the Cuyahoga River drainage basin: Cuyahoga River (24), Mill Creek (19), Big Creek (14), West Creek (1), Spring Creek (2), Wolf Creek (2), Treadway Creek (2), and Ohio Canal (1).

NEORSD is in the process of installing controls to reduce the impacts from wet-weather related treatment plant bypasses and CSOs. These controls are being installed in accordance with a federal Consent Decree that has been approved by both US EPA and Ohio EPA. The Consent Decree requires completion of the construction and full implementation of all remedial and control measures by 2035.

The Consent Decree contains provisions and schedules for implementation of the CSO LTCP. The provisions include the construction of seven tunnels to store combined sewage until the collection systems and WWTPs can accommodate the flow. In addition to the large tunnel projects, NEORSD will construct new storage facilities, upgrade several pump stations, regulators, and relief sewers, and separate sections of its sewer system. The Consent Decree also requires NEORSD to expand all three of its WWTPs, and construct or upgrade wet weather treatment facilities associated with the plants. When combined with existing upgraded controls and work already underway, approximately 98 percent of the total wet weather flows will be captured for treatment. When the CSO control measures required by the Consent Decree are implemented, NEORSD will eliminate or capture and treat nearly 4 billion gallons of the 4.5 billion gallons of annual CSO discharges estimated at the time the Consent Decree was entered.

Inspections of the NEORSD CSOs and control structures were inspected by Ohio EPA during 2019. The inspections determined that NEORSD was operating and maintaining its collection system in accordance with the conditions of the NPDES permit.

NEORSD Southerly WWTC (3PF00002)

NEORSD Southerly Wastewater Treatment Center (WWTC), located at 6000 Canal Road, Cuyahoga Heights, Cuyahoga County, Ohio discharges to the Cuyahoga River at RM 10.57. Southerly WWTC is the largest of the three NEORSD wastewater treatment plants serving the City of Cleveland and all or part of 61 suburban municipalities in Cuyahoga and Summit counties. Located in Cuyahoga Heights, the NEORSD Southerly WWTC serves a population of greater than 600,000. The collection system is comprised of both separate sanitary sewers (approx. 79.3%) and combined sewers (approx. 20.7%).

The 175 MGD facility provides treatment to an average daily flow of 125 MGD, with an existing peak secondary treatment capacity of 400 MGD. The treatment processes include screening, grease collection/separation, grit removal, primary settling, phosphorus removal (ferric chloride addition), two-stage activated sludge biological process (aka 1st and 2nd stage aeration), 1st and 2nd stage settling, tertiary media filtration, chlorination, and de-chlorination.

The treatment capacity of the 1st stage aeration system was expanded in 2017 - 2018 from 175 to 215 MGD; the 2nd stage aeration system is designed to treat flows up to 400 MGD. Flows up to 215 MGD receive two-stage biological treatment. Flows exceeding this capacity, and up to 400 MGD, are diverted around the 1st stage to the 400 MGD 2nd stage aeration system. The combined treated final effluent is discharged to the Cuyahoga River.

In 2020, NEORSD initiated operation of a 125 MGD chemically enhanced primary treatment (CEHRT) system to treat wet weather flows above the 400 MGD biological capacity. Future expansions of both the biological and CEHRT capacities are currently under review.

Solid stream processes include primary sludge gravity thickening, gravity belt thickening of secondary sludge, sludge storage, and dewatering using centrifugation. In 2013, NEORSD completed construction of the Renewable Energy Facility (REF) to replace its aging thermal conditioning system and multiple hearth incinerators. Dewatered solids removed from the Southerly WWTC's various treatment processes are incinerated in three fluidized-bed incinerators housed in the REF. Waste heat from the incineration process is recovered and used to generate electricity via a steam turbine generator. Presently, the slurried incinerator ash is pumped to a series of three ash storage lagoons prior to being removed and trucked to a beneficial reuse facility or landfill for disposal. On an as-needed basis, dewatered sludge can also be hauled directly to a landfill.

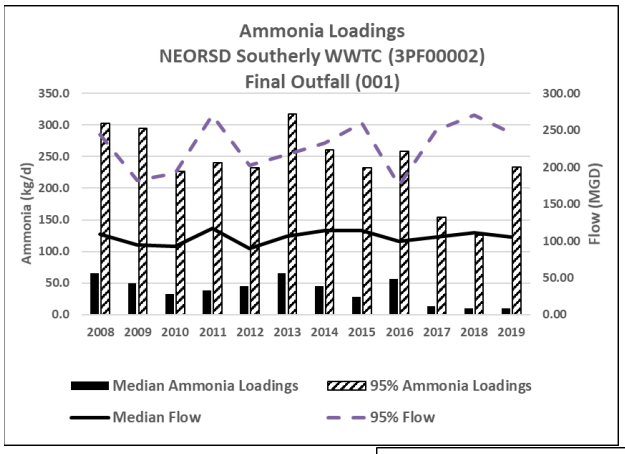
NEORSD implements an Ohio EPA-approved industrial pretreatment program. Based on information in the NPDES application submitted by NEORSD, there are 26 categorical and 5 non-categorical significant industrial users presently discharging to the NEORSD Southerly WWTC. The total industrial flow is approximately 0.99 MGD.

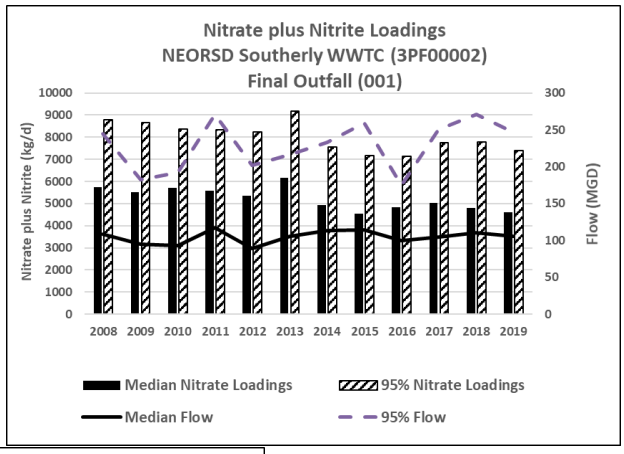
Compliance Summary

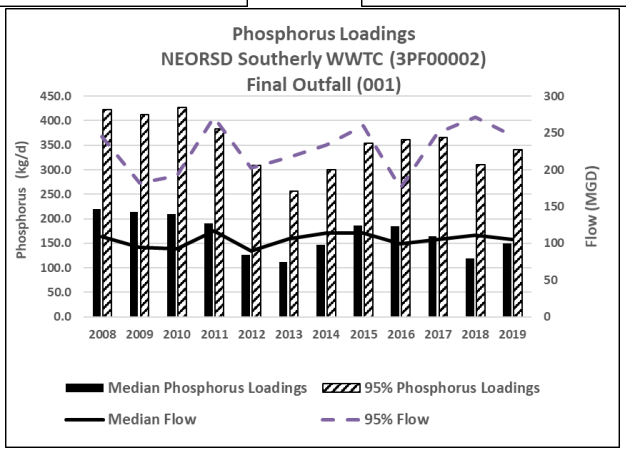
A review of DMR data for 2017-2019 revealed no effluent limitation violations during the study period.

The most recent inspections of the Southerly WWTC were performed by Ohio EPA staff on December 21, 2016 and June 21, 2017. At the time of the inspections, the operation and maintenance of the treatment plant appeared to be satisfactory. The visual quality of the final discharge was also determined to be satisfactory.

Pollutant Loadings







ArcelorMittal Steel Cleveland, Inc. (3ID00003)

ArcelorMittal Steel Cleveland, located at 3060 Eggers Avenue, Cleveland, Cuyahoga County, Ohio, discharges via multiple outfalls to the Cuyahoga River between RM 4.70 - 6.81. ArcelorMittal is an integrated steel mill consisting of iron making, steel making, and steel finishing operations. The plant operates two blast furnaces which feed two steelmaking facilities. These products serve the automotive, construction, pipe and tube, appliance, container and machinery markets. Below is a list of the facility's industrial processes:

- Blast Furnaces
- Basic Oxygen Furnaces
- Vacuum Degassing
- Continuous Casting
- Hot Forming
- Acid Pickling
- Cold Rolling
- Hot Dip Coating
- Ancillary Operations

Wastewater sources include process wastewater, miscellaneous non-process flows, storm water, and groundwater. The facility currently has 34 permitted outfalls; five (5) of these outfalls discharge treated process wastewater. Wastewater treatment systems utilized include neutralization, chemical precipitation, oil removal, and sedimentation.

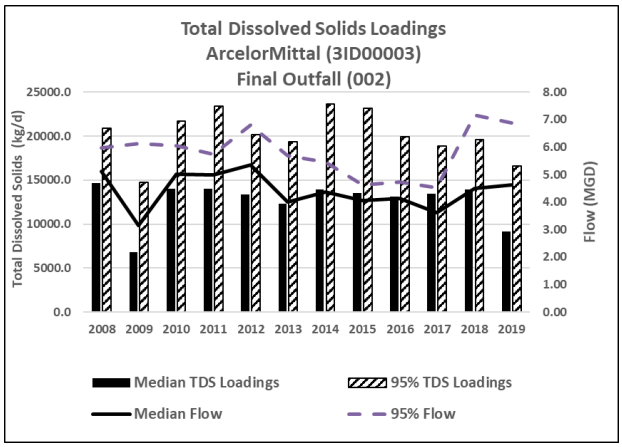
Compliance Summary

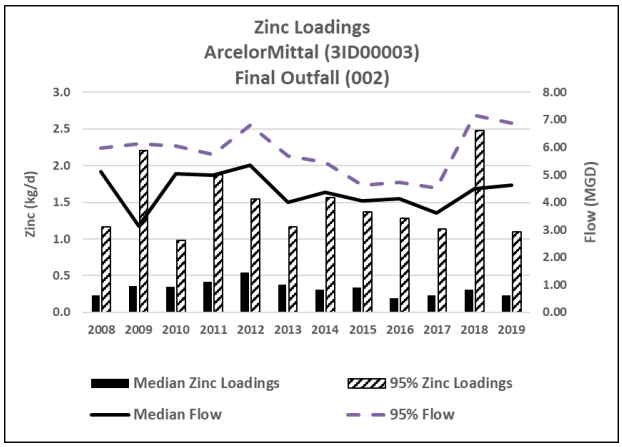
A review of DMR data for 2017-2019 revealed the following effluent limitation violations during the study period:

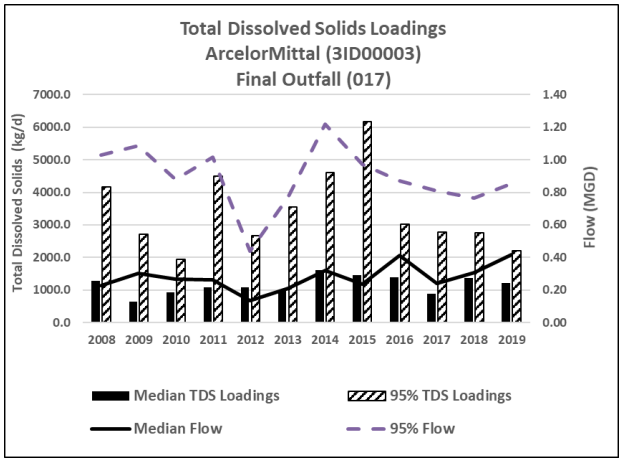
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2017	017	pH, Maximum	1D Conc	9.0	9.02	2/25/2017
August 2017	022	pH	1D Conc	6.5	6.	8/23/2017
October 2017	002	Acute Toxicity, *C. dubia*	1D Conc	1.0	1.3	10/17/2017
February 2018	002	Oil and Grease, Hexane	1D Conc	20	40.7	2/23/2018
March 2018	017	Zinc, Total Recoverable	1D Conc	470	546.	3/22/2018
October 2018	017	Zinc, Total (Zn)	1D Conc	470	1400.	10/18/2018
October 2018	022	pH	1D Conc	9.0	9.9	10/23/2018

The most recent inspection of the ArcelorMittal Steel facility was performed by Ohio EPA staff on November 15, 2016. At the time of the inspection, the operation and maintenance of the respective wastewater treatment and management systems appeared to be satisfactory. The visual quality of the discharges from the various outfalls was also determined to be satisfactory.

Pollutant Loadings







Appendix C – Macroinvertebrate Collection Results

Cuyahoga River Basin 2017-2018

Station: F01G02 CUYAHOGA R. @ CHARDON-WINDSOR RD. 0:00 8/2/17

Rivercode: 19-001-000 River Mile: 96.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
32	8	2	0	32		2		Marginally Good	NORMAL

	Taxa	Quant/Qual
03600	Oligochaeta	+
04666	Helobdella papillata	+
06201	Hyalella sp	+
08601	Hydrachnidia	+
11200	Callibaetis sp	+
11250	Neocloeon sp	+
11295	Cloeon dipterum	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
22001	Coenagrionidae	+
28410	Leucorrhinia sp	+
43300	Ranatra sp	+
44300	Pelocoris sp	+
45100	Palmacorixa sp	+
45900	Notonecta sp	+
51600	Polycentropus group	+
53800	Hydroptila sp	+
59728	Triaenodes marginatus	+
60900	Peltodytes sp	+
62100	Celina sp	+
66500	Enochrus sp	+
72700	Anopheles sp	+
74501	Ceratopogonidae	+
77125	Ablabesmyia monilis	+
77140	Ablabesmyia peleensis	+
77355	Clinotanypus pinguis	+
81210	Nanocladius (N.) alternantherae	+
83003	Dicrotendipes fumidus	+
85500	Paratanytarsus sp	+
94400	Fossaria sp	+
95100	Physella sp	+
96280	Planorbella (Pierosoma) trivolvis	+

Station: F01P51 CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608 0:00 9/6/17

Rivercode: 19-001-000 River Mile: 90.86

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
45	7	2	0	45	476	2	22	N/A	0.60 NORMAL

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01801	Turbellaria	6+
03040	Fredericella sp	3+
03121	Paludicella articulata	4+
03360	Plumatella sp	4+
03600	Oligochaeta	9+
04637	Placobdella phalera	3+
04664	Helobdella stagnalis	3+
04666	Helobdella papillata	24+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06201	Hyalella sp	66+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
22001	Coenagrionidae	2+
22300	Argia sp	+
23700	Anax sp	+
24900	Gomphus Complex	+
28955	Plathemis lydia	+
45400	Trichocorixa sp	+
45700	Buenoa sp	+
52200	Cheumatopsyche sp	10+
52530	Hydropsyche depravata group	+
59520	Oecetis cinerascens	2+
59555	Oecetis inconspicua complex sp F (sensu Floyd, 1995)	+
59580	Oecetis persimilis	2+
60300	Dineutus sp	+
60900	Peltodytes sp	+
65800	Berosus sp	3+
67800	Tropisternus sp	+
68702	Dubiraphia bivittata	18+
72700	Anopheles sp	+
72900	Culex sp	+
83040	Dicrotendipes neomodestus	+
83158	Endochironomus nigricans	+
83300	Glyptotendipes (G.) sp	53+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
85625	Rheotanytarsus sp	2+
89001	Sciomyzidae	+
92330	Valvata tricarinata tricarinata	1+
92615	Cipangopaludina japonica	+
93200	Hydrobiidae	261+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: F01P51 CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608 0:00 8/27/18

Rivercode: 19-001-000 River Mile: 90.86

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
36	3	1	0	45	48,282	1	14	N/A	0.70 LOW

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01801	Turbellaria	2,688+
03221	Pectinatella magnifica	1
03360	Plumatella sp	1
03600	Oligochaeta	38,400+
04637	Placobdella phalera	+
04664	Helobdella stagnalis	4+
04666	Helobdella papillata	3+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06201	Hyalella sp	320+
08601	Hydrachnidia	128
17200	Caenis sp	+
22001	Coenagrionidae	10+
27307	Epitheca (Epicordulia) princeps	1+
44300	Pelocoris sp	+
52200	Cheumatopsyche sp	242+
52530	Hydropsyche depravata group	5+
60300	Dineutus sp	+
60400	Gyrinus sp	+
65800	Berosus sp	+
68702	Dubiraphia bivittata	1+
74100	Simulium sp	+
77130	Ablabesmyia rhamphe group	136+
77500	Conchapelopia sp	136
77750	Thienemannimyia sp	68
78600	Pentaneura inconspicua	+
80420	Cricotopus (C.) bicinctus	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	136
81240	Nanocladius (N.) distinctus	817+
82770	Chironomus (C.) riparius group	+
83040	Dicrotendipes neomodestus	+
83051	Dicrotendipes simpsoni	68
83150	Endochironomus sp	136+
83360	Glyptotendipes (G.) testaceus	3,540+
84000	Parachironomus sp	+
84450	Polypedilum (Uresipedilum) flavum	545+
84800	Tribelos jucundum	+
85625	Rheotanytarsus sp	817+
92615	Cipangopaludina japonica	2+
93200	Hydrobiidae	22+
95100	Physella sp	7+
98200	Pisidium sp	1
98600	Sphaerium sp	47
99760	Ligumia nasuta	+

Station: F01A53 CUYAHOGA R. AT BURTON @ ST. RT. 87 0:00 9/11/17

Rivercode: 19-001-000 River Mile: 87.26

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
47	9	3	0	70	2,221	7	36	N/A	0.20 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	256+
01900	Nemertea	8
03600	Oligochaeta	237+
04637	Placobdella phalera	+
05800	Caecidotea sp	120+
06201	Hyalella sp	68+
06700	Crangonyx sp	174+
08260	Faxonius sanbornii sanbornii	1+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11125	Labiobaetis frondalis	+
11200	Callibaetis sp	+
13400	Stenacron sp	11+
14950	small Leptophlebiidae	11
16700	Tricorythodes sp	1
17200	Caenis sp	22+
21200	Calopteryx sp	2+
21700	Lestes sp	+
22001	Coenagrionidae	+
22300	Argia sp	1
24107	Nasiaeschna pentacantha	+
42700	Belostoma sp	+
45100	Palmacorixa sp	+
45400	Trichocorixa sp	+
45900	Notonecta sp	+
48220	Chauliodes rastricornis	+
51600	Polycentropus group	22
52200	Cheumatopsyche sp	165+
53800	Hydroptila sp	2
55200	Phryganea sp	+
59500	Oecetis sp	5
59520	Oecetis cinerascens	3+
59580	Oecetis persimilis	2
59728	Triaenodes marginatus	+
59950	Parapoynx sp	+
68601	Ancyronyx variegatus	14+
68702	Dubiraphia bivittata	+
68901	Macronychus glabratus	1+
72340	Dixella sp	+
72700	Anopheles sp	+
72900	Culex sp	+
77130	Ablabesmyia rhamphe group	58+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	23
77800	Helopelopia sp	23
78140	Labrundinia pilosella	12+
78600	Pentaneura inconspicua	12+
80370	Corynoneura lobata	90+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	47
82121	Thienemanniella lobapodema	20
82885	Cryptotendipes pseudotener	+
83002	Dicrotendipes modestus	+
83040	Dicrotendipes neomodestus	12
83051	Dicrotendipes simpsoni	47
83158	Endochironomus nigricans	12
83840	Microtendipes pedellus group	70
83860	Microtendipes rydalensis	93
84000	Parachironomus sp	12
84155	Paralauterborniella nigrohalteralis	+
84300	Phaenopsectra obediens group	+
84460	Polypedilum (P.) fallax group	12
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	47
84790	Tribelos fuscicorne	105
84800	Tribelos jucundum	233
85615	Rheotanytarsus pellucidus	128+
85821	Tanytarsus glabrescens group sp 7	35
93200	Hydrobiidae	4+
94400	Fossaria sp	+

Station: F01W77 CUYAHOGA R. @ RUSSELL PARK 0:00 9/11/17

Rivercode: 19-001-000 River Mile: 83.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
38	3	0	0	71	2,456	3	32	Good	0.21 NORMAL

	Taxa	Quant/Qual
01320	Hydra sp	10
01801	Turbellaria	1+
03600	Oligochaeta	65+
04666	Helobdella papillata	+
05800	Caecidotea sp	10+
06201	Hyalella sp	178+
06700	Crangonyx sp	128
08260	Faxonius sanbornii sanbornii	+
11200	Callibaetis sp	+
13400	Stenacron sp	1
13521	Stenonema femoratum	2
14950	small Leptophlebiidae	43
17200	Caenis sp	18+
21200	Calopteryx sp	1
21700	Lestes sp	+
22001	Coenagrionidae	+
22300	Argia sp	1
24107	Nasiaeschna pentacantha	+
28208	Erythemis simplicicollis	+
42700	Belostoma sp	+
44300	Pelocoris sp	+
45100	Palmacorixa sp	+
45700	Buenoa sp	+
51206	Cyrnellus fraternus	102
51300	Neureclipsis sp	12
51600	Polycentropus group	20
52200	Cheumatopsyche sp	96
55200	Phryganea sp	+
60300	Dineutus sp	2+
60400	Gyrinus sp	+
68702	Dubiraphia bivittata	+
68901	Macronychus glabratus	1
72600	Aedes sp	+
72700	Anopheles sp	+
72900	Culex sp	+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	13
77130	Ablabesmyia rhamphe group	248
77355	Clinotanypus pinguis	+
77750	Thienemannimyia sp	26
77800	Helopelopia sp	26
78600	Pentaneura inconspicua	13
78655	Procladius (Holotanypus) sp	+
79030	Tanypus punctipennis (sensu Roback, 1977)	+
80370	Corynoneura lobata	8+
80420	Cricotopus (C.) bicinctus	+
80510	Cricotopus (Isocladius) sylvestris group	+
81631	Parakiefferiella n.sp 1	26
81825	Rheocricotopus (Psilocricotopus) robacki	39
82121	Thienemanniella lobapodema	59
83003	Dicrotendipes fumidus	26
83040	Dicrotendipes neomodestus	104+
83051	Dicrotendipes simpsoni	13+
83158	Endochironomus nigricans	78+
83840	Microtendipes pedellus group	104
83860	Microtendipes rydalensis	13
84410	Polypedilum (Pentapedilum) tritum	+
84450	Polypedilum (Uresipedilum) flavum	13
84460	Polypedilum (P.) fallax group	117
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	248
84790	Tribelos fuscicorne	352
84800	Tribelos jucundum	117
85500	Paratanytarsus sp	26+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	26
93200	Hydrobiidae	14+
94400	Fossaria sp	1
95100	Physella sp	1
96120	Menetus (Micromenetus) dilatatus	53
96900	Ferrissia sp	1

Station: 502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD. 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 75.83

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
52	17	12	0	75	15,300	24	48	N/A	0.90 ABOVE NO

	Taxa	Quant/Qual
01320	Hydra sp	17
01801	Turbellaria	50+
03121	Paludicella articulata	1
03360	Plumatella sp	1+
03600	Oligochaeta	40+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	64
11130	Baetis intercalaris	19+
11150	Labiobaetis propinquus	+
11155	Iswaeon anoka	+
12200	Isonychia sp	8+
13400	Stenacron sp	595+
13521	Stenonema femoratum	76+
13570	Maccaffertium terminatum	1
14950	small Leptophlebiidae	8
16700	Tricorythodes sp	490+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
45400	Trichocorixa sp	+
48410	Corydalus cornutus	7
50315	Chimarra obscura	2,288+
51206	Cyrnellus fraternus	1
51300	Neureclipsis sp	125
52200	Cheumatopsyche sp	4,451+
52520	Hydropsyche bidens	104
52530	Hydropsyche depravata group	52+
52560	Hydropsyche orris	337
52570	Hydropsyche simulans	450
53800	Hydroptila sp	19+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
59410	Nectopsyche diarina	+
59520	Oecetis cinerascens	+
59580	Oecetis persimilis	164+
60300	Dineutus sp	1+
68601	Ancyronyx variegatus	+
68901	Macronychus glabratus	32
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	1,633+
77750	Thienemannimyia sp	180
77800	Helopelopia sp	90+
78140	Labrundinia pilosella	+
78600	Pentaneura inconspicua	+
80363	Corynoneura sp. 12	16
80410	Cricotopus (C.) sp	90+
81825	Rheocricotopus (Psilocricotopus) robacki	450
82101	Thienemanniella taurocapita	32
82121	Thienemanniella lobapodema	32
82130	Thienemanniella similis	32
82220	Tvetenia discoloripes group	225+
82822	Cryptochironomus eminentia	+
83040	Dicrotendipes neomodestus	+
83158	Endochironomus nigricans	45
83300	Glyptotendipes (G.) sp	90
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	45
83860	Microtendipes rydalensis	495+
84010	Parachironomus abortivus (sensu Simpson & Bode, 198	+
84450	Polypedilum (Uresipedilum) flavum	1,215+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	90+
85265	Cladotanytarsus vanderwulpi group sp 5	+
85615	Rheotanytarsus pellucidus	135
85625	Rheotanytarsus sp	900+
85800	Tanytarsus sp	+
87540	Hemerodromia sp	104
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: F01W22 CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP. 0:00 9/14/17

Rivercode: 19-001-000 River Mile: 69.96

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
77	22	27	1	91	6,067	32	52	N/A	2.30 NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
01320	Hydra sp	8
01418	Craspedacusta sowerbii	2
03121	Paludicella articulata	10
03360	Plumatella sp	1
03451	Urnatella gracilis	3
03600	Oligochaeta	130+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11130	Baetis intercalaris	124+
11150	Labiobaetis propinquus	+
11155	Iswaeon anoka	+
12200	Isonychia sp	54+
13400	Stenacron sp	38+
13510	Maccaffertium exiguum	362+
13561	Maccaffertium pulchellum	529+
13570	Maccaffertium terminatum	250+
14950	small Leptophlebiidae	16
16700	Tricorythodes sp	8+
17200	Caenis sp	3+
18700	Hexagenia sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23905	Boyeria grafiana	+
42700	Belostoma sp	+
43300	Ranatra sp	+
45400	Trichocorixa sp	+
47600	Sialis sp	+
48410	Corydalus cornutus	7+
50315	Chimarra obscura	523+
50906	Psychomyia flavida	+
52200	Cheumatopsyche sp	654+
52430	Ceratopsyche morosa group	16
52530	Hydropsyche depravata group	14
52540	Hydropsyche dicantha	2
52550	Hydropsyche frisoni	191+
52570	Hydropsyche simulans	21
52620	Macrostemum zebratum	2+
53800	Hydroptila sp	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
59310	Mystacides sepulchralis	+
59580	Oecetis persimilis	8+
59720	Triaenodes ignitus	+
60300	Dineutus sp	+
60400	Gyrinus sp	+
67500	Laccobius sp	+
68075	Psephenus herricki	+
68700	Dubiraphia sp	+
68901	Macronychus glabratus	23+
69400	Stenelmis sp	64+
71100	Hexatoma sp	+
74100	Simulium sp	693+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	+
77150	Ablabesmyia simpsoni	+
77750	Thienemannimyia sp	73
77800	Helopelopia sp	24+
80310	Cardiocladius obscurus	+
80370	Corynoneura lobata	2+
80410	Cricotopus (C.) sp	24+
80420	Cricotopus (C.) bicinctus	24+
81825	Rheocricotopus (Psilocricotopus) robacki	750+
82121	Thienemanniella lobapodema	47+
82141	Thienemanniella xena	29
82220	Tvetenia discoloripes group	48+
82885	Cryptotendipes pseudotener	+
83300	Glyptotendipes (G.) sp	+
83410	Harnischia curtilamellata	+
83840	Microtendipes pedellus group	+
83860	Microtendipes rydalensis	121+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	24+
84460	Polypedilum (P.) fallax group	24
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84888	Xenochironomus xenolabis	+
85261	Cladotanytarsus vanderwulpi	+
85615	Rheotanytarsus pellucidus	121+
85625	Rheotanytarsus sp	992+
85720	Stempellinella fimbriata	+
85840	Tanytarsus sepp	+
86100	Chrysops sp	+
87540	Hemerodromia sp	8
93900	Elimia sp	+
95100	Physella sp	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	+
98600	Sphaerium sp	+

Station: F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303 0:00 9/14/17

Rivercode: 19-001-000 River Mile: 64.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
79	31	32	0	96	2,400	36	42	N/A	1.90 NORMAL

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01801	Turbellaria	18+
02600	Nematomorpha	5
03600	Oligochaeta	80+
04666	Helobdella papillata	1
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	1+
08255	Faxonius rusticus x sanbornii	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	9
11014	Acentrella turbida	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	332+
11150	Labiobaetis propinquus	+
11155	Iswaeon anoka	24+
11200	Callibaetis sp	+
12200	Isonychia sp	64+
13000	Leucrocuta sp	1
13400	Stenacron sp	74+
13510	Maccaffertium exiguum	16+
13561	Maccaffertium pulchellum	44+
13570	Maccaffertium terminatum	47+
16700	Tricorythodes sp	32+
17200	Caenis sp	23+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
34410	Paragnetina media	2
34710	Agnetina capitata	4+
42700	Belostoma sp	+
45900	Notonecta sp	+
48410	Corydalus cornutus	2+
50301	Chimarra aterrima	6+
50315	Chimarra obscura	16+
50804	Lype diversa	25+
50906	Psychomyia flavida	+
51300	Neureclipsis sp	+
51400	Nyctiophylax sp	+
52200	Cheumatopsyche sp	40+
52430	Ceratopsyche morosa group	21+
52530	Hydropsyche depravata group	2+
52550	Hydropsyche frisoni	3
52620	Macrostemum zebratum	+
53800	Hydroptila sp	9
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
58505	Helicopsyche borealis	+
59120	Ceraclea flava or C. neffi	+
59580	Oecetis persimilis	+
59720	Triaenodes ignitus	+
59740	Triaenodes perna	+
59911	Crambidae	2
59970	Petrophila sp	+
60300	Dineutus sp	+
60900	Peltodytes sp	+
61101	Acilius fraternus	+
68075	Psephenus herricki	+
68201	Scirtidae	+
68601	Ancyronyx variegatus	9
68700	Dubiraphia sp	+
68901	Macronychus glabratus	22+
69400	Stenelmis sp	+
71100	Hexatoma sp	+
72340	Dixella sp	+
72700	Anopheles sp	+
74100	Simulium sp	105+
77355	Clinotanypus pinguis	+
77750	Thienemannimyia sp	+
78450	Nilotanypus fimbriatus	24
80310	Cardiocladius obscurus	145+
80370	Corynoneura lobata	46
80410	Cricotopus (C.) sp	9
80420	Cricotopus (C.) bicinctus	9+
80440	Cricotopus (C.) trifascia	26
80500	Cricotopus (Isocladius) reversus group	9
81825	Rheocricotopus (Psilocricotopus) robacki	189+
82130	Thienemanniella similis	22+
82141	Thienemanniella xena	156
82820	Cryptochironomus sp	+
83410	Harnischia curtilamellata	+
83860	Microtendipes rydalensis	+
84450	Polypedilum (Uresipedilum) flavum	9
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84888	Xenochironomus xenolabis	+
85615	Rheotanytarsus pellucidus	26+
85625	Rheotanytarsus sp	409+
85800	Tanytarsus sp	+
87540	Hemerodromia sp	149+
93200	Hydrobiidae	+
93900	Elimia sp	2
96900	Ferrissia sp	131+
97601	Corbicula fluminea	+
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: F01P29 CUYAHOGA R. DST. LAKE ROCKWELL @ RAVENNA RD. 0:00 9/6/17

Rivercode: 19-001-000 River Mile: 57.67

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
41	9	2	0	59	8,368	5	28	Marginally Good	0.03 LOW

	Taxa	Quant/Qual
00401	Spongillidae	+
01320	Hydra sp	28
01801	Turbellaria	579+
01900	Nemertea	177
02600	Nematomorpha	5
03040	Fredericella sp	7
03121	Paludicella articulata	4
03360	Plumatella sp	4
03600	Oligochaeta	245+
04666	Helobdella papillata	17+
05800	Caecidotea sp	+
06201	Hyalella sp	23+
06700	Crangonyx sp	+
08601	Hydrachnidia	+
11200	Callibaetis sp	+
13400	Stenacron sp	6+
13521	Stenonema femoratum	+
16700	Tricorythodes sp	43+
17200	Caenis sp	16+
22001	Coenagrionidae	+
22300	Argia sp	+
51206	Cyrnellus fraternus	61
51600	Polycentropus group	32
52200	Cheumatopsyche sp	97+
54200	Orthotrichia sp	64
59310	Mystacides sepulchralis	+
59500	Oecetis sp	16
59520	Oecetis cinerascens	1+
59570	Oecetis nocturna	+
59580	Oecetis persimilis	8
60300	Dineutus sp	38+
60400	Gyrinus sp	+
60900	Peltodytes sp	+
63300	Hydroporini	+
68201	Scirtidae	+
68700	Dubiraphia sp	1+
77130	Ablabesmyia rhamphe group	+
78600	Pentaneura inconspicua	238
80370	Corynoneura lobata	4
83002	Dicrotendipes modestus	+
83040	Dicrotendipes neomodestus	143+
83158	Endochironomus nigricans	+
83160	Endochironomus subtendens	143+
83300	Glyptotendipes (G.) sp	5,733+
84000	Parachironomus sp	+
84450	Polypedilum (Uresipedilum) flavum	382
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85500	Paratanytarsus sp	47+
85625	Rheotanytarsus sp	43
87540	Hemerodromia sp	+
93200	Hydrobiidae	21+
95907	Gyraulus (Torquis) parvus	17+
96120	Menetus (Micromenetus) dilatatus	55
96900	Ferrissia sp	2+
97601	Corbicula fluminea	48
97710	Dreissena polymorpha	+
98001	Sphaeriidae	20
99100	Pyganodon grandis	+

Station: F01W70 CUYAHOGA R. @ STANDING ROCK CEMETERY (FREE FLOWING) 0:00 9/6/17

Rivercode: 19-001-000 River Mile: 55.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
70	23	20	0	86	6,118	23	40	N/A	0.70 LOW

	Taxa	Quant/Qual
00800	Spongilla sp	+
01320	Hydra sp	33
01801	Turbellaria	78+
03360	Plumatella sp	10
03600	Oligochaeta	105+
04666	Helobdella papillata	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08250	Faxonius rusticus	+
08255	Faxonius rusticus x sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	123+
11150	Labiobaetis propinquus	+
13400	Stenacron sp	1+
13510	Maccaffertium exiguum	16
13521	Stenonema femoratum	16
13561	Maccaffertium pulchellum	95+
13570	Maccaffertium terminatum	127+
16700	Tricorythodes sp	45+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
43300	Ranatra sp	+
45100	Palmacorixa sp	+
47600	Sialis sp	+
50804	Lype diversa	8+
50906	Psychomyia flavida	+
51300	Neureclipsis sp	4+
51600	Polycentropus group	+
52200	Cheumatopsyche sp	1,865+
52430	Ceratopsyche morosa group	756+
52520	Hydropsyche bidens	203+
52530	Hydropsyche depravata group	46+
52560	Hydropsyche orris	363+
53800	Hydroptila sp	16+
54000	Leucotrichia pictipes	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
59410	Nectopsyche diarina	+
59520	Oecetis cinerascens	+
60300	Dineutus sp	+
66200	Cymbiodyta sp	1
68025	Ectopria sp	+
68130	Helichus sp	1
68201	Scirtidae	8
68601	Ancyronyx variegatus	1+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	10+
69400	Stenelmis sp	+
74100	Simulium sp	4+
74673	Atrichopogon websteri	3
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
78450	Nilotanypus fimbriatus	8
78600	Pentaneura inconspicua	24+
78655	Procladius (Holotanypus) sp	+
80370	Corynoneura lobata	16
81690	Paratrichocladius sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	24
82141	Thienemanniella xena	24
82220	Tvetenia discoloripes group	121
82820	Cryptochironomus sp	+
82885	Cryptotendipes pseudotener	+
83002	Dicrotendipes modestus	+
83040	Dicrotendipes neomodestus	+
83158	Endochironomus nigricans	+
83300	Glyptotendipes (G.) sp	24+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	747+
84470	Polypedilum (P.) illinoense	674+
84540	Polypedilum (Tripodura) scalaenum group	+
85265	Cladotanytarsus vanderwulpi group sp 5	+
85615	Rheotanytarsus pellucidus	24
85625	Rheotanytarsus sp	434+
87540	Hemerodromia sp	14
89716	Limnophora discreta	25
93200	Hydrobiidae	+
93900	Elimia sp	+
95100	Physella sp	+
95907	Gyraulus (Torquis) parvus	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	21+
97710	Dreissena polymorpha	+

Station: F01S17 CUYAHOGA R. UPST. KENT WWTP @ FULLER PARK 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 54.32

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
58	16	17	0	69	5,093	21	42	N/A	0.90 NORMAL

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01200	Cordylophora caspia	+
01801	Turbellaria	50+
03360	Plumatella sp	+
03600	Oligochaeta	48+
05800	Caecidotea sp	16+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	16
11120	Baetis flavistriga	51+
11130	Baetis intercalaris	823+
11620	Paracloeodes minutus	+
13400	Stenacron sp	68+
13510	Maccaffertium exiguum	131
13561	Maccaffertium pulchellum	27+
13570	Maccaffertium terminatum	10
16700	Tricorythodes sp	50+
17200	Caenis sp	+
21300	Hetaerina sp	+
42700	Belostoma sp	+
49200	Climacia areolaris	+
50315	Chimarra obscura	24+
50906	Psychomyia flavida	8+
51300	Neureclipsis sp	10+
51600	Polycentropus group	+
52200	Cheumatopsyche sp	923+
52430	Ceratopsyche morosa group	454+
52530	Hydropsyche depravata group	15
53400	Protoptila sp	+
54000	Leucotrichia pictipes	+
59580	Oecetis persimilis	+
68025	Ectopria sp	+
68601	Ancyronyx variegatus	4+
68901	Macronychus glabratus	46+
69400	Stenelmis sp	9+
72700	Anopheles sp	+
74100	Simulium sp	992+
77120	Ablabesmyia mallochi	+
77130	Ablabesmyia rhamphe group	+
77750	Thienemannimyia sp	44+
77800	Helopelopia sp	15+
78450	Nilotanypus fimbriatus	176+
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	+
80370	Corynoneura lobata	25
80430	Cricotopus (C.) tremulus group	+
81825	Rheocricotopus (Psilocricotopus) robacki	15
82101	Thienemanniella taurocapita	+
82130	Thienemanniella similis	9
82141	Thienemanniella xena	223
82220	Tvetenia discoloripes group	132
82820	Cryptochironomus sp	+
82885	Cryptotendipes pseudotener	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84450	Polypedilum (Uresipedilum) flavum	293+
84460	Polypedilum (P.) fallax group	29
84470	Polypedilum (P.) illinoense	+
84480	Polypedilum (P.) laetum group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	+
85625	Rheotanytarsus sp	351+
87540	Hemerodromia sp	1
93200	Hydrobiidae	+
93900	Elimia sp	+
96900	Ferrissia sp	4+
97601	Corbicula fluminea	1+
97710	Dreissena polymorpha	+
99860	Lampsilis siliquoidea	+

Station: 300518 CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING) 0:00 9/20/17

Rivercode: 19-001-000 River Mile: 52.50

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
67	18	13	0	84	5,762	21	54	N/A	1.00 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	24+
03600	Oligochaeta	16+
04666	Helobdella papillata	+
04686	Placobdella papillifera	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	51+
11130	Baetis intercalaris	442+
11155	Iswaeon anoka	12
11200	Callibaetis sp	+
13400	Stenacron sp	172+
13510	Maccaffertium exiguum	267+
13521	Stenonema femoratum	+
13550	Maccaffertium mexicanum integrum	2
13561	Maccaffertium pulchellum	414+
13570	Maccaffertium terminatum	845+
16700	Tricorythodes sp	304+
21200	Calopteryx sp	+
21300	Hetaerina sp	1+
22001	Coenagrionidae	+
23700	Anax sp	+
42700	Belostoma sp	+
45400	Trichocorixa sp	+
45700	Buenoa sp	+
47600	Sialis sp	+
50804	Lype diversa	45
50906	Psychomyia flavida	+
51300	Neureclipsis sp	49
51600	Polycentropus group	+
52200	Cheumatopsyche sp	940+
52430	Ceratopsyche morosa group	776+
52530	Hydropsyche depravata group	6+
53800	Hydroptila sp	+
54000	Leucotrichia pictipes	+
59300	Mystacides sp	+
59500	Oecetis sp	1
59720	Triaenodes ignitus	+
60900	Peltodytes sp	+
67500	Laccobius sp	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	47+
69400	Stenelmis sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	248+
77750	Thienemannimyia sp	56
77800	Helopelopia sp	45
78450	Nilotanypus fimbriatus	34
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	11
80410	Cricotopus (C.) sp	11+
80420	Cricotopus (C.) bicinctus	113+
80430	Cricotopus (C.) tremulus group	11
80510	Cricotopus (Isocladius) sylvestris group	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	23+
81240	Nanocladius (N.) distinctus	34
82070	Synorthocladius semivirens	11
82101	Thienemanniella taurocapita	52+
82130	Thienemanniella similis	32
82220	Tvetenia discoloripes group	192
83002	Dicrotendipes modestus	+
83040	Dicrotendipes neomodestus	23
83158	Endochironomus nigricans	+
83410	Harnischia curtilamellata	+
84450	Polypedilum (Uresipedilum) flavum	158+
84460	Polypedilum (P.) fallax group	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84790	Tribelos fuscicorne	+
85615	Rheotanytarsus pellucidus	11
85625	Rheotanytarsus sp	192+
86100	Chrysops sp	+
87540	Hemerodromia sp	8
89001	Sciomyzidae	+
93200	Hydrobiidae	+
93900	Elimia sp	+
95100	Physella sp	+
96900	Ferrissia sp	45+
96930	Laevapex fuscus	+
97601	Corbicula fluminea	38+
97710	Dreissena polymorpha	+

Station: 300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING) 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 51.00

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
54	16	14	0	72	7,189	17	44	N/A	1.90 NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
01320	Hydra sp	8
01801	Turbellaria	71+
03600	Oligochaeta	+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08601	Hydrachnidia	+
11014	Acentrella turbida	10
11120	Baetis flavistriga	11
11130	Baetis intercalaris	1,004+
11155	Iswaeon anoka	1+
13400	Stenacron sp	2+
13510	Maccaffertium exiguum	14+
13561	Maccaffertium pulchellum	136+
13570	Maccaffertium terminatum	69+
16700	Tricorythodes sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23700	Anax sp	+
27307	Epitheca (Epicordulia) princeps	+
43300	Ranatra sp	+
43570	Neoplea sp	+
44501	Corixidae	+
50906	Psychomyia flavida	8+
52200	Cheumatopsyche sp	199+
52430	Ceratopsyche morosa group	2,879+
52450	Ceratopsyche sparna	6
52530	Hydropsyche depravata group	6
52540	Hydropsyche dicantha	3
53400	Protoptila sp	+
53800	Hydroptila sp	+
54000	Leucotrichia pictipes	+
59300	Mystacides sp	+
59520	Oecetis cinerascens	+
59720	Triaenodes ignitus	+
60900	Peltodytes sp	+
65800	Berosus sp	+
68700	Dubiraphia sp	+
68901	Macronychus glabratus	7+
69400	Stenelmis sp	+
70600	Antocha sp	+
72700	Anopheles sp	+
74100	Simulium sp	1,568+
74501	Ceratopogonidae	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	8
80310	Cardiocladius obscurus	32+
80370	Corynoneura lobata	32
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	8
81240	Nanocladius (N.) distinctus	16
81270	Nanocladius (N.) spiniplenus	8
81825	Rheocricotopus (Psilocricotopus) robacki	16
82121	Thienemanniella lobapodema	21
82130	Thienemanniella similis	25+
82141	Thienemanniella xena	71
82220	Tvetenia discoloripes group	418
83158	Endochironomus nigricans	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	289+
84460	Polypedilum (P.) fallax group	8
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84800	Tribelos jucundum	8
85625	Rheotanytarsus sp	24
85821	Tanytarsus glabrescens group sp 7	+
93200	Hydrobiidae	+
95100	Physella sp	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	203+
97710	Dreissena polymorpha	+

Station: 300516 CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOWING) 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 50.00

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
59	17	17	0	59		17		Very Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11155	Iswaeon anoka	+
11670	Procloeon viridoculare	+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	+
13561	Maccaffertium pulchellum	+
13570	Maccaffertium terminatum	+
16700	Tricorythodes sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
45400	Trichocorixa sp	+
50804	Lype diversa	+
50906	Psychomyia flavida	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
53400	Protoptila sp	+
53800	Hydroptila sp	+
59570	Oecetis nocturna	+
68025	Ectopria sp	+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	+
80360	Corynoneura floridaensis	+
80370	Corynoneura lobata	+
80420	Cricotopus (C.) bicinctus	+
80440	Cricotopus (C.) trifascia	+
82070	Synorthocladius semivirens	+
82130	Thienemanniella similis	+
82220	Tvetenia discoloripes group	+
82730	Chironomus (C.) decorus group	+
82822	Cryptochironomus eminentia	+
82824	Cryptochironomus ponderosus	+
83040	Dicrotendipes neomodestus	+
83158	Endochironomus nigricans	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
93200	Hydrobiidae	+
93900	Elimia sp	+
95100	Physella sp	+
95907	Gyraulus (Torquis) parvus	+
96900	Ferrissia sp	+
97710	Dreissena polymorpha	+

Station: 200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 48.70

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
39	13	13	0	61	9,273	19	48	N/A	1.20 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	15+
03600	Oligochaeta	16
04664	Helobdella stagnalis	1
04666	Helobdella papillata	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	16
11120	Baetis flavistriga	2
11130	Baetis intercalaris	446+
11155	Iswaeon anoka	61+
11620	Paracloeodes minutus	+
13400	Stenacron sp	90
13510	Maccaffertium exiguum	35
13550	Maccaffertium mexicanum integrum	+
13561	Maccaffertium pulchellum	106+
13570	Maccaffertium terminatum	1,444+
16700	Tricorythodes sp	25+
22001	Coenagrionidae	+
22300	Argia sp	+
27307	Epitheca (Epicordulia) princeps	+
34700	Agnetina sp	+
42700	Belostoma sp	+
44501	Corixidae	+
51300	Neureclipsis sp	8
51600	Polycentropus group	+
52200	Cheumatopsyche sp	3,563+
52430	Ceratopsyche morosa group	1,731+
52530	Hydropsyche depravata group	3
53400	Protoptila sp	+
53800	Hydroptila sp	33+
68601	Ancyronyx variegatus	4
68901	Macronychus glabratus	53+
69400	Stenelmis sp	35+
70600	Antocha sp	+
72700	Anopheles sp	+
74100	Simulium sp	112+
78450	Nilotanypus fimbriatus	37
78750	Rheopelopia paramaculipennis	75
80310	Cardiocladius obscurus	+
80360	Corynoneura floridaensis	32
81825	Rheocricotopus (Psilocricotopus) robacki	12
82101	Thienemanniella taurocapita	18
82141	Thienemanniella xena	9
82220	Tvetenia discoloripes group	486
82820	Cryptochironomus sp	+
83158	Endochironomus nigricans	+
83300	Glyptotendipes (G.) sp	12
84450	Polypedilum (Uresipedilum) flavum	473+
84460	Polypedilum (P.) fallax group	12
84520	Polypedilum (Tripodura) halterale group	25
84540	Polypedilum (Tripodura) scalaenum group	37+
85625	Rheotanytarsus sp	150+
85800	Tanytarsus sp	25
85821	Tanytarsus glabrescens group sp 7	12
93200	Hydrobiidae	+
93900	Elimia sp	+
96900	Ferrissia sp	19+
97601	Corbicula fluminea	40
97710	Dreissena polymorpha	+

Station: 502150 CUYAHOGA R. AT AKRON @ CUYAHOGA ST. 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 42.60

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
38	11	11	0	56	10,477	12	40	N/A	1.10 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	7+
03600	Oligochaeta	200
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	32+
11014	Acentrella turbida	+
11120	Baetis flavistriga	88+
11130	Baetis intercalaris	2,317+
13400	Stenacron sp	119+
13570	Maccaffertium terminatum	27+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	1+
23909	Boyeria vinosa	+
24107	Nasiaeschna pentacantha	+
42700	Belostoma sp	+
50315	Chimarra obscura	336+
50906	Psychomyia flavida	32+
52200	Cheumatopsyche sp	1,497+
52430	Ceratopsyche morosa group	1,079+
53800	Hydroptila sp	163
54000	Leucotrichia pictipes	+
59700	Triaenodes sp	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	1
68901	Macronychus glabratus	72+
69400	Stenelmis sp	24+
74100	Simulium sp	40
77500	Conchapelopia sp	315
77800	Helopelopia sp	14+
78450	Nilotanypus fimbriatus	315
80310	Cardiocladius obscurus	90+
80370	Corynoneura lobata	32
80410	Cricotopus (C.) sp	135
80420	Cricotopus (C.) bicinctus	180
80430	Cricotopus (C.) tremulus group	90
80440	Cricotopus (C.) trifascia	135+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	45
81270	Nanocladius (N.) spiniplenus	45
82101	Thienemanniella taurocapita	309
82141	Thienemanniella xena	389
82220	Tvetenia discoloripes group	405+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	45
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	360+
85625	Rheotanytarsus sp	1,439
85821	Tanytarsus glabrescens group sp 7	90
87501	Empididae	1
93900	Elimia sp	+
95100	Physella sp	+
96900	Ferrissia sp	8+
97601	Corbicula fluminea	+
97710	Dreissena polymorpha	+

Station: F01W64 CUYAHOGA R. 0.55 MI. DST. L. CUYAHOGA R. @ GOLF COURSE 0:00 9/4/18

Rivercode: 19-001-000 River Mile: 41.71

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
51	14	12	0	51		12		Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04962	Erpobdella fervida	+
06201	Hyalella sp	+
06810	Gammarus fasciatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11155	Iswaeon anoka	+
13400	Stenacron sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
42700	Belostoma sp	+
50315	Chimarra obscura	+
51300	Neureclipsis sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53400	Protoptila sp	+
53800	Hydroptila sp	+
54000	Leucotrichia pictipes	+
59400	Nectopsyche sp	+
68601	Ancyronyx variegatus	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	+
80420	Cricotopus (C.) bicinctus	+
80440	Cricotopus (C.) trifascia	+
82220	Tvetenia discoloripes group	+
83003	Dicrotendipes fumidus	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84612	Saetheria tylus	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
87540	Hemerodromia sp	+
93900	Elimia sp	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	+
98600	Sphaerium sp	+

Station: 200042 CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 39.70

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	13	15	0	63	7,594	20	48	N/A	1.50 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	2+
03360	Plumatella sp	+
03600	Oligochaeta	49+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	1+
06810	Gammarus fasciatus	96+
08250	Faxonius rusticus	+
08601	Hydrachnidia	8+
11120	Baetis flavistriga	212+
11130	Baetis intercalaris	1,007+
13400	Stenacron sp	19+
13510	Maccaffertium exiguum	4
13570	Maccaffertium terminatum	39+
16700	Tricorythodes sp	18
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22300	Argia sp	+
26700	Macromia sp	+
48410	Corydalus cornutus	+
50315	Chimarra obscura	26+
50906	Psychomyia flavida	1+
51300	Neureclipsis sp	10+
51600	Polycentropus group	+
52200	Cheumatopsyche sp	930+
52430	Ceratopsyche morosa group	976+
52450	Ceratopsyche sparna	48
53400	Protoptila sp	+
53800	Hydroptila sp	30+
54000	Leucotrichia pictipes	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	26+
69400	Stenelmis sp	52+
70600	Antocha sp	32
74100	Simulium sp	106+
77500	Conchapelopia sp	116+
77750	Thienemannimyia sp	39+
78450	Nilotanypus fimbriatus	16
78600	Pentaneura inconspicua	+
80310	Cardiocladius obscurus	77
80410	Cricotopus (C.) sp	39+
80440	Cricotopus (C.) trifascia	193
82101	Thienemanniella taurocapita	92+
82130	Thienemanniella similis	+
82141	Thienemanniella xena	16
82220	Tvetenia discoloripes group	424+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83300	Glyptotendipes (G.) sp	39
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	39
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	424+
84470	Polypedilum (P.) illinoense	+
84480	Polypedilum (P.) laetum group	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	77+
85625	Rheotanytarsus sp	1,811+
85800	Tanytarsus sp	116+
85821	Tanytarsus glabrescens group sp 7	308
87540	Hemerodromia sp	12
93900	Elimia sp	+
96900	Ferrissia sp	27+
97601	Corbicula fluminea	37
97710	Dreissena polymorpha	+

Station: 502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD. 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 33.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	10	5	0	60	7,280	9	30	N/A	0.20 NORMAL

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01320	Hydra sp	24
01801	Turbellaria	36+
03040	Fredericella sp	19+
03121	Paludicella articulata	16
03360	Plumatella sp	+
03600	Oligochaeta	2,303+
05800	Caecidotea sp	3+
06810	Gammarus fasciatus	88+
11130	Baetis intercalaris	20+
11200	Callibaetis sp	+
13400	Stenacron sp	46+
13561	Maccaffertium pulchellum	16+
13570	Maccaffertium terminatum	61+
16700	Tricorythodes sp	+
21200	Calopteryx sp	1+
22300	Argia sp	34+
23909	Boyeria vinosa	+
44501	Corixidae	+
49200	Climacia areolaris	+
51206	Cyrnellus fraternus	5+
51600	Polycentropus group	2
52200	Cheumatopsyche sp	735+
52430	Ceratopsyche morosa group	79+
52530	Hydropsyche depravata group	24+
53800	Hydroptila sp	11
59500	Oecetis sp	8
68601	Ancyronyx variegatus	5+
68901	Macronychus glabratus	52+
77120	Ablabesmyia mallochi	118
77500	Conchapelopia sp	40
78140	Labrundinia pilosella	23
78750	Rheopelopia paramaculipennis	40
80350	Corynoneura sp	8
80420	Cricotopus (C.) bicinctus	80
80500	Cricotopus (Isocladius) reversus group	79
81270	Nanocladius (N.) spiniplenus	40
81825	Rheocricotopus (Psilocricotopus) robacki	80+
82130	Thienemanniella similis	32
82141	Thienemanniella xena	71
82730	Chironomus (C.) decorus group	157+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	236+
84118	Paracladopelma undine	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	236+
84460	Polypedilum (P.) fallax group	118+
84470	Polypedilum (P.) illinoense	79+
84540	Polypedilum (Tripodura) scalaenum group	276+
84888	Xenochironomus xenolabis	+
85500	Paratanytarsus sp	118
85625	Rheotanytarsus sp	945+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	512+
85840	Tanytarsus sepp	276+
87540	Hemerodromia sp	57
95100	Physella sp	1+
96900	Ferrissia sp	38+
97710	Dreissena polymorpha	+
98001	Sphaeriidae	32

Station: 502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD. 0:00 9/5/18

Rivercode: 19-001-000 River Mile: 33.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	10	8	0	55	4,866	13	28	N/A	1.60 NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
01801	Turbellaria	146
03360	Plumatella sp	+
03600	Oligochaeta	820+
04964	Erpobdella microstoma	2
05800	Caecidotea sp	17+
06810	Gammarus fasciatus	4+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	22+
11130	Baetis intercalaris	260+
13400	Stenacron sp	1+
13570	Maccaffertium terminatum	40+
16700	Tricorythodes sp	+
21200	Calopteryx sp	+
22300	Argia sp	+
23909	Boyeria vinosa	+
51300	Neureclipsis sp	+
52200	Cheumatopsyche sp	533+
52430	Ceratopsyche morosa group	344+
52530	Hydropsyche depravata group	19+
53400	Protoptila sp	1
53800	Hydroptila sp	32+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	13+
68901	Macronychus glabratus	28+
69400	Stenelmis sp	88+
70600	Antocha sp	20
71900	Tipula sp	+
74100	Simulium sp	36+
77750	Thienemannimyia sp	+
80310	Cardiocladius obscurus	84+
80410	Cricotopus (C.) sp	146
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	21
81690	Paratrichocladius sp	42
82101	Thienemanniella taurocapita	34
82220	Tvetenia discoloripes group	63+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	63+
83040	Dicrotendipes neomodestus	21+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	125+
84300	Phaenopsectra obediens group	21
84450	Polypedilum (Uresipedilum) flavum	272+
84460	Polypedilum (P.) fallax group	21
84520	Polypedilum (Tripodura) halterale group	21
84540	Polypedilum (Tripodura) scalaenum group	1,316+
85265	Cladotanytarsus vanderwulpi group sp 5	21
85625	Rheotanytarsus sp	63+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	84+
85840	Tanytarsus sepp	+
87501	Empididae	+
87540	Hemerodromia sp	9
96900	Ferrissia sp	9+
97601	Corbicula fluminea	4+

Station: F01A58 CUYAHOGA R. @ BOSTON MILLS RD. 0:00 9/11/17

Rivercode: 19-001-000 River Mile: 26.50

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
38	9	8	0	46	7,750	9	34	N/A	1.75 LOW

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01320	Hydra sp	8
01801	Turbellaria	2+
03040	Fredericella sp	+
03360	Plumatella sp	+
03600	Oligochaeta	32+
06810	Gammarus fasciatus	+
11120	Baetis flavistriga	164+
11130	Baetis intercalaris	877+
11200	Callibaetis sp	+
13400	Stenacron sp	+
13550	Maccaffertium mexicanum integrum	+
21200	Calopteryx sp	+
50315	Chimarra obscura	1
52200	Cheumatopsyche sp	735+
52430	Ceratopsyche morosa group	2,909+
52530	Hydropsyche depravata group	125+
52570	Hydropsyche simulans	+
53800	Hydroptila sp	32
67500	Laccobius sp	+
68901	Macronychus glabratus	39+
69400	Stenelmis sp	+
74100	Simulium sp	278+
80310	Cardiocladius obscurus	117+
80370	Corynoneura lobata	8
80420	Cricotopus (C.) bicinctus	23+
80430	Cricotopus (C.) tremulus group	46
80440	Cricotopus (C.) trifascia	23
82101	Thienemanniella taurocapita	32+
82130	Thienemanniella similis	58+
82141	Thienemanniella xena	176+
82220	Tvetenia discoloripes group	280+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
82885	Cryptotendipes pseudotener	+
84450	Polypedilum (Uresipedilum) flavum	585+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85625	Rheotanytarsus sp	1,122+
85800	Tanytarsus sp	23
85840	Tanytarsus sepp	23+
93900	Elimia sp	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	8+
97710	Dreissena polymorpha	+
98200	Pisidium sp	24

Station: F01S13 CUYAHOGA R. AT JAITE @ HIGHLAND RD. 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 24.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	14	12	0	54	9,283	14	50	N/A	1.40 NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
01801	Turbellaria	2+
03451	Urnatella gracilis	8
03600	Oligochaeta	40
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	4+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	50+
11130	Baetis intercalaris	1,703+
13400	Stenacron sp	11+
13510	Maccaffertium exiguum	12+
13521	Stenonema femoratum	+
13561	Maccaffertium pulchellum	13+
13570	Maccaffertium terminatum	107+
16700	Tricorythodes sp	18+
21200	Calopteryx sp	+
22300	Argia sp	+
24900	Gomphus Complex	+
34120	Acroneuria carolinensis	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	1,893+
52430	Ceratopsyche morosa group	1,635+
52530	Hydropsyche depravata group	5+
52560	Hydropsyche orris	43
53800	Hydroptila sp	1+
68601	Ancyronyx variegatus	1
68901	Macronychus glabratus	5+
70600	Antocha sp	8+
74100	Simulium sp	42+
77750	Thienemannimyia sp	+
80310	Cardiocladius obscurus	+
80370	Corynoneura lobata	16
80430	Cricotopus (C.) tremulus group	55+
80440	Cricotopus (C.) trifascia	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	83
81270	Nanocladius (N.) spiniplenus	28
81825	Rheocricotopus (Psilocricotopus) robacki	110
82101	Thienemanniella taurocapita	34+
82130	Thienemanniella similis	153+
82141	Thienemanniella xena	176
82220	Tvetenia discoloripes group	138+
83040	Dicrotendipes neomodestus	+
84450	Polypedilum (Uresipedilum) flavum	330+
84470	Polypedilum (P.) illinoense	28
84540	Polypedilum (Tripodura) scalaenum group	28
85625	Rheotanytarsus sp	1,927+
85800	Tanytarsus sp	28
85821	Tanytarsus glabrescens group sp 7	495+
86100	Chrysops sp	+
95100	Physella sp	+
96900	Ferrissia sp	33+
97601	Corbicula fluminea	20+
97710	Dreissena polymorpha	+

Station: 300510 CUYAHOGA R. NEAR OLD CARRIAGE TRAIL (IMPOUNDED) 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 22.40

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
53	15	14	0	64	11,137	18		N/A	0.75 LOW

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01801	Turbellaria	+
03600	Oligochaeta	64
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	45+
11130	Baetis intercalaris	2,586+
11200	Callibaetis sp	+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	+
13550	Maccaffertium mexicanum integrum	8
13561	Maccaffertium pulchellum	1+
13570	Maccaffertium terminatum	65+
16700	Tricorythodes sp	9+
21200	Calopteryx sp	+
22300	Argia sp	+
23909	Boyeria vinosa	+
26700	Macromia sp	+
45100	Palmacorixa sp	+
50315	Chimarra obscura	8+
50906	Psychomyia flavida	+
52200	Cheumatopsyche sp	2,261+
52430	Ceratopsyche morosa group	2,456+
52520	Hydropsyche bidens	23+
52530	Hydropsyche depravata group	46+
52560	Hydropsyche orris	38
53501	Hydroptilidae	1+
66200	Cymbiodyta sp	+
68075	Psephenus herricki	+
68901	Macronychus glabratus	3+
69400	Stenelmis sp	+
72700	Anopheles sp	+
74100	Simulium sp	925+
77120	Ablabesmyia mallochi	+
77750	Thienemannimyia sp	23
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	69+
80360	Corynoneura floridaensis	32+
80410	Cricotopus (C.) sp	23
80430	Cricotopus (C.) tremulus group	23+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	46
82101	Thienemanniella taurocapita	47
82130	Thienemanniella similis	254
82141	Thienemanniella xena	111
82220	Tvetenia discoloripes group	207+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83002	Dicrotendipes modestus	+
83040	Dicrotendipes neomodestus	+
84450	Polypedilum (Uresipedilum) flavum	321+
84460	Polypedilum (P.) fallax group	23
84470	Polypedilum (P.) illinoense	23+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	1,284+
85821	Tanytarsus glabrescens group sp 7	79
85840	Tanytarsus sepp	+
93200	Hydrobiidae	+
95100	Physella sp	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	33+
97710	Dreissena polymorpha	+
99240	Lasmigona complanata	+

Station: 502170 CUYAHOGA R. @ STATION RD. (IMPOUNDED) 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 20.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	8	2	0	60	4,759	4	32	N/A	0.03 NORMAL

	Taxa	Quant/Qual
01320	Hydra sp	170
01801	Turbellaria	48+
03600	Oligochaeta	112
05800	Caecidotea sp	+
06201	Hyalella sp	+
06810	Gammarus fasciatus	213+
08250	Faxonius rusticus	+
11130	Baetis intercalaris	16
11200	Callibaetis sp	+
13400	Stenacron sp	10+
13521	Stenonema femoratum	6+
13570	Maccaffertium terminatum	38+
16700	Tricorythodes sp	132+
17200	Caenis sp	57+
21200	Calopteryx sp	2
22001	Coenagrionidae	+
22300	Argia sp	4+
23909	Boyeria vinosa	1
42700	Belostoma sp	+
45400	Trichocorixa sp	+
51206	Cyrnellus fraternus	16
52200	Cheumatopsyche sp	75+
52430	Ceratopsyche morosa group	16
53800	Hydroptila sp	16+
65800	Berosus sp	+
67800	Tropisternus sp	+
68601	Ancyronyx variegatus	+
68901	Macronychus glabratus	2+
69400	Stenelmis sp	2
72700	Anopheles sp	+
77750	Thienemannimyia sp	82
78655	Procladius (Holotanypus) sp	+
80370	Corynoneura lobata	24
80410	Cricotopus (C.) sp	40
80427	Cricotopus (C.) politus	40
82070	Synorthocladius semivirens	+
82121	Thienemanniella lobapodema	16
82141	Thienemanniella xena	8
82730	Chironomus (C.) decorus group	+
83002	Dicrotendipes modestus	40+
83003	Dicrotendipes fumidus	+
83040	Dicrotendipes neomodestus	1,267+
83300	Glyptotendipes (G.) sp	+
84450	Polypedilum (Uresipedilum) flavum	40+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84960	Pseudochironomus sp	+
85230	Cladotanytarsus mancus group	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	122
85800	Tanytarsus sp	286+
85802	Tanytarsus n. sp. near curticornis	40
85820	Tanytarsus glabrescens group sp 6	204
85821	Tanytarsus glabrescens group sp 7	1,103+
85840	Tanytarsus sepp	122
95100	Physella sp	304+
96120	Menetus (Micromenetus) dilatatus	36+
96900	Ferrissia sp	47+
97601	Corbicula fluminea	2+
98200	Pisidium sp	+

Station: 300509 CUYAHOGA R. NEAR BRECKSVILLE @ ST. RT. 82 (DST DAM) 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 20.67

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
44	14	13	0	60	8,153	17	48	N/A	0.80 LOW

	Taxa	Quant/Qual
00401	Spongillidae	+
01320	Hydra sp	1+
01801	Turbellaria	23+
03360	Plumatella sp	1+
03451	Urnatella gracilis	8
03600	Oligochaeta	+
06810	Gammarus fasciatus	+
11120	Baetis flavistriga	1,650+
11130	Baetis intercalaris	232+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	2+
13561	Maccaffertium pulchellum	10+
13570	Maccaffertium terminatum	63+
16700	Tricorythodes sp	32+
17200	Caenis sp	1
21200	Calopteryx sp	+
22300	Argia sp	+
23909	Boyeria vinosa	+
50315	Chimarra obscura	1+
52200	Cheumatopsyche sp	1,086+
52430	Ceratopsyche morosa group	2,648+
52520	Hydropsyche bidens	8
52530	Hydropsyche depravata group	4+
53800	Hydroptila sp	9+
54000	Leucotrichia pictipes	+
59100	Ceraclea sp	+
68075	Psephenus herricki	+
68901	Macronychus glabratus	19+
69400	Stenelmis sp	1+
70600	Antocha sp	+
74100	Simulium sp	194+
77750	Thienemannimyia sp	54
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	18
80310	Cardiocladius obscurus	+
80360	Corynoneura floridaensis	16
80370	Corynoneura lobata	16
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	36
80430	Cricotopus (C.) tremulus group	+
80440	Cricotopus (C.) trifascia	18
81250	Nanocladius (N.) minimus	18
81825	Rheocricotopus (Psilocricotopus) robacki	36
82101	Thienemanniella taurocapita	32+
82130	Thienemanniella similis	74
82141	Thienemanniella xena	205
82220	Tvetenia discoloripes group	250+
83040	Dicrotendipes neomodestus	+
84450	Polypedilum (Uresipedilum) flavum	679+
84460	Polypedilum (P.) fallax group	18
84540	Polypedilum (Tripodura) scalaenum group	18
84888	Xenochironomus xenolabis	+
85625	Rheotanytarsus sp	572+
85821	Tanytarsus glabrescens group sp 7	71+
87540	Hemerodromia sp	8
93200	Hydrobiidae	+
95100	Physella sp	+
96900	Ferrissia sp	16+
97601	Corbicula fluminea	5+
97710	Dreissena polymorpha	+

Station: F01S12 CUYAHOGA R. @ FITZWATER RD. 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 17.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
52	12	16	0	66	7,957	21	54	N/A	0.80 NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
01801	Turbellaria	28+
03360	Plumatella sp	+
03451	Urnatella gracilis	16+
03600	Oligochaeta	16+
06810	Gammarus fasciatus	+
11120	Baetis flavistriga	114+
11130	Baetis intercalaris	1,934+
11620	Paracloeodes minutus	+
13400	Stenacron sp	12
13510	Maccaffertium exiguum	5
13550	Maccaffertium mexicanum integrum	3
13570	Maccaffertium terminatum	439+
16700	Tricorythodes sp	432+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	1+
45400	Trichocorixa sp	+
50906	Psychomyia flavida	+
51206	Cyrnellus fraternus	+
51300	Neureclipsis sp	1
52200	Cheumatopsyche sp	1,295+
52430	Ceratopsyche morosa group	1,119+
52520	Hydropsyche bidens	81
52560	Hydropsyche orris	29+
53400	Protoptila sp	+
53800	Hydroptila sp	49
54000	Leucotrichia pictipes	+
59410	Nectopsyche diarina	1
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	23+
68707	Dubiraphia quadrinotata	+
68901	Macronychus glabratus	5+
69400	Stenelmis sp	1+
70600	Antocha sp	+
74100	Simulium sp	67+
77500	Conchapelopia sp	23
77750	Thienemannimyia sp	46
78450	Nilotanypus fimbriatus	23
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	23+
80370	Corynoneura lobata	32
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	46+
80430	Cricotopus (C.) tremulus group	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	23
81825	Rheocricotopus (Psilocricotopus) robacki	46
82101	Thienemanniella taurocapita	35+
82130	Thienemanniella similis	66+
82141	Thienemanniella xena	80+
82220	Tvetenia discoloripes group	208+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84450	Polypedilum (Uresipedilum) flavum	393
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	+
84888	Xenochironomus xenolabis	+
85625	Rheotanytarsus sp	1,203+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	23+
96900	Ferrissia sp	1+
97601	Corbicula fluminea	15+

Station: F01S11 CUYAHOGA R. @ HILLSIDE RD. 0:00 9/12/17

Rivercode: 19-001-000 River Mile: 15.61

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
56	16	14	0	62	7,501	17	42	N/A	3.50 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03360	Plumatella sp	+
03451	Urnatella gracilis	1
03600	Oligochaeta	80+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	+
08250	Faxonius rusticus	+
11014	Acentrella turbida	10
11120	Baetis flavistriga	+
11130	Baetis intercalaris	958+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	5+
13521	Stenonema femoratum	+
13550	Maccaffertium mexicanum integrum	25+
13561	Maccaffertium pulchellum	3+
13570	Maccaffertium terminatum	54+
16700	Tricorythodes sp	2+
21200	Calopteryx sp	+
22300	Argia sp	+
42700	Belostoma sp	+
45400	Trichocorixa sp	+
50315	Chimarra obscura	1+
51600	Polycentropus group	+
52200	Cheumatopsyche sp	870+
52430	Ceratopsyche morosa group	2,018+
52520	Hydropsyche bidens	131+
52560	Hydropsyche orris	74
53800	Hydroptila sp	+
59407	Nectopsyche candida	+
65800	Berosus sp	+
68300	Cyphon sp	+
68901	Macronychus glabratus	13+
69400	Stenelmis sp	+
74100	Simulium sp	1,616+
77120	Ablabesmyia mallochi	+
77750	Thienemannimyia sp	16+
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	127+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	16+
80440	Cricotopus (C.) trifascia	+
80510	Cricotopus (Isocladius) sylvestris group	+
81825	Rheocricotopus (Psilocricotopus) robacki	16
82101	Thienemanniella taurocapita	7+
82130	Thienemanniella similis	23+
82141	Thienemanniella xena	203
82220	Tvetenia discoloripes group	318+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83003	Dicrotendipes fumidus	+
83040	Dicrotendipes neomodestus	+
84155	Paralauterborniella nigrohalteralis	+
84450	Polypedilum (Uresipedilum) flavum	95+
84470	Polypedilum (P.) illinoense	16+
84540	Polypedilum (Tripodura) scalaenum group	+
85625	Rheotanytarsus sp	779+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	16+
87540	Hemerodromia sp	8
96900	Ferrissia sp	+
97601	Corbicula fluminea	+

Station: F99Q03 CUYAHOGA R. AT VALLEY VIEW @ I-480 BRIDGE 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 12.00

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
48	13	11	0	66	8,877	18	52	N/A	1.30 NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
01801	Turbellaria	+
03451	Urnatella gracilis	32
03600	Oligochaeta	128+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	1+
08601	Hydrachnidia	16
11120	Baetis flavistriga	58+
11130	Baetis intercalaris	2,470+
13000	Leucrocuta sp	1
13400	Stenacron sp	+
13510	Maccaffertium exiguum	7
13550	Maccaffertium mexicanum integrum	5
13570	Maccaffertium terminatum	530+
16700	Tricorythodes sp	313+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
50315	Chimarra obscura	1+
52200	Cheumatopsyche sp	1,608+
52430	Ceratopsyche morosa group	1,163+
52520	Hydropsyche bidens	56+
52560	Hydropsyche orris	22+
52570	Hydropsyche simulans	+
53400	Protoptila sp	+
53800	Hydroptila sp	+
59407	Nectopsyche candida	1
65800	Berosus sp	+
68601	Ancyronyx variegatus	2+
68901	Macronychus glabratus	72+
69400	Stenelmis sp	+
74100	Simulium sp	240+
77750	Thienemannimyia sp	78
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	131+
80370	Corynoneura lobata	16
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	26
81825	Rheocricotopus (Psilocricotopus) robacki	131
82130	Thienemanniella similis	69
82141	Thienemanniella xena	82
82220	Tvetenia discoloripes group	131
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	131+
84460	Polypedilum (P.) fallax group	26
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	78
84700	Stenochironomus sp	26
84888	Xenochironomus xenolabis	+
85625	Rheotanytarsus sp	1,150+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	26
85840	Tanytarsus sepp	26+
87540	Hemerodromia sp	4
95100	Physella sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	1+
97601	Corbicula fluminea	19+
99700	Potamilus alatus	+

Station: F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 11.33

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
51	17	14	0	64	8,059	18	52	N/A	1.60 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03040	Fredericella sp	+
03600	Oligochaeta	64
04962	Erpobdella fervida	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	1+
08250	Faxonius rusticus	+
08601	Hydrachnidia	9
11014	Acentrella turbida	+
11120	Baetis flavistriga	1+
11130	Baetis intercalaris	1,965+
13400	Stenacron sp	8+
13510	Maccaffertium exiguum	4+
13550	Maccaffertium mexicanum integrum	2
13561	Maccaffertium pulchellum	11+
13570	Maccaffertium terminatum	301+
16700	Tricorythodes sp	107+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
26700	Macromia sp	+
50906	Psychomyia flavida	+
52200	Cheumatopsyche sp	1,911+
52430	Ceratopsyche morosa group	1,430+
52520	Hydropsyche bidens	25+
52530	Hydropsyche depravata group	+
52560	Hydropsyche orris	30+
53800	Hydroptila sp	16+
54000	Leucotrichia pictipes	+
59410	Nectopsyche diarina	+
65800	Berosus sp	+
68601	Ancyronyx variegatus	1+
68901	Macronychus glabratus	23+
69400	Stenelmis sp	17+
74100	Simulium sp	644+
77750	Thienemannimyia sp	43
78140	Labrundinia pilosella	+
80310	Cardiocladius obscurus	158+
80420	Cricotopus (C.) bicinctus	14
80440	Cricotopus (C.) trifascia	14
80470	Cricotopus (C.) or Orthocladius (O.) sp	14
81825	Rheocricotopus (Psilocricotopus) robacki	87+
82130	Thienemanniella similis	8
82141	Thienemanniella xena	16
82200	Tvetenia bavarica group	+
82220	Tvetenia discoloripes group	332
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	231+
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	+
85625	Rheotanytarsus sp	534+
85821	Tanytarsus glabrescens group sp 7	14+
85840	Tanytarsus sepp	14
87540	Hemerodromia sp	8
93900	Elimia sp	1
96900	Ferrissia sp	+
97601	Corbicula fluminea	1+
97710	Dreissena polymorpha	+

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	13	9	0	63	7,747	13	54	N/A	1.00 LOW

	Taxa	Quant/Qual
00650	Eunapius sp	+
01320	Hydra sp	8+
01801	Turbellaria	27+
03040	Fredericella sp	+
03360	Plumatella sp	3
03600	Oligochaeta	64+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
06800	Gammarus sp	+
08601	Hydrachnidia	8
11120	Baetis flavistriga	48+
11130	Baetis intercalaris	1,130+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	29+
13521	Stenonema femoratum	10
13550	Maccaffertium mexicanum integrum	3
13561	Maccaffertium pulchellum	25+
13570	Maccaffertium terminatum	374+
16700	Tricorythodes sp	488+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	1,713+
52430	Ceratopsyche morosa group	612+
52450	Ceratopsyche sparna	32
52520	Hydropsyche bidens	24+
52530	Hydropsyche depravata group	12+
52560	Hydropsyche orris	54
53800	Hydroptila sp	10+
66500	Enochrus sp	+
68601	Ancyronyx variegatus	+
68901	Macronychus glabratus	17+
69400	Stenelmis sp	+
74100	Simulium sp	17+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	61
77750	Thienemannimyia sp	91+
80310	Cardiocladius obscurus	244+
80370	Corynoneura lobata	8
80420	Cricotopus (C.) bicinctus	30+
80430	Cricotopus (C.) tremulus group	91+
80440	Cricotopus (C.) trifascia	+
81825	Rheocricotopus (Psilocricotopus) robacki	91+
82101	Thienemanniella taurocapita	86
82121	Thienemanniella lobapodema	26+
82130	Thienemanniella similis	220
82141	Thienemanniella xena	26
82220	Tvetenia discoloripes group	91+
82730	Chironomus (C.) decorus group	+
83040	Dicrotendipes neomodestus	61+
84450	Polypedilum (Uresipedilum) flavum	244+
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
85625	Rheotanytarsus sp	1,460+
85821	Tanytarsus glabrescens group sp 7	152+
85840	Tanytarsus sepp	30+
87540	Hemerodromia sp	9+
96900	Ferrissia sp	9
97601	Corbicula fluminea	9

Station: F99Q02 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 10.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
48	8	6	0	71	6,762	14	46	N/A	1.40 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
01900	Nemertea	+
03040	Fredericella sp	2+
03360	Plumatella sp	+
03600	Oligochaeta	49+
04962	Erpobdella fervida	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	+
08601	Hydrachnidia	9
11001	Baetidae	8
11120	Baetis flavistriga	43+
11130	Baetis intercalaris	972+
13400	Stenacron sp	9+
13510	Maccaffertium exiguum	7
13561	Maccaffertium pulchellum	6
13570	Maccaffertium terminatum	110+
16700	Tricorythodes sp	71+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
45400	Trichocorixa sp	+
52200	Cheumatopsyche sp	1,422+
52430	Ceratopsyche morosa group	1,005+
52450	Ceratopsyche sparna	6
52520	Hydropsyche bidens	66
52530	Hydropsyche depravata group	5
52560	Hydropsyche orris	57
53800	Hydroptila sp	26
59415	Nectopsyche exquisita	+
68601	Ancyronyx variegatus	1+
68901	Macronychus glabratus	11+
69400	Stenelmis sp	8+
70600	Antocha sp	1
74100	Simulium sp	78
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	8
78655	Procladius (Holotanypus) sp	+
79100	Thienemannimyia group	34
80310	Cardiocladius obscurus	67+
80360	Corynoneura floridaensis	8
80370	Corynoneura lobata	8
80420	Cricotopus (C.) bicinctus	133+
80430	Cricotopus (C.) tremulus group	100+
80510	Cricotopus (Isocladius) sylvestris group	67+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	34
81825	Rheocricotopus (Psilocricotopus) robacki	167+
82130	Thienemanniella similis	131
82141	Thienemanniella xena	122
82220	Tvetenia discoloripes group	67
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83002	Dicrotendipes modestus	34
83040	Dicrotendipes neomodestus	67+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84040	Parachironomus frequens	+
84450	Polypedilum (Uresipedilum) flavum	234+
84470	Polypedilum (P.) illinoense	67+
84520	Polypedilum (Tripodura) halterale group	+
85500	Paratanytarsus sp	34
85625	Rheotanytarsus sp	1,333+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	67
85840	Tanytarsus sepp	+
86100	Chrysops sp	+
95100	Physella sp	+
96120	Menetus (Micromenetus) dilatatus	+
97601	Corbicula fluminea	+
98001	Sphaeriidae	8

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	16	13	0	58	11,717	14	46	N/A	1.05 LOW

	Taxa	Quant/Qual
00650	Eunapius sp	+
01801	Turbellaria	+
03040	Fredericella sp	+
03600	Oligochaeta	528+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	1+
11120	Baetis flavistriga	32+
11130	Baetis intercalaris	1,663+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	4+
13561	Maccaffertium pulchellum	55+
13570	Maccaffertium terminatum	53+
16700	Tricorythodes sp	134+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	8
23909	Boyeria vinosa	+
50315	Chimarra obscura	1+
52200	Cheumatopsyche sp	3,726+
52430	Ceratopsyche morosa group	1,515+
52520	Hydropsyche bidens	93+
52530	Hydropsyche depravata group	2+
52560	Hydropsyche orris	206+
53800	Hydroptila sp	19+
59415	Nectopsyche exquisita	+
68601	Ancyronyx variegatus	8+
68901	Macronychus glabratus	52+
69400	Stenelmis sp	1+
74100	Simulium sp	49+
77125	Ablabesmyia monilis	+
77500	Conchapelopia sp	50+
77750	Thienemannimyia sp	150
80310	Cardiocladius obscurus	150+
80351	Corynoneura caudicula	8
80410	Cricotopus (C.) sp	125+
80420	Cricotopus (C.) bicinctus	50+
80430	Cricotopus (C.) tremulus group	101
80440	Cricotopus (C.) trifascia	25+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	76
81240	Nanocladius (N.) distinctus	50+
81250	Nanocladius (N.) minimus	25
81825	Rheocricotopus (Psilocricotopus) robacki	50+
82101	Thienemanniella taurocapita	+
82130	Thienemanniella similis	126+
82141	Thienemanniella xena	82
82220	Tvetenia discoloripes group	125
83040	Dicrotendipes neomodestus	+
84450	Polypedilum (Uresipedilum) flavum	451+
85615	Rheotanytarsus pellucidus	50+
85625	Rheotanytarsus sp	1,528+
85821	Tanytarsus glabrescens group sp 7	300+
85840	Tanytarsus sepp	25+
87540	Hemerodromia sp	+
97601	Corbicula fluminea	20+
98600	Sphaerium sp	+

Station: 502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE. 0:00 9/13/17

Rivercode: 19-001-000 River Mile: 7.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
41	11	7	1	64	5,020	14	32	N/A	1.00 NORMAL

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01320	Hydra sp	9
01801	Turbellaria	1
01900	Nemertea	16
03040	Fredericella sp	4+
03360	Plumatella sp	1+
03600	Oligochaeta	20+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	78+
13000	Leucrocuta sp	2
13510	Maccaffertium exiguum	2
13550	Maccaffertium mexicanum integrum	+
13561	Maccaffertium pulchellum	+
13570	Maccaffertium terminatum	79+
16700	Tricorythodes sp	429+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
52200	Cheumatopsyche sp	245+
52430	Ceratopsyche morosa group	28+
52520	Hydropsyche bidens	2
52560	Hydropsyche orris	2
53800	Hydroptila sp	54+
59400	Nectopsyche sp	+
68601	Ancyronyx variegatus	2+
68901	Macronychus glabratus	4+
69400	Stenelmis sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	37
77750	Thienemannimyia sp	73+
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	110
80370	Corynoneura lobata	16
80410	Cricotopus (C.) sp	144
80420	Cricotopus (C.) bicinctus	182+
80430	Cricotopus (C.) tremulus group	473
80510	Cricotopus (Isocladius) sylvestris group	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	110
81240	Nanocladius (N.) distinctus	110
81250	Nanocladius (N.) minimus	37
81650	Parametriocnemus sp	37
82101	Thienemanniella taurocapita	27
82130	Thienemanniella similis	86+
82141	Thienemanniella xena	16
82730	Chironomus (C.) decorus group	+
83040	Dicrotendipes neomodestus	37+
83050	Dicrotendipes lucifer	73
83300	Glyptotendipes (G.) sp	+
84450	Polypedilum (Uresipedilum) flavum	72+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	37
85500	Paratanytarsus sp	73+
85615	Rheotanytarsus pellucidus	37
85625	Rheotanytarsus sp	1,419+
85821	Tanytarsus glabrescens group sp 7	727+
85840	Tanytarsus sepp	73
87540	Hemerodromia sp	36
96120	Menetus (Micromenetus) dilatatus	+
97710	Dreissena polymorpha	+

Station: 200005 CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS 0:00 9/11/17

Rivercode: 19-001-000 River Mile: 2.74

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
27	0	0	0	43	9,662	0	22	N/A	0.00 NORMAL

	Taxa	Quant/Qual
01320	Hydra sp	36
01801	Turbellaria	86
03600	Oligochaeta	2,368+
04661	Helobdella elongata	+
04664	Helobdella stagnalis	1+
04666	Helobdella papillata	1
04935	Erpobdella punctata punctata	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	54+
22001	Coenagrionidae	3+
22300	Argia sp	20
27307	Epitheca (Epicordulia) princeps	+
51206	Cyrnellus fraternus	2
60900	Peltodytes sp	+
77120	Ablabesmyia mallochi	+
78655	Procladius (Holotanypus) sp	+
79020	Tanypus neopunctipennis	+
80420	Cricotopus (C.) bicinctus	56
80500	Cricotopus (Isocladius) reversus group	505+
80510	Cricotopus (Isocladius) sylvestris group	505+
82730	Chironomus (C.) decorus group	112
82800	Cladopelma sp	+
83000	Dicrotendipes sp	2,131
83002	Dicrotendipes modestus	112+
83003	Dicrotendipes fumidus	168+
83040	Dicrotendipes neomodestus	280
83050	Dicrotendipes lucifer	112
83051	Dicrotendipes simpsoni	841
83300	Glyptotendipes (G.) sp	1,738
84470	Polypedilum (P.) illinoense	+
85500	Paratanytarsus sp	449
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	56
92615	Cipangopaludina japonica	10+
95100	Physella sp	7+
96120	Menetus (Micromenetus) dilatatus	8
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	1
97601	Corbicula fluminea	+
97710	Dreissena polymorpha	+
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: F01G43 WEST CREEK AT PARMA @ BROADVIEW RD. 0:00 8/27/18

Rivercode: 19-001-004 River Mile: 3.70

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
31	9	4	0	31		4		Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
05800	Caecidotea sp	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
50301	Chimarra aterrima	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
68601	Ancyronyx variegatus	+
69400	Stenelmis sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	+
80410	Cricotopus (C.) sp	+
82770	Chironomus (C.) riparius group	+
83040	Dicrotendipes neomodestus	+
83300	Glyptotendipes (G.) sp	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	+
85821	Tanytarsus glabrescens group sp 7	+
95100	Physella sp	+

Station: F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.) 0:00 8/28/18

Rivercode: 19-001-004 River Mile: 0.19

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
34	9	4	0	48	878	7	36		1.60 LOW

	Taxa	Quant/Qual
01801	Turbellaria	2+
03600	Oligochaeta	84+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
11120	Baetis flavistriga	20+
11130	Baetis intercalaris	50+
13521	Stenonema femoratum	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	1
50301	Chimarra aterrima	26+
51550	Plectrocnemia sp	2
52200	Cheumatopsyche sp	37+
52430	Ceratopsyche morosa group	14+
52450	Ceratopsyche sparna	10+
52530	Hydropsyche depravata group	1+
53800	Hydroptila sp	+
65800	Berosus sp	+
68601	Ancyronyx variegatus	+
69400	Stenelmis sp	18+
70600	Antocha sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	20
77500	Conchapelopia sp	59+
77750	Thienemannimyia sp	33+
77800	Helopelopia sp	66+
78450	Nilotanypus fimbriatus	7
80351	Corynoneura caudicula	4
80370	Corynoneura lobata	12
80420	Cricotopus (C.) bicinctus	13+
80430	Cricotopus (C.) tremulus group	+
82101	Thienemanniella taurocapita	4
82220	Tvetenia discoloripes group	+
82820	Cryptochironomus sp	26+
83040	Dicrotendipes neomodestus	33+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	7
84210	Paratendipes albimanus or P. duplicatus	26
84300	Phaenopsectra obediens group	53
84450	Polypedilum (Uresipedilum) flavum	7+
84460	Polypedilum (P.) fallax group	26
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	79+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	7
85800	Tanytarsus sp	7+
85821	Tanytarsus glabrescens group sp 7	105+
85840	Tanytarsus sepp	7
87540	Hemerodromia sp	12

Station: F01G37 SAGAMORE CREEK UPST. SAGAMORE RD. 0:00 8/1/18

Rivercode: 19-001-011 River Mile: 2.92

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
31	7	2	0	31		2		Marginally Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
01900	Nemertea	+
03360	Plumatella sp	+
06201	Hyalella sp	+
07701	Cambaridae	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
59300	Mystacides sp	+
68601	Ancyronyx variegatus	+
70600	Antocha sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
80420	Cricotopus (C.) bicinctus	+
82141	Thienemanniella xena	+
84450	Polypedilum (Uresipedilum) flavum	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
96002	Helisoma anceps anceps	+
97601	Corbicula fluminea	+

Station: F01G38 SAGAMORE CREEK @ CANAL RD. 0:00 7/30/19

Rivercode: 19-001-011 River Mile: 0.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
55	15	13	4	55		13		Very Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
11250	Neocloeon sp	+
11295	Cloeon dipterum	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21001	Calopterygidae	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
25250	small Lanthus or Stylogomphus	+
50301	Chimarra aterrima	+
51500	Phylocentropus sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
59970	Petrophila sp	+
67700	Paracymus sp	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	+
68700	Dubiraphia sp	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71800	Pseudolimnophila sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78350	Meropelopia sp	+
80310	Cardiocladius obscurus	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
81650	Parametriocnemus sp	+
81690	Paratrichocladius sp	+
82820	Cryptochironomus sp	+
84210	Paratendipes albimanus or P. duplicatus	+
84440	Polypedilum (Uresipedilum) aviceps	+
84450	Polypedilum (Uresipedilum) flavum	+
84460	Polypedilum (P.) fallax group	+
84470	Polypedilum (P.) illinoense	+
85625	Rheotanytarsus sp	+
85840	Tanytarsus sepp	+
95100	Physella sp	+

Station: 303997 SPRING CREEK @ BUCKEYE TRAIL UPST. BLUE HEN FALLS 0:00 6/21/18

Rivercode: 19-001-012 River Mile: 0.90

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
39	10	14	8	39		14		Very Good	LOW

	Taxa	Quant/Qual
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
21200	Calopteryx sp	+
21604	Archilestes grandis	+
23905	Boyeria grafiana	+
33100	Leuctra sp	+
34500	Perlesta sp	+
48610	Nigronia fasciata	+
50301	Chimarra aterrima	+
50410	Dolophilodes distinctus	+
51250	Holocentropus sp	+
52200	Cheumatopsyche sp	+
52440	Ceratopsyche slossonae	+
52450	Ceratopsyche sparna	+
61400	Agabus sp	+
62500	Deronectes sp	+
68025	Ectopria sp	+
68075	Psephenus herricki	+
68130	Helichus sp	+
69400	Stenelmis sp	+
70600	Antocha sp	+
70700	Dicranota sp	+
71100	Hexatoma sp	+
71900	Tipula sp	+
74501	Ceratopogonidae	+
77250	Alotanypus venustus	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
79400	Zavrelimyia (Z.) sp	+
81690	Paratrichocladius sp	+
82200	Tvetenia bavarica group	+
82730	Chironomus (C.) decorus group	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84315	Phaenopsectra flavipes	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
95100	Physella sp	+

Station: F01P23 SAND RUN @ RIVERVIEW RD N OF AKRON 0:00 7/24/18

Rivercode: 19-001-014 River Mile: 0.13

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
35	8	7	6	35		7		Good	ABOVE NO

	Taxa	Quant/Qual
03600	Oligochaeta	+
11120	Baetis flavistriga	+
21001	Calopterygidae	+
33100	Leuctra sp	+
50301	Chimarra aterrima	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
71100	Hexatoma sp	+
71700	Pilaria sp	+
71910	Tipula abdominalis	+
72222	Bittacomorpha clavipes	+
72700	Anopheles sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78350	Meropelopia sp	+
80410	Cricotopus (C.) sp	+
81650	Parametriocnemus sp	+
81690	Paratrichocladius sp	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84430	Polypedilum (P.) albicorne	+
84440	Polypedilum (Uresipedilum) aviceps	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84612	Saetheria tylus	+
85400	Micropsectra sp	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
85840	Tanytarsus sepp	+

Station: F01G15 HARPER DITCH @ BECK RD. 0:00 7/12/18

Rivercode: 19-001-020 River Mile: 0.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
46	12	5	2	46		5		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04935	Erpobdella punctata punctata	+
06201	Hyalella sp	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22300	Argia sp	+
23600	Aeshna sp	+
34100	Acroneuria sp	+
44501	Corixidae	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
57900	Pycnopsyche sp	+
60300	Dineutus sp	+
63300	Hydroporini	+
65800	Berosus sp	+
69400	Stenelmis sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
78401	Natarsia species A (sensu Roback, 1978)	+
79720	Diamesa sp	+
81650	Parametriocnemus sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82820	Cryptochironomus sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	+
84750	Stictochironomus sp	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
95907	Gyraulus (Torquis) parvus	+
96280	Planorbella (Pierosoma) trivolvis	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01G16 TRIB. TO CUYAHOGA R. (63.43) @ ST. RT. 303 0:00 7/13/18

Rivercode: 19-001-022 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
62	13	13	2	62		13		Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03360	Plumatella sp	+
03600	Oligochaeta	+
04653	Glossiphonia complanata	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11200	Callibaetis sp	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
13561	Maccaffertium pulchellum	+
13570	Maccaffertium terminatum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
45100	Palmacorixa sp	+
45900	Notonecta sp	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
51610	Polycentropus sp	+
52550	Hydropsyche frisoni	+
57900	Pycnopsyche sp	+
58505	Helicopsyche borealis	+
59300	Mystacides sp	+
60300	Dineutus sp	+
60900	Peltodytes sp	+
65800	Berosus sp	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
70600	Antocha sp	+
70700	Dicranota sp	+
71900	Tipula sp	+
72340	Dixella sp	+
72700	Anopheles sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
82885	Cryptotendipes pseudotener	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84700	Stenochironomus sp	+
84750	Stictochironomus sp	+
85400	Micropsectra sp	+
85500	Paratanytarsus sp	+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
92516	Campeloma decisum	+
93200	Hydrobiidae	+
93900	Elimia sp	+
94400	Fossaria sp	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01P53 TRIB. TO CUYAHOGA R. (65.19) E OF STREETSBORO, NEAR COIT RD 0:00 7/12/18

Rivercode: 19-001-023 River Mile: 0.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	9	4	0	42		4		Marginally Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
04930	Erpobdella sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23700	Anax sp	+
29000	Sympetrum sp	+
42700	Belostoma sp	+
44300	Pelocoris sp	+
50301	Chimarra aterrima	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
60900	Peltodytes sp	+
67800	Tropisternus sp	+
68201	Scirtidae	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
72340	Dixella sp	+
74100	Simulium sp	+
77355	Clinotanypus pinguis	+
82820	Cryptochironomus sp	+
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
85625	Rheotanytarsus sp	+
92904	Viviparus georgianus	+
93200	Hydrobiidae	+
95100	Physella sp	+
96280	Planorbella (Pierosoma) trivolvis	+
98200	Pisidium sp	+

Station: F01G13 TRIB. TO CUYAHOGA R. (69.43) @ CANADA RD. 0:00 7/13/18

Rivercode: 19-001-024 River Mile: 0.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
65	14	15	2	65		15		Very Good	NORMAL

	Taxa	Quant/Qual
03600	Oligochaeta	+
04680	Placobdella sp	+
04930	Erpobdella sp	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11125	Labiobaetis frondalis	+
11130	Baetis intercalaris	+
11270	Anafroptilum victoriae	+
17200	Caenis sp	+
23909	Boyeria vinosa	+
25510	Stylogomphus albistylus	+
29000	Sympetrum sp	+
45300	Sigara sp	+
47600	Sialis sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
52550	Hydropsyche frisoni	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
60900	Peltodytes sp	+
63300	Hydroporini	+
65800	Berosus sp	+
67000	Helophorus sp	+
67750	Sperchopsis tesselatus	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
71900	Tipula sp	+
72340	Dixella sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
80370	Corynoneura lobata	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
81650	Parametriocnemus sp	+
81690	Paratrichocladius sp	+
82200	Tvetenia bavarica group	+
82820	Cryptochironomus sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84475	Polypedilum (P.) ophioides	+
84520	Polypedilum (Tripodura) halterale group	+
84612	Saetheria tylus	+
84750	Stictochironomus sp	+
85261	Cladotanytarsus vanderwulpi	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
87540	Hemerodromia sp	+
93200	Hydrobiidae	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: 200064 TRIB. TO CUYAHOGA R. (63.82) @ ST. RT. 303 0:00 7/12/18

Rivercode: 19-001-041 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
41	11	11	2	41		11		Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
04664	Helobdella stagnalis	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
23909	Boyeria vinosa	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
58505	Helicopsyche borealis	+
63300	Hydroporini	+
65700	Anacaena sp	+
67500	Laccobius sp	+
68075	Psephenus herricki	+
68130	Helichus sp	+
68702	Dubiraphia bivittata	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
69210	Optioservus ovalis	+
69400	Stenelmis sp	+
70600	Antocha sp	+
70700	Dicranota sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
79720	Diamesa sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82200	Tvetenia bavarica group	+
83840	Microtendipes pedellus group	+
84750	Stictochironomus sp	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: 303971 TRIB. TO CUYAHOGA R. (25.41) @ RIVERVIEW RD. 0:00 8/7/18

Rivercode: 19-001-045 River Mile: 0.15

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
51	20	15	5	51		15		Exceptional	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
06201	Hyalella sp	+
07860	Cambarus (Puncticambarus) robustus	+
11018	Acerpenna macdunnoughi	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
11250	Neocloeon sp	+
13521	Stenonema femoratum	+
15000	Paraleptophlebia sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23909	Boyeria vinosa	+
33100	Leuctra sp	+
34120	Acroneuria carolinensis	+
45900	Notonecta sp	+
50301	Chimarra aterrima	+
50410	Dolophilodes distinctus	+
52200	Cheumatopsyche sp	+
52315	Diplectrona modesta	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
68075	Psephenus herricki	+
68707	Dubiraphia quadrinotata	+
69400	Stenelmis sp	+
71100	Hexatoma sp	+
71300	Limonia sp	+
71910	Tipula abdominalis	+
72700	Anopheles sp	+
74501	Ceratopogonidae	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78500	Zavrelimyia (Paramerina) fragilis	+
81650	Parametriocnemus sp	+
82710	Chironomus (C.) sp	+
82820	Cryptochironomus sp	+
83003	Dicrotendipes fumidus	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
87540	Hemerodromia sp	+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: F01S21 BIG CREEK @ BIG CREEK PARKWAY 0:00 6/27/18

Rivercode: 19-005-000 River Mile: 7.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
33	9	3	0	33		3		Marginally Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
21200	Calopteryx sp	+
23600	Aeshna sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
66500	Enochrus sp	+
69400	Stenelmis sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
82820	Cryptochironomus sp	+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
95100	Physella sp	+

Station: 301193 BIG CREEK AT BROOKLYN, UPST. FORD BRANCH 0:00 9/5/18

Rivercode: 19-005-000 River Mile: 4.40

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
37	10	4	0	37		4		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
50315	Chimarra obscura	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
70600	Antocha sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
80410	Cricotopus (C.) sp	+
80430	Cricotopus (C.) tremulus group	+
82820	Cryptochironomus sp	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
87540	Hemerodromia sp	+
96120	Menetus (Micromenetus) dilatatus	+

Station: F01S20 BIG CREEK @ USGS GAGE 0:00 9/5/18
Rivercode: 19-005-000 River Mile: 2.40

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
39	8	4	0	59	2,941	8	44		1.00 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	143+
03600	Oligochaeta	265+
04664	Helobdella stagnalis	+
04935	Erpobdella punctata punctata	5+
04964	Erpobdella microstoma	5+
05800	Caecidotea sp	32+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	36
11120	Baetis flavistriga	627+
11130	Baetis intercalaris	460+
13521	Stenonema femoratum	+
16700	Tricorythodes sp	4
21300	Hetaerina sp	28+
22001	Coenagrionidae	+
22300	Argia sp	+
50315	Chimarra obscura	32+
52200	Cheumatopsyche sp	39+
52430	Ceratopsyche morosa group	70+
52450	Ceratopsyche sparna	4
52530	Hydropsyche depravata group	280+
52540	Hydropsyche dicantha	17
52570	Hydropsyche simulans	4
53800	Hydroptila sp	96+
70600	Antocha sp	2+
71900	Tipula sp	+
74100	Simulium sp	10+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	207+
77750	Thienemannimyia sp	31+
77800	Helopelopia sp	6+
78450	Nilotanypus fimbriatus	64
80310	Cardiocladius obscurus	+
80370	Corynoneura lobata	26
80410	Cricotopus (C.) sp	6+
80430	Cricotopus (C.) tremulus group	13+
80440	Cricotopus (C.) trifascia	13+
81825	Rheocricotopus (Psilocricotopus) robacki	6
82141	Thienemanniella xena	16
82220	Tvetenia discoloripes group	13
82820	Cryptochironomus sp	+
83003	Dicrotendipes fumidus	6
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	126+
84460	Polypedilum (P.) fallax group	13
84470	Polypedilum (P.) illinoense	19+
84540	Polypedilum (Tripodura) scalaenum group	13
84700	Stenochironomus sp	6
85500	Paratanytarsus sp	13
85625	Rheotanytarsus sp	13
85800	Tanytarsus sp	25+
85821	Tanytarsus glabrescens group sp 7	38+
87540	Hemerodromia sp	58
95100	Physella sp	+
96120	Menetus (Micromenetus) dilatatus	9
96900	Ferrissia sp	41
98200	Pisidium sp	1
98600	Sphaerium sp	+

Station: 502120 BIG CREEK @ JENNINGS AVE. 0:00 8/28/18

Rivercode: 19-005-000 River Mile: 0.23

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
27	8	2	0	27		2		Marginally Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04930	Erpobdella sp	+
05800	Caecidotea sp	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
17200	Caenis sp	+
22001	Coenagrionidae	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
80310	Cardiocladius obscurus	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
80440	Cricotopus (C.) trifascia	+
83040	Dicrotendipes neomodestus	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
95100	Physella sp	+
98600	Sphaerium sp	+

Station: F01P09 MILL CREEK @ BROADWAY RD. 0:00 9/5/18

Rivercode: 19-006-000 River Mile: 4.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
49	9	3	1	49		3		Marginally Good	NORMAL

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01801	Turbellaria	+
03040	Fredericella sp	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
04935	Erpobdella punctata punctata	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
49200	Climacia areolaris	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
54160	Ochrotrichia sp	+
59500	Oecetis sp	+
70600	Antocha sp	+
72600	Aedes sp	+
77001	Tanypodinae	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
78350	Meropelopia sp	+
80420	Cricotopus (C.) bicinctus	+
82770	Chironomus (C.) riparius group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	+
84540	Polypedilum (Tripodura) scalaenum group	+
84888	Xenochironomus xenolabis	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
87540	Hemerodromia sp	+
95100	Physella sp	+
96120	Menetus (Micromenetus) dilatatus	+

Station: 502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD. 0:00 9/5/18

Rivercode: 19-006-000 River Mile: 0.12

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	10	4	0	42		4		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
04664	Helobdella stagnalis	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13570	Maccaffertium terminatum	+
16700	Tricorythodes sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53501	Hydroptilidae	+
67500	Laccobius sp	+
69400	Stenelmis sp	+
71900	Tipula sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	+
84540	Polypedilum (Tripodura) scalaenum group	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
85840	Tanytarsus sepp	+
95100	Physella sp	+

Station: F99Q10 TINKERS CREEK SE OF HUDSON @ SEASONS RD. 0:00 8/14/18

Rivercode: 19-007-000 River Mile: 28.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
56	17	11	3	75	2,939	17	52	N/A	0.28 LOW

	Taxa	Quant/Qual
01801	Turbellaria	3+
03600	Oligochaeta	16+
04640	Placobdella picta	+
04687	Placobdella parasitica	+
05800	Caecidotea sp	32+
06201	Hyalella sp	3+
08250	Faxonius rusticus	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	2+
11125	Labiobaetis frondalis	12+
13400	Stenacron sp	15+
13561	Maccaffertium pulchellum	+
13590	Maccaffertium vicarium	24
14950	small Leptophlebiidae	34
16700	Tricorythodes sp	8
17200	Caenis sp	+
21200	Calopteryx sp	2+
23909	Boyeria vinosa	1
43300	Ranatra sp	+
43570	Neoplea sp	+
45100	Palmacorixa sp	+
45300	Sigara sp	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
50804	Lype diversa	1+
51400	Nyctiophylax sp	2+
51550	Plectrocnemia sp	38+
51610	Polycentropus sp	2+
52200	Cheumatopsyche sp	196+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	4+
53800	Hydroptila sp	93+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	1
59500	Oecetis sp	1+
60400	Gyrinus sp	+
63300	Hydroporini	+
68707	Dubiraphia quadrinotata	31+
68901	Macronychus glabratus	7+
69400	Stenelmis sp	5+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	78
77800	Helopelopia sp	25+
78350	Meropelopia sp	176
78655	Procladius (Holotanypus) sp	+
80370	Corynoneura lobata	56
80420	Cricotopus (C.) bicinctus	+
81650	Parametriocnemus sp	25
82121	Thienemanniella lobapodema	64
82820	Cryptochironomus sp	25+
82885	Cryptotendipes pseudotener	+
83040	Dicrotendipes neomodestus	25
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	25
83840	Microtendipes pedellus group	354+
84155	Paralauterborniella nigrohalteralis	25+
84450	Polypedilum (Uresipedilum) flavum	25
84460	Polypedilum (P.) fallax group	51
85500	Paratanytarsus sp	76+
85615	Rheotanytarsus pellucidus	25
85625	Rheotanytarsus sp	76
85720	Stempellinella fimbriata	76
85800	Tanytarsus sp	430+
85802	Tanytarsus n. sp. near curticornis	278
85821	Tanytarsus glabrescens group sp 7	430+
86100	Chrysops sp	2+
87510	Neoplasta sp	+
87540	Hemerodromia sp	26
89501	Ephydridae	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96900	Ferrissia sp	33+
99100	Pyganodon grandis	+

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
32	13	10	0	49	4,311	13	52	N/A	1.30 LOW

	Taxa	Quant/Qual
01320	Hydra sp	16
01801	Turbellaria	144+
03600	Oligochaeta	16
04666	Helobdella papillata	+
05800	Caecidotea sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	44
11120	Baetis flavistriga	87+
11130	Baetis intercalaris	1,734+
13400	Stenacron sp	3+
13521	Stenonema femoratum	+
13550	Maccaffertium mexicanum integrum	1
13570	Maccaffertium terminatum	226+
16700	Tricorythodes sp	161+
17200	Caenis sp	+
22300	Argia sp	16+
52200	Cheumatopsyche sp	468+
52430	Ceratopsyche morosa group	73
52530	Hydropsyche depravata group	420+
53800	Hydroptila sp	200+
54160	Ochrotrichia sp	53+
59300	Mystacides sp	2+
59410	Nectopsyche diarina	4+
68075	Psephenus herricki	8+
68601	Ancyronyx variegatus	8
68901	Macronychus glabratus	112+
69400	Stenelmis sp	46+
71900	Tipula sp	+
74100	Simulium sp	5+
77500	Conchapelopia sp	14
77750	Thienemannimyia sp	14
77800	Helopelopia sp	5+
78450	Nilotanypus fimbriatus	10
80370	Corynoneura lobata	48
81825	Rheocricotopus (Psilocricotopus) robacki	110
82141	Thienemanniella xena	4
82820	Cryptochironomus sp	+
84300	Phaenopsectra obediens group	5
84450	Polypedilum (Uresipedilum) flavum	201+
85265	Cladotanytarsus vanderwulpi group sp 5	5+
85615	Rheotanytarsus pellucidus	5
85625	Rheotanytarsus sp	19
85821	Tanytarsus glabrescens group sp 7	14
93200	Hydrobiidae	5
93900	Elimia sp	5+
95100	Physella sp	+
97601	Corbicula fluminea	+
99440	Fusconaia flava	+
99860	Lampsilis siliquoidea	+

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
34	12	10	1	50	2,847	13	44	N/A	1.70 LOW

	Taxa	Quant/Qual
01320	Hydra sp	8
01801	Turbellaria	120
03600	Oligochaeta	50
04685	Placobdella ornata	+
06201	Hyalella sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	1
11120	Baetis flavistriga	3+
11130	Baetis intercalaris	919+
13400	Stenacron sp	+
13570	Maccaffertium terminatum	30+
16700	Tricorythodes sp	11+
21300	Hetaerina sp	8+
22001	Coenagrionidae	+
22300	Argia sp	2+
51300	Neureclipsis sp	1
52200	Cheumatopsyche sp	233+
52430	Ceratopsyche morosa group	177+
52530	Hydropsyche depravata group	366+
53800	Hydroptila sp	168+
54160	Ochrotrichia sp	120+
59300	Mystacides sp	+
59728	Triaenodes marginatus	+
65800	Berosus sp	+
68075	Psephenus herricki	8+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	2+
68901	Macronychus glabratus	19+
69400	Stenelmis sp	17+
74100	Simulium sp	10+
78350	Meropelopia sp	5
78450	Nilotanypus fimbriatus	5
80351	Corynoneura caudicula	2
80370	Corynoneura lobata	10
80440	Cricotopus (C.) trifascia	5
81825	Rheocricotopus (Psilocricotopus) robacki	5
82101	Thienemanniella taurocapita	8
82220	Tvetenia discoloripes group	10
84450	Polypedilum (Uresipedilum) flavum	501+
84470	Polypedilum (P.) illinoense	+
85625	Rheotanytarsus sp	15
93200	Hydrobiidae	1+
93900	Elimia sp	5+
95100	Physella sp	+
96900	Ferrissia sp	1
97601	Corbicula fluminea	+
98600	Sphaerium sp	1
99280	Lasmigona costata	+
99440	Fusconaia flava	+
99860	Lampsilis siliquoidea	+

Station: F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR. 0:00 8/14/18

Rivercode: 19-007-000 River Mile: 13.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
48	15	15	1	66	1,681	16	52	N/A	0.80 LOW

	Taxa	Quant/Qual
01320	Hydra sp	2
01801	Turbellaria	4+
03600	Oligochaeta	14
04660	Helobdella sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	8+
11120	Baetis flavistriga	22+
11130	Baetis intercalaris	747+
13400	Stenacron sp	9+
13570	Maccaffertium terminatum	71+
16700	Tricorythodes sp	27+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	22+
23804	Basiaeschna janata	+
45400	Trichocorixa sp	+
51400	Nyctiophylax sp	+
52200	Cheumatopsyche sp	228+
52430	Ceratopsyche morosa group	33+
52530	Hydropsyche depravata group	91+
53800	Hydroptila sp	37+
54160	Ochrotrichia sp	7
59300	Mystacides sp	+
59410	Nectopsyche diarina	+
59570	Oecetis nocturna	+
59720	Triaenodes ignitus	+
60900	Peltodytes sp	+
65800	Berosus sp	1+
68075	Psephenus herricki	2+
68601	Ancyronyx variegatus	1+
68708	Dubiraphia vittata group	2+
68901	Macronychus glabratus	66+
69400	Stenelmis sp	32+
71900	Tipula sp	1
74100	Simulium sp	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	7
77750	Thienemannimyia sp	27+
77800	Helopelopia sp	5+
78350	Meropelopia sp	2
80370	Corynoneura lobata	2
80420	Cricotopus (C.) bicinctus	2
81825	Rheocricotopus (Psilocricotopus) robacki	52
82070	Synorthocladius semivirens	2
82141	Thienemanniella xena	4
82220	Tvetenia discoloripes group	7+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	7+
84210	Paratendipes albimanus or P. duplicatus	2
84450	Polypedilum (Uresipedilum) flavum	52
84460	Polypedilum (P.) fallax group	17
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	25+
85265	Cladotanytarsus vanderwulpi group sp 5	2+
85625	Rheotanytarsus sp	7
85800	Tanytarsus sp	2+
85821	Tanytarsus glabrescens group sp 7	2
87540	Hemerodromia sp	1
93200	Hydrobiidae	3+
93900	Elimia sp	2+
96900	Ferrissia sp	14
97601	Corbicula fluminea	8+
99280	Lasmigona costata	+
99440	Fusconaia flava	+
99860	Lampsilis siliquoidea	+

Station: 502090 TINKERS CREEK AT GLEN WILLOW, DST. RICHMOND RD. 0:00 8/29/18

Rivercode: 19-007-000 River Mile: 8.65

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
56	11	6	0	60	4,124	6	40	N/A	1.20 LOW

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01801	Turbellaria	216+
03360	Plumatella sp	+
03600	Oligochaeta	25+
04664	Helobdella stagnalis	+
04962	Erpobdella fervida	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	1+
11130	Baetis intercalaris	818+
13400	Stenacron sp	+
13570	Maccaffertium terminatum	39+
16700	Tricorythodes sp	2+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
49200	Climacia areolaris	+
52200	Cheumatopsyche sp	176+
52430	Ceratopsyche morosa group	1,507+
52530	Hydropsyche depravata group	583+
53800	Hydroptila sp	+
54160	Ochrotrichia sp	10+
59570	Oecetis nocturna	+
60900	Peltodytes sp	+
65800	Berosus sp	+
68601	Ancyronyx variegatus	4+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	35+
69400	Stenelmis sp	5+
70600	Antocha sp	+
74100	Simulium sp	9
77120	Ablabesmyia mallochi	+
77750	Thienemannimyia sp	5+
78450	Nilotanypus fimbriatus	16
78655	Procladius (Holotanypus) sp	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
81825	Rheocricotopus (Psilocricotopus) robacki	15
82220	Tvetenia discoloripes group	94+
82730	Chironomus (C.) decorus group	+
82824	Cryptochironomus ponderosus	+
82885	Cryptotendipes pseudotener	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	356+
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	5+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	5
85230	Cladotanytarsus mancus group	+
85625	Rheotanytarsus sp	49+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	149+

Station: 502220 TINKERS CREEK AT BEDFORD @ ST. RT. 14 0:00 8/29/18

Rivercode: 19-007-000 River Mile: 6.32

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
55	12	8	0	59	4,063	8	42	N/A	1.30 LOW

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01801	Turbellaria	128+
03360	Plumatella sp	+
03600	Oligochaeta	40+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	1+
06700	Crangonyx sp	+
08601	Hydrachnidia	32+
11120	Baetis flavistriga	46+
11130	Baetis intercalaris	634+
13400	Stenacron sp	+
13570	Maccaffertium terminatum	48+
16700	Tricorythodes sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
52200	Cheumatopsyche sp	176+
52430	Ceratopsyche morosa group	1,321+
52450	Ceratopsyche sparna	3+
52530	Hydropsyche depravata group	529+
53800	Hydroptila sp	1+
54160	Ochrotrichia sp	+
59570	Oecetis nocturna	+
60900	Peltodytes sp	+
65800	Berosus sp	+
66500	Enochrus sp	+
68901	Macronychus glabratus	35+
69400	Stenelmis sp	17+
70600	Antocha sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	32+
77750	Thienemannimyia sp	11+
77800	Helopelopia sp	11
78655	Procladius (Holotanypus) sp	+
80410	Cricotopus (C.) sp	11+
80420	Cricotopus (C.) bicinctus	+
80440	Cricotopus (C.) trifascia	11
81270	Nanocladius (N.) spiniplenus	21
81825	Rheocricotopus (Psilocricotopus) robacki	32+
82141	Thienemanniella xena	8
82220	Tvetenia discoloripes group	357+
82824	Cryptochironomus ponderosus	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84450	Polypedilum (Uresipedilum) flavum	389+
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	11+
85625	Rheotanytarsus sp	84+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	74+
85840	Tanytarsus sepp	+
93900	Elimia sp	+
95100	Physella sp	+
97601	Corbicula fluminea	+

Station: F01S25 TINKERS CREEK UPST. WOOD CREEK, ADJ. BUTTON RD. 0:00 8/29/18

Rivercode: 19-007-000 River Mile: 2.50

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
51	11	8	1	51		8		Good	LOW

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01801	Turbellaria	+
01900	Nemertea	+
03040	Fredericella sp	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
13570	Maccaffertium terminatum	+
16700	Tricorythodes sp	+
21300	Hetaerina sp	+
22300	Argia sp	+
23600	Aeshna sp	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
49200	Climacia areolaris	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53501	Hydroptilidae	+
59410	Nectopsyche diarina	+
65800	Berosus sp	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71900	Tipula sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
80420	Cricotopus (C.) bicinctus	+
82141	Thienemanniella xena	+
82220	Tvetenia discoloripes group	+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84888	Xenochironomus xenolabis	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
94400	Fossaria sp	+
97601	Corbicula fluminea	+

Station: F01S24 TINKERS CREEK AT MOUTH @ CANAL RD. 0:00 9/5/18

Rivercode: 19-007-000 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
46	8	7	0	55	5,655	7	40	N/A	1.75 LOW

	Taxa	Quant/Qual
01801	Turbellaria	41+
03600	Oligochaeta	57
04664	Helobdella stagnalis	+
04964	Erpobdella microstoma	1
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	8
11120	Baetis flavistriga	110+
11130	Baetis intercalaris	268+
13570	Maccaffertium terminatum	93+
16700	Tricorythodes sp	14+
21300	Hetaerina sp	1+
22001	Coenagrionidae	+
22300	Argia sp	1+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
52200	Cheumatopsyche sp	401+
52430	Ceratopsyche morosa group	2,961+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	34+
53800	Hydroptila sp	8
65800	Berosus sp	8+
68601	Ancyronyx variegatus	20+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	39+
69400	Stenelmis sp	9+
70600	Antocha sp	7+
71900	Tipula sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	41+
77750	Thienemannimyia sp	177
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	14
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	+
80410	Cricotopus (C.) sp	14+
80430	Cricotopus (C.) tremulus group	82+
80440	Cricotopus (C.) trifascia	+
82220	Tvetenia discoloripes group	205+
82820	Cryptochironomus sp	14+
83040	Dicrotendipes neomodestus	82+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	504+
84460	Polypedilum (P.) fallax group	27
84470	Polypedilum (P.) illinoense	+
84700	Stenochironomus sp	+
85625	Rheotanytarsus sp	273+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	123+
85840	Tanytarsus sepp	9
95100	Physella sp	+
96900	Ferrissia sp	9
97601	Corbicula fluminea	+

Station: F01S36 WOOD CREEK DST. BEDFORD WWTP, NEAR MOUTH 0:00 7/29/19

Rivercode: 19-007-001 River Mile: 0.15

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
28	4	0	0	28		0		Fair	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
06700	Crangonyx sp	+
11120	Baetis flavistriga	+
21200	Calopteryx sp	+
21604	Archilestes grandis	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
42700	Belostoma sp	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
65800	Berosus sp	+
66500	Enochrus sp	+
69400	Stenelmis sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
78601	Pentaneura inyoensis	+
80740	Eukiefferiella claripennis group	+
83003	Dicrotendipes fumidus	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
87540	Hemerodromia sp	+

Station: F01G22 BEAR CREEK W OF I-271 @ SOLON RD. 0:00 8/1/18

Rivercode: 19-007-007 River Mile: 0.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
34	8	3	0	34		3		Marginally Good	LOW

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01801	Turbellaria	+
03040	Fredericella sp	+
04968	Erpobdella tetragon	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
51001	Polycentropodidae	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71900	Tipula sp	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
82820	Cryptochironomus sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84040	Parachironomus frequens	+
84210	Paratendipes albimanus or P. duplicatus	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
95100	Physella sp	+

Station: F01W57 HAWTHORNE CREEK @ RICHMOND RD. 0:00 8/2/18

Rivercode: 19-007-008 River Mile: 0.75

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
36	8	4	1	36		4		Marginally Good	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08220	Faxonius immunis	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
23909	Boyeria vinosa	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
68601	Ancyronyx variegatus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78401	Natarsia species A (sensu Roback, 1978)	+
78450	Nilotanypus fimbriatus	+
78601	Pentaneura inyoensis	+
79720	Diamesa sp	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
82220	Tvetenia discoloripes group	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
87540	Hemerodromia sp	+

Station: F01P44 BEAVER MEADOW RUN DST. SOLON WWTP @ OLD COCHRAN RD. 0:00 8/15/18

Rivercode: 19-007-010 River Mile: 0.11

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
41	6	4	0	49	2,987	4	40	N/A	1.80 LOW

	Taxa	Quant/Qual
01320	Hydra sp	4
01801	Turbellaria	278+
03040	Fredericella sp	1
03600	Oligochaeta	58+
04964	Erpobdella microstoma	1+
05800	Caecidotea sp	+
07820	Cambarus (Cambarus) bartonii cavatus	+
08601	Hydrachnidia	16+
11120	Baetis flavistriga	150+
11130	Baetis intercalaris	256+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	1+
22300	Argia sp	+
23909	Boyeria vinosa	+
52200	Cheumatopsyche sp	99+
52430	Ceratopsyche morosa group	284+
52450	Ceratopsyche sparna	5
52530	Hydropsyche depravata group	417+
53800	Hydroptila sp	1+
65800	Berosus sp	3+
68601	Ancyronyx variegatus	1+
69400	Stenelmis sp	62+
70600	Antocha sp	2+
71900	Tipula sp	+
74100	Simulium sp	9+
77800	Helopelopia sp	116+
78450	Nilotanypus fimbriatus	13
80370	Corynoneura lobata	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82220	Tvetenia discoloripes group	168+
82820	Cryptochironomus sp	26+
83003	Dicrotendipes fumidus	+
83040	Dicrotendipes neomodestus	13+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	52+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	13
84450	Polypedilum (Uresipedilum) flavum	387+
84460	Polypedilum (P.) fallax group	13
84540	Polypedilum (Tripodura) scalaenum group	129
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	13+
85800	Tanytarsus sp	65+
85821	Tanytarsus glabrescens group sp 7	297+
87540	Hemerodromia sp	34
95100	Physella sp	+

Station: F01W28 POND BROOK JUST DST. OF TRIB. 0:00 7/31/18

Rivercode: 19-008-000 River Mile: 2.39

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
43	6	0	0	43		0		Fair	LOW

	Taxa	Quant/Qual
01320	Hydra sp	+
01801	Turbellaria	+
04664	Helobdella stagnalis	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	+
11200	Callibaetis sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
28955	Plathemis lydia	+
42700	Belostoma sp	+
42800	Lethocerus sp	+
43300	Ranatra sp	+
44300	Pelocoris sp	+
45100	Palmacorixa sp	+
45400	Trichocorixa sp	+
52200	Cheumatopsyche sp	+
53800	Hydroptila sp	+
59500	Oecetis sp	+
59570	Oecetis nocturna	+
65800	Berosus sp	+
67800	Tropisternus sp	+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	+
77750	Thienemannimyia sp	+
80420	Cricotopus (C.) bicinctus	+
82141	Thienemanniella xena	+
82820	Cryptochironomus sp	+
83000	Dicrotendipes sp	+
83158	Endochironomus nigricans	+
84470	Polypedilum (P.) illinoense	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
87540	Hemerodromia sp	+
92615	Cipangopaludina japonica	+
93200	Hydrobiidae	+
94400	Fossaria sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
96930	Laevapex fuscus	+
98600	Sphaerium sp	+
99100	Pyganodon grandis	+

Station: F01S40 POND BROOK NEAR AURORA @ ST. RT. 82 0:00 7/17/18

Rivercode: 19-008-000 River Mile: 1.41

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
47	12	2	0	47		2		Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04653	Glossiphonia complanata	+
04664	Helobdella stagnalis	+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
13400	Stenacron sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
42700	Belostoma sp	+
44300	Pelocoris sp	+
45400	Trichocorixa sp	+
51610	Polycentropus sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
59550	Oecetis inconspicua complex sp A (sensu Floyd, 1995)	+
59570	Oecetis nocturna	+
59728	Triaenodes marginatus	+
65700	Anacaena sp	+
65800	Berosus sp	+
67700	Paracymus sp	+
67800	Tropisternus sp	+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
82141	Thienemanniella xena	+
82885	Cryptotendipes pseudotener	+
84470	Polypedilum (P.) illinoense	+
84700	Stenochironomus sp	+
84800	Tribelos jucundum	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
92615	Cipangopaludina japonica	+
93200	Hydrobiidae	+
95100	Physella sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
98600	Sphaerium sp	+
99100	Pyganodon grandis	+

Station: F01S59 CHIPPEWA CREEK UPST. BROADVIEW HEIGHTS LANDFILL 0:00 8/6/18

Rivercode: 19-009-000 River Mile: 6.03

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
36	11	6	1	36		6		Good	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
08260	Faxonius sanbornii sanbornii	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
69400	Stenelmis sp	+
70600	Antocha sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78601	Pentaneura inyoensis	+
80310	Cardiocladius obscurus	+
80410	Cricotopus (C.) sp	+
80430	Cricotopus (C.) tremulus group	+
80440	Cricotopus (C.) trifascia	+
82730	Chironomus (C.) decorus group	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84315	Phaenopsectra flavipes	+
84460	Polypedilum (P.) fallax group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84612	Saetheria tylus	+
85625	Rheotanytarsus sp	+
85840	Tanytarsus sepp	+
87540	Hemerodromia sp	+
89704	Lispoides aequifrons	+

Station: F01P13 CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD. 0:00 9/4/18

Rivercode: 19-009-000 River Mile: 0.36

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
43	12	10	2	63	1,642	14	50	N/A	0.37 LOW

	Taxa	Quant/Qual
01801	Turbellaria	30+
01900	Nemertea	17
03451	Urnatella gracilis	+
03600	Oligochaeta	17+
05800	Caecidotea sp	1+
06700	Crangonyx sp	+
11020	Acerpenna pygmaea	10
11120	Baetis flavistriga	34+
11130	Baetis intercalaris	40+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
16700	Tricorythodes sp	9
17200	Caenis sp	9+
21200	Calopteryx sp	3+
22001	Coenagrionidae	+
22300	Argia sp	2+
23909	Boyeria vinosa	+
50301	Chimarra aterrima	3+
50315	Chimarra obscura	10+
51300	Neureclipsis sp	1
52200	Cheumatopsyche sp	195+
52430	Ceratopsyche morosa group	27+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	14
59300	Mystacides sp	+
68075	Psephenus herricki	+
68130	Helichus sp	+
68601	Ancyronyx variegatus	9
69400	Stenelmis sp	4+
70600	Antocha sp	5+
71300	Limonia sp	+
71900	Tipula sp	1
74100	Simulium sp	+
74650	Atrichopogon sp	20
77120	Ablabesmyia mallochi	14+
77500	Conchapelopia sp	138
77750	Thienemannimyia sp	83
77800	Helopelopia sp	124+
78350	Meropelopia sp	28
78450	Nilotanypus fimbriatus	83
78655	Procladius (Holotanypus) sp	+
80351	Corynoneura caudicula	8
80370	Corynoneura lobata	8
80420	Cricotopus (C.) bicinctus	55+
81650	Parametriocnemus sp	14
81690	Paratrichocladius sp	14+
82141	Thienemanniella xena	13
82220	Tvetenia discoloripes group	+
82730	Chironomus (C.) decorus group	+
83040	Dicrotendipes neomodestus	55+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84300	Phaenopsectra obediens group	28+
84540	Polypedilum (Tripodura) scalaenum group	+
84612	Saetheria tylus	+
85261	Cladotanytarsus vanderwulpi	14
85500	Paratanytarsus sp	83
85625	Rheotanytarsus sp	83
85821	Tanytarsus glabrescens group sp 7	221
85840	Tanytarsus sepp	97+
87540	Hemerodromia sp	18+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: 302647 TRIB. TO CHIPPEWA CREEK (0.80) NEAR BRECKSVILLE, NEAR MOUTH 0:00 8/6/18

Rivercode: 19-009-001 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
32	13	12	6	32		12		Exceptional	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
06700	Crangonyx sp	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
13521	Stenonema femoratum	+
15000	Paraleptophlebia sp	+
23600	Aeshna sp	+
23905	Boyeria grafiana	+
33100	Leuctra sp	+
50301	Chimarra aterrima	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52315	Diplectrona modesta	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
68075	Psephenus herricki	+
71900	Tipula sp	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
81690	Paratrichocladius sp	+
82141	Thienemanniella xena	+
82220	Tvetenia discoloripes group	+
84210	Paratendipes albimanus or P. duplicatus	+
84440	Polypedilum (Uresipedilum) aviceps	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
85500	Paratanytarsus sp	+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
95100	Physella sp	+

Station: F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD. 0:00 8/1/18

Rivercode: 19-010-000 River Mile: 7.02

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	12	2	0	50		2		Marginally Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08220	Faxonius immunis	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23804	Basiaeschna janata	+
44501	Corixidae	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
59100	Ceraclea sp	+
59500	Oecetis sp	+
59555	Oecetis inconspicua complex sp F (sensu Floyd, 1995)	+
59728	Triaenodes marginatus	+
65800	Berosus sp	+
66500	Enochrus sp	+
68025	Ectopria sp	+
68601	Ancyronyx variegatus	+
69400	Stenelmis sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
82820	Cryptochironomus sp	+
83003	Dicrotendipes fumidus	+
83158	Endochironomus nigricans	+
83300	Glyptotendipes (G.) sp	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
87540	Hemerodromia sp	+
93200	Hydrobiidae	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01P35 BRANDYWINE CREEK NEAR NORTHFIELD CENTER @ ST. RT. 8 0:00 8/2/18

Rivercode: 19-010-000 River Mile: 4.27

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	10	3	0	42		3		Good	LOW

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01801	Turbellaria	+
03360	Plumatella sp	+
04666	Helobdella papillata	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23804	Basiaeschna janata	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
59118	Ceraclea enodis	+
59720	Triaenodes ignitus	+
59728	Triaenodes marginatus	+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	+
84888	Xenochironomus xenolabis	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
93200	Hydrobiidae	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96120	Menetus (Micromenetus) dilatatus	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE 0:00 9/6/18

Rivercode: 19-010-000 River Mile: 0.26

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
45	14	10	0	45		10		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04685	Placobdella ornata	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
13570	Maccaffertium terminatum	+
16700	Tricorythodes sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
42700	Belostoma sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
51300	Neureclipsis sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
65800	Berosus sp	+
66500	Enochrus sp	+
68601	Ancyronyx variegatus	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
82220	Tvetenia discoloripes group	+
82730	Chironomus (C.) decorus group	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84300	Phaenopsectra obediens group	+
84540	Polypedilum (Tripodura) scalaenum group	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
95100	Physella sp	+

Station: F01W15 INDIAN CREEK AT MACEDONIA @ MOUTH 0:00 8/2/18

Rivercode: 19-010-001 River Mile: 0.01

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	8	2	0	50		2		Marginally Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
53800	Hydroptila sp	+
59720	Triaenodes ignitus	+
60400	Gyrinus sp	+
65800	Berosus sp	+
67700	Paracymus sp	+
68601	Ancyronyx variegatus	+
68707	Dubiraphia quadrinotata	+
69400	Stenelmis sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
80410	Cricotopus (C.) sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82820	Cryptochironomus sp	+
82824	Cryptochironomus ponderosus	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84460	Polypedilum (P.) fallax group	+
84470	Polypedilum (P.) illinoense	+
84612	Saetheria tylus	+
84700	Stenochironomus sp	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
87540	Hemerodromia sp	+
95100	Physella sp	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	+
98600	Sphaerium sp	+

Station: F01G34 STANFORD RUN @ HINES HILL RD. 0:00 8/6/18

Rivercode: 19-011-000 River Mile: 0.90

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
28	10	8	0	28		8		Good	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
11250	Neocloeon sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
23909	Boyeria vinosa	+
45900	Notonecta sp	+
47600	Sialis sp	+
48620	Nigronia serricornis	+
50301	Chimarra aterrima	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
68130	Helichus sp	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71100	Hexatoma sp	+
71800	Pseudolimnophila sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
84470	Polypedilum (P.) illinoense	+
95100	Physella sp	+

Station: F01G33 SLIPPER RUN @ RIVERVIEW RD. 0:00 6/21/18

Rivercode: 19-012-000 River Mile: 0.16

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
37	13	12	5	37		12		Very Good	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
07860	Cambarus (Puncticambarus) robustus	+
11018	Acerpenna macdunnoughi	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11650	Procloeon sp (w/ hindwing pads)	+
13521	Stenonema femoratum	+
23905	Boyeria grafiana	+
25510	Stylogomphus albistylus	+
34500	Perlesta sp	+
50301	Chimarra aterrima	+
51250	Holocentropus sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53501	Hydroptilidae	+
68075	Psephenus herricki	+
69400	Stenelmis sp	+
71900	Tipula sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77500	Conchapelopia sp	+
80370	Corynoneura lobata	+
81650	Parametriocnemus sp	+
82820	Cryptochironomus sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
85501	Paratanytarsus longistilus	+
87515	Clinocera sp	+
94400	Fossaria sp	+
95100	Physella sp	+

Station: F01G32 BOSTON RUN @ DUGWAY HILL RD. 0:00 8/8/18

Rivercode: 19-013-000 River Mile: 0.22

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
43	18	12	4	43		12		Exceptional	LOW

	Taxa	Quant/Qual
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11250	Neocloeon sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22300	Argia sp	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
33100	Leuctra sp	+
34120	Acroneuria carolinensis	+
47600	Sialis sp	+
48610	Nigronia fasciata	+
48620	Nigronia serricornis	+
50301	Chimarra aterrima	+
51050	Cernotina sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53501	Hydroptilidae	+
68075	Psephenus herricki	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
71910	Tipula abdominalis	+
72700	Anopheles sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	+
78655	Procladius (Holotanypus) sp	+
79400	Zavrelimyia (Z.) sp	+
80420	Cricotopus (C.) bicinctus	+
84210	Paratendipes albimanus or P. duplicatus	+
84540	Polypedilum (Tripodura) scalaenum group	+
85821	Tanytarsus glabrescens group sp 7	+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: F01G30 SALT RUN @ AKRON-PENINSULA RD. 0:00 7/25/18

Rivercode: 19-016-000 River Mile: 0.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
65	15	11	3	65		11		Very Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11018	Acerpenna macdunnoughi	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
11250	Neocloeon sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11670	Procloeon viridoculare	+
13521	Stenonema femoratum	+
13590	Maccaffertium vicarium	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
24900	Gomphus Complex	+
43570	Neoplea sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
57900	Pycnopsyche sp	+
59730	Triaenodes melaca	+
60900	Peltodytes sp	+
63300	Hydroporini	+
67500	Laccobius sp	+
67700	Paracymus sp	+
68130	Helichus sp	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
70502	Limoniinae	+
70700	Dicranota sp	+
71100	Hexatoma sp	+
72340	Dixella sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
78350	Meropelopia sp	+
78655	Procladius (Holotanypus) sp	+
81650	Parametriocnemus sp	+
82820	Cryptochironomus sp	+
84315	Phaenopsectra flavipes	+
84470	Polypedilum (P.) illinoense	+
84475	Polypedilum (P.) ophioides	+
84480	Polypedilum (P.) laetum group	+
84612	Saetheria tylus	+
85201	Cladotanytarsus species group A	+
85230	Cladotanytarsus mancus group	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
86100	Chrysops sp	+
87540	Hemerodromia sp	+
95100	Physella sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	+

Station: F01G29 DICKERSON RUN @ AKRON-PENINSULA RD. 0:00 7/30/19

Rivercode: 19-017-000 River Mile: 0.60

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
37	13	10	4	37		10		Very Good	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
05800	Caecidotea sp	+
08260	Faxonius sanbornii sanbornii	+
11018	Acerpenna macdunnoughi	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11430	Diphetor hageni	+
11651	Procloeon sp (w/o hindwing pads)	+
13521	Stenonema femoratum	+
13590	Maccaffertium vicarium	+
17200	Caenis sp	+
21001	Calopterygidae	+
23600	Aeshna sp	+
23905	Boyeria grafiana	+
25510	Stylogomphus albistylus	+
33100	Leuctra sp	+
52200	Cheumatopsyche sp	+
52315	Diplectrona modesta	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
67750	Sperchopsis tesselatus	+
68130	Helichus sp	+
69400	Stenelmis sp	+
70700	Dicranota sp	+
71100	Hexatoma sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
82820	Cryptochironomus sp	+
84210	Paratendipes albimanus or P. duplicatus	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84612	Saetheria tylus	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+

Station: F01G27 ROBINSON RUN @ AKRON-PENINSULA RD. 0:00 8/8/18

Rivercode: 19-019-000 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
31	10	5	5	31		5		Good	LOW

	Taxa	Quant/Qual
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
17200	Caenis sp	+
21200	Calopteryx sp	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
24900	Gomphus Complex	+
33100	Leuctra sp	+
47600	Sialis sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
66200	Cymbiodyta sp	+
67750	Sperchopsis tesselatus	+
68130	Helichus sp	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71600	Pedicia sp	+
71900	Tipula sp	+
74501	Ceratopogonidae	+
78350	Meropelopia sp	+
82141	Thienemanniella xena	+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
84210	Paratendipes albimanus or P. duplicatus	+
85625	Rheotanytarsus sp	+
87540	Hemerodromia sp	+

Station: 300088 FURNACE RUN DST. CONFLUENCE WITH ROCK CREEK 0:00 8/8/18

Rivercode: 19-020-000 River Mile: 7.25

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
51	17	16	7	51		16		Exceptional	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
05800	Caecidotea sp	+
08255	Faxonius rusticus x sanbornii	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11430	Diphetor hageni	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23700	Anax sp	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
25510	Stylogomphus albistylus	+
33100	Leuctra sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
50410	Dolophilodes distinctus	+
51400	Nyctiophylax sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53501	Hydroptilidae	+
67800	Tropisternus sp	+
68025	Ectopria sp	+
68075	Psephenus herricki	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
80420	Cricotopus (C.) bicinctus	+
81650	Parametriocnemus sp	+
82101	Thienemanniella taurocapita	+
82730	Chironomus (C.) decorus group	+
83003	Dicrotendipes fumidus	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84430	Polypedilum (P.) albicorne	+
84440	Polypedilum (Uresipedilum) aviceps	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+

Station: F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD. 0:00 9/6/18

Rivercode: 19-020-000 River Mile: 0.27

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
39	12	12	2	65	2,290	19	56	N/A	0.80 NORMAL

	Taxa	Quant/Qual
03600	Oligochaeta	16+
08260	Faxonius sanbornii sanbornii	+
11020	Acerpenna pygmaea	9+
11120	Baetis flavistriga	175+
11130	Baetis intercalaris	470+
11250	Neocloeon sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
13521	Stenonema femoratum	6+
13570	Maccaffertium terminatum	41+
16200	Eurylophella sp	2
16700	Tricorythodes sp	3
17200	Caenis sp	76+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23909	Boyeria vinosa	+
24900	Gomphus Complex	+
26700	Macromia sp	+
50315	Chimarra obscura	132+
51300	Neureclipsis sp	9
52200	Cheumatopsyche sp	252+
52430	Ceratopsyche morosa group	554+
52450	Ceratopsyche sparna	18
52530	Hydropsyche depravata group	6
53800	Hydroptila sp	2
68075	Psephenus herricki	+
68130	Helichus sp	1
68601	Ancyronyx variegatus	9
68901	Macronychus glabratus	1
69400	Stenelmis sp	21+
70600	Antocha sp	3+
71900	Tipula sp	+
74100	Simulium sp	2+
77500	Conchapelopia sp	83+
77750	Thienemannimyia sp	5
77800	Helopelopia sp	36+
78450	Nilotanypus fimbriatus	45
80310	Cardiocladius obscurus	5+
80410	Cricotopus (C.) sp	10
80420	Cricotopus (C.) bicinctus	21
80430	Cricotopus (C.) tremulus group	10
81650	Parametriocnemus sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	5
82101	Thienemanniella taurocapita	4
82141	Thienemanniella xena	4
82220	Tvetenia discoloripes group	10
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	5+
84210	Paratendipes albimanus or P. duplicatus	+
84315	Phaenopsectra flavipes	+
84440	Polypedilum (Uresipedilum) aviceps	5
84450	Polypedilum (Uresipedilum) flavum	67
84540	Polypedilum (Tripodura) scalaenum group	10+
85201	Cladotanytarsus species group A	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	104
85752	Sublettea coffmani	10
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	5
85840	Tanytarsus sepp	16
87540	Hemerodromia sp	20
95100	Physella sp	+
96900	Ferrissia sp	2

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	13	12	6	50		12		Exceptional	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
05800	Caecidotea sp	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11430	Diphetor hageni	+
13521	Stenonema femoratum	+
21200	Calopteryx sp	+
22300	Argia sp	+
23905	Boyeria grafiana	+
27500	Somatochlora sp	+
33100	Leuctra sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52315	Diplectrona modesta	+
52440	Ceratopsyche slossonae	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
66500	Enochrus sp	+
67100	Hydrobius sp	+
68025	Ectopria sp	+
68075	Psephenus herricki	+
69400	Stenelmis sp	+
71300	Limonia sp	+
71910	Tipula abdominalis	+
72700	Anopheles sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78510	Zavrelimyia (Paramerina) sp 1	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
82730	Chironomus (C.) decorus group	+
84440	Polypedilum (Uresipedilum) aviceps	+
84450	Polypedilum (Uresipedilum) flavum	+
84460	Polypedilum (P.) fallax group	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85261	Cladotanytarsus vanderwulpi	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
89704	Lispoides aequifrons	+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: 300085 ROCK CREEK UPST. ELM GROVE BRIDGE 0:00 8/7/18

Rivercode: 19-020-002 River Mile: 0.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
46	7	8	5	46		8		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
13521	Stenonema femoratum	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
26100	Cordulegaster sp	+
50301	Chimarra aterrima	+
51400	Nyctiophylax sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
63300	Hydroporini	+
66500	Enochrus sp	+
68708	Dubiraphia vittata group	+
69200	Optioservus sp	+
69400	Stenelmis sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78300	Macropelopia sp	+
78350	Meropelopia sp	+
78601	Pentaneura inyoensis	+
79720	Diamesa sp	+
82710	Chironomus (C.) sp	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84315	Phaenopsectra flavipes	+
84440	Polypedilum (Uresipedilum) aviceps	+
84460	Polypedilum (P.) fallax group	+
84540	Polypedilum (Tripodura) scalaenum group	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
87501	Empididae	+
95100	Physella sp	+

Station: 303964 RIDING RUN @WHEATLEY RD. 0:00 7/23/19

Rivercode: 19-020-003 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	14	13	7	42		13		Exceptional	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
11018	Acerpenna macdunnoughi	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
15000	Paraleptophlebia sp	+
21001	Calopterygidae	+
23905	Boyeria grafiana	+
32001	Nemouridae	+
33100	Leuctra sp	+
34120	Acroneuria carolinensis	+
48610	Nigronia fasciata	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
63300	Hydroporini	+
67700	Paracymus sp	+
68130	Helichus sp	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
70700	Dicranota sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
79400	Zavrelimyia (Z.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82200	Tvetenia bavarica group	+
82730	Chironomus (C.) decorus group	+
84460	Polypedilum (P.) fallax group	+
84470	Polypedilum (P.) illinoense	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+

Station: 303970 TRIB. TO FURNACE RUN (1.20) @ EVERETT RD. 0:00 7/24/18

Rivercode: 19-020-004 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
37	14	11	4	37		11		Very Good	LOW

	Taxa	Quant/Qual
11018	Acerpenna macdunnoughi	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
23909	Boyeria vinosa	+
33100	Leuctra sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
68075	Psephenus herricki	+
68130	Helichus sp	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
70800	Erioptera sp	+
71100	Hexatoma sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84440	Polypedilum (Uresipedilum) aviceps	+
84540	Polypedilum (Tripodura) scalaenum group	+
85261	Cladotanytarsus vanderwulpi	+
95100	Physella sp	+

Station: F01G46 YELLOW CREEK @ GRANGER RD. (FIRST CROSSING UPST. NORTH FORK) 0:00 7/26/18

Rivercode: 19-021-000 River Mile: 5.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
63	16	16	2	63		16		Exceptional	NORMAL

	Taxa	Quant/Qual			Quant/Qual
01801	Turbellaria	+	85821	Tanytarsus glabrescens group sp 7	+
03600	Oligochaeta	+	86401	Atherix lantha	+
04964	Erpobdella microstoma	+	87540	Hemerodromia sp	+
05800	Caecidotea sp	+	94400	Fossaria sp	+
06700	Crangonyx sp	+	95100	Physella sp	+
08260	Faxonius sanbornii sanbornii	+	96900	Ferrissia sp	+
08601	Hydrachnidia	+	98600	Sphaerium sp	+
11120	Baetis flavistriga	+			
11130	Baetis intercalaris	+			
11670	Procloeon viridoculare	+			
13400	Stenacron sp	+			
13521	Stenonema femoratum	+			
17200	Caenis sp	+			
21200	Calopteryx sp	+			
22001	Coenagrionidae	+			
23909	Boyeria vinosa	+			
25510	Stylogomphus albistylus	+			
33100	Leuctra sp	+			
45900	Notonecta sp	+			
50315	Chimarra obscura	+			
51550	Plectrocnemia sp	+			
52200	Cheumatopsyche sp	+			
52430	Ceratopsyche morosa group	+			
52530	Hydropsyche depravata group	+			
57900	Pycnopsyche sp	+			
58505	Helicopsyche borealis	+			
59580	Oecetis persimilis	+			
59720	Triaenodes ignitus	+			
67750	Sperchopsis tesselatus	+			
68075	Psephenus herricki	+			
68130	Helichus sp	+			
68201	Scirtidae	+			
68601	Ancyronyx variegatus	+			
68707	Dubiraphia quadrinotata	+			
68708	Dubiraphia vittata group	+			
68901	Macronychus glabratus	+			
69200	Optioservus sp	+			
69400	Stenelmis sp	+			
71100	Hexatoma sp	+			
72340	Dixella sp	+			
72700	Anopheles sp	+			
77120	Ablabesmyia mallochi	+			
77800	Helopelopia sp	+			
78450	Nilotanypus fimbriatus	+			
78655	Procladius (Holotanypus) sp	+			
80204	Brillia flavifrons group	+			
82820	Cryptochironomus sp	+			
83840	Microtendipes pedellus group	+			
84155	Paralauterborniella nigrohalteralis	+			
84210	Paratendipes albimanus or P. duplicatus	+			
84300	Phaenopsectra obediens group	+			
84315	Phaenopsectra flavipes	+			
84440	Polypedilum (Uresipedilum) aviceps	+			
84470	Polypedilum (P.) illinoense	+			
85625	Rheotanytarsus sp	+			
85720	Stempellinella fimbriata	+			

Station: F01P16 YELLOW CREEK DST. GHENT @ YELLOW CREEK RD. 0:00 9/6/18

Rivercode: 19-021-000 River Mile: 4.08

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
42	16	10	5	65	2,081	15	50	N/A	0.80 ABOVE NO

	Taxa	Quant/Qual
03040	Fredericella sp	+
03600	Oligochaeta	9+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	25+
11130	Baetis intercalaris	44+
11650	Procloeon sp (w/ hindwing pads)	+
13400	Stenacron sp	2+
13521	Stenonema femoratum	3+
14950	small Leptophlebiidae	4
17200	Caenis sp	11+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23909	Boyeria vinosa	+
50301	Chimarra aterrima	121+
50315	Chimarra obscura	3+
50804	Lype diversa	17
52200	Cheumatopsyche sp	81+
52315	Diplectrona modesta	+
52430	Ceratopsyche morosa group	195+
52440	Ceratopsyche slossonae	2
52450	Ceratopsyche sparna	69+
52530	Hydropsyche depravata group	2+
53800	Hydroptila sp	1
57900	Pycnopsyche sp	+
58505	Helicopsyche borealis	+
59720	Triaenodes ignitus	+
68075	Psephenus herricki	+
68130	Helichus sp	+
68601	Ancyronyx variegatus	2+
68708	Dubiraphia vittata group	1+
68901	Macronychus glabratus	17+
69400	Stenelmis sp	16+
70600	Antocha sp	27
71900	Tipula sp	+
74100	Simulium sp	3
77500	Conchapelopia sp	94
77800	Helopelopia sp	80
78350	Meropelopia sp	13
78450	Nilotanypus fimbriatus	54
80410	Cricotopus (C.) sp	13+
80420	Cricotopus (C.) bicinctus	13
81650	Parametriocnemus sp	188+
82121	Thienemanniella lobapodema	8
83040	Dicrotendipes neomodestus	13+
83840	Microtendipes pedellus group	40
83860	Microtendipes rydalensis	13
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	13
84430	Polypedilum (P.) albicorne	13
84460	Polypedilum (P.) fallax group	147
84540	Polypedilum (Tripodura) scalaenum group	54
85500	Paratanytarsus sp	54+
85615	Rheotanytarsus pellucidus	40
85625	Rheotanytarsus sp	107+
85752	Sublettea coffmani	54+
85800	Tanytarsus sp	+
85801	Tanytarsus sp 1	13
85821	Tanytarsus glabrescens group sp 7	201
85840	Tanytarsus sepp	40
86401	Atherix lantha	+
87540	Hemerodromia sp	13
95100	Physella sp	1+
96900	Ferrissia sp	147+

Station: F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD. 0:00 9/6/18

Rivercode: 19-021-000 River Mile: 0.14

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
36	10	9	0	56	3,079	13	46	N/A	0.40 NORMAL

	Taxa	Quant/Qual
03600	Oligochaeta	32+
05800	Caecidotea sp	1+
06700	Crangonyx sp	+
11120	Baetis flavistriga	106+
11130	Baetis intercalaris	205+
11651	Procloeon sp (w/o hindwing pads)	+
13400	Stenacron sp	8
13521	Stenonema femoratum	2+
13561	Maccaffertium pulchellum	1
13570	Maccaffertium terminatum	13+
17200	Caenis sp	8
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	1+
42700	Belostoma sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
51300	Neureclipsis sp	43
52200	Cheumatopsyche sp	771+
52430	Ceratopsyche morosa group	124+
52450	Ceratopsyche sparna	2
52530	Hydropsyche depravata group	51+
53800	Hydroptila sp	1
68130	Helichus sp	+
68601	Ancyronyx variegatus	12
68708	Dubiraphia vittata group	1+
68901	Macronychus glabratus	29
69400	Stenelmis sp	1+
70600	Antocha sp	83+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77500	Conchapelopia sp	165+
77800	Helopelopia sp	66+
78450	Nilotanypus fimbriatus	99
80310	Cardiocladius obscurus	+
81690	Paratrichocladius sp	17
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	50
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	50+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	17
84450	Polypedilum (Uresipedilum) flavum	66+
84460	Polypedilum (P.) fallax group	66
84480	Polypedilum (P.) laetum group	+
84540	Polypedilum (Tripodura) scalaenum group	99+
84612	Saetheria tylus	+
85230	Cladotanytarsus mancus group	+
85625	Rheotanytarsus sp	232
85752	Sublettea coffmani	17
85800	Tanytarsus sp	33
85821	Tanytarsus glabrescens group sp 7	447
85840	Tanytarsus sepp	50
87540	Hemerodromia sp	82
95100	Physella sp	2+
96900	Ferrissia sp	26

Station: F01P21 N. FK. YELLOW CREEK AT GHENT, UPST. YELLOW CREEK RD. 0:00 7/26/18

Rivercode: 19-022-000 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
53	17	14	3	53		14		Exceptional	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
25510	Stylogomphus albistylus	+
33100	Leuctra sp	+
50301	Chimarra aterrima	+
51400	Nyctiophylax sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
57900	Pycnopsyche sp	+
58505	Helicopsyche borealis	+
59300	Mystacides sp	+
59728	Triaenodes marginatus	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69225	Optioservus fastiditus	+
69400	Stenelmis sp	+
71900	Tipula sp	+
71910	Tipula abdominalis	+
72700	Anopheles sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
82101	Thienemanniella taurocapita	+
82820	Cryptochironomus sp	+
83040	Dicrotendipes neomodestus	+
84210	Paratendipes albimanus or P. duplicatus	+
84475	Polypedilum (P.) ophioides	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85201	Cladotanytarsus species group A	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85800	Tanytarsus sp	+
94400	Fossaria sp	+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD. 0:00 7/29/19

Rivercode: 19-023-000 River Mile: 0.60

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
35	11	11	5	35		11		Good	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
11018	Acerpenna macdunnoughi	+
11115	Baetis tricaudatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
21001	Calopterygidae	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
25250	small Lanthus or Stylogomphus	+
32001	Nemouridae	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
66500	Enochrus sp	+
68130	Helichus sp	+
68707	Dubiraphia quadrinotata	+
69400	Stenelmis sp	+
70700	Dicranota sp	+
71100	Hexatoma sp	+
71300	Limonia sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77740	Thienemannimyia (Hayesomyia) senata	+
80204	Brillia flavifrons group	+
82200	Tvetenia bavarica group	+
84210	Paratendipes albimanus or P. duplicatus	+
84440	Polypedilum (Uresipedilum) aviceps	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84612	Saetheria tylus	+
85625	Rheotanytarsus sp	+
85840	Tanytarsus sepp	+

Station: F01P25 MUD BROOK AT STOW @ SEASONS RD. 0:00 8/15/18

Rivercode: 19-024-000 River Mile: 8.34

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
55	7	2	0	71	2,254	5	46	N/A	0.39 LOW

	Taxa	Quant/Qual
01801	Turbellaria	153+
03600	Oligochaeta	8
04664	Helobdella stagnalis	+
04666	Helobdella papillata	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	15+
06201	Hyalella sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	20
08250	Faxonius rusticus	2+
08601	Hydrachnidia	+
11120	Baetis flavistriga	12+
11130	Baetis intercalaris	248+
13400	Stenacron sp	14+
17200	Caenis sp	23+
21200	Calopteryx sp	14+
22001	Coenagrionidae	+
22300	Argia sp	34+
23804	Basiaeschna janata	+
44501	Corixidae	+
47600	Sialis sp	1
52200	Cheumatopsyche sp	512+
52530	Hydropsyche depravata group	18
53800	Hydroptila sp	1
59300	Mystacides sp	+
59728	Triaenodes marginatus	+
60400	Gyrinus sp	+
65800	Berosus sp	+
66500	Enochrus sp	+
67800	Tropisternus sp	+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	13+
68901	Macronychus glabratus	19+
69400	Stenelmis sp	34+
70502	Limoniinae	+
77130	Ablabesmyia rhamphe group	11+
77500	Conchapelopia sp	11+
77750	Thienemannimyia sp	80
77800	Helopelopia sp	57+
78450	Nilotanypus fimbriatus	23
78600	Pentaneura inconspicua	23+
80370	Corynoneura lobata	24
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	23+
81270	Nanocladius (N.) spiniplenus	+
81825	Rheocricotopus (Psilocricotopus) robacki	11+
82121	Thienemanniella lobapodema	4
82141	Thienemanniella xena	+
82220	Tvetenia discoloripes group	23
82820	Cryptochironomus sp	11+
82885	Cryptotendipes pseudotener	+
83003	Dicrotendipes fumidus	23
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	23
84210	Paratendipes albimanus or P. duplicatus	23+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	102+
84460	Polypedilum (P.) fallax group	23
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	148+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	23+
85625	Rheotanytarsus sp	273+
85800	Tanytarsus sp	11+
85821	Tanytarsus glabrescens group sp 7	68+
85840	Tanytarsus sepp	46
87540	Hemerodromia sp	1
93200	Hydrobiidae	39+
93900	Elimia sp	2
95100	Physella sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
96930	Laevapex fuscus	7+
98600	Sphaerium sp	+

Station: F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD. 0:00 9/4/18

Rivercode: 19-024-000 River Mile: 0.18

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
34	9	5	0	46	2,556	9	42	N/A	1.20 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	41+
03600	Oligochaeta	152+
04964	Erpobdella microstoma	3+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	57+
11130	Baetis intercalaris	337+
13400	Stenacron sp	2+
13561	Maccaffertium pulchellum	1
13570	Maccaffertium terminatum	1
21200	Calopteryx sp	+
22300	Argia sp	1+
23909	Boyeria vinosa	+
48410	Corydalus cornutus	+
50315	Chimarra obscura	30+
52200	Cheumatopsyche sp	288+
52430	Ceratopsyche morosa group	114+
52450	Ceratopsyche sparna	288+
52530	Hydropsyche depravata group	27+
53400	Protoptila sp	4+
53800	Hydroptila sp	10
60900	Peltodytes sp	+
63300	Hydroporini	+
68601	Ancyronyx variegatus	1+
68901	Macronychus glabratus	44+
69400	Stenelmis sp	249+
70600	Antocha sp	1
71900	Tipula sp	+
77500	Conchapelopia sp	141+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	9
81825	Rheocricotopus (Psilocricotopus) robacki	9
82220	Tvetenia discoloripes group	9
82730	Chironomus (C.) decorus group	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	220+
84210	Paratendipes albimanus or P. duplicatus	18+
84300	Phaenopsectra obediens group	62
84450	Polypedilum (Uresipedilum) flavum	141+
84460	Polypedilum (P.) fallax group	79
84540	Polypedilum (Tripodura) scalaenum group	123+
85625	Rheotanytarsus sp	18
85800	Tanytarsus sp	44+
85821	Tanytarsus glabrescens group sp 7	9
85840	Tanytarsus sepp	+
87540	Hemerodromia sp	6
96900	Ferrissia sp	17+

Station: F01S46 POWERS BROOK DST. HUDSON #6 WWTP @ SOD FARM RD. 0:00 9/12/18

Rivercode: 19-025-000 River Mile: 0.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
40	7	3	0	40		3		Marginally Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11200	Callibaetis sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
24107	Nasiaeschna pentacantha	+
43570	Neoplea sp	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52540	Hydropsyche dicantha	+
60900	Peltodytes sp	+
68601	Ancyronyx variegatus	+
68707	Dubiraphia quadrinotata	+
69400	Stenelmis sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
83158	Endochironomus nigricans	+
83300	Glyptotendipes (G.) sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84700	Stenochironomus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
86100	Chrysops sp	+
87400	Stratiomys sp	+
93200	Hydrobiidae	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
97601	Corbicula fluminea	+
99100	Pyganodon grandis	+

Station: F01W37 FISH CREEK AT KENT @ N. RIVER RD. 0:00 7/18/18

Rivercode: 19-026-000 River Mile: 0.38

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
59	11	7	0	59		7		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
04935	Erpobdella punctata punctata	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
21001	Calopterygidae	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
23909	Boyeria vinosa	+
27500	Somatochlora sp	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
59720	Triaenodes ignitus	+
59728	Triaenodes marginatus	+
66500	Enochrus sp	+
68025	Ectopria sp	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
71900	Tipula sp	+
71910	Tipula abdominalis	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77150	Ablabesmyia simpsoni	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
82820	Cryptochironomus sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
87540	Hemerodromia sp	+
92516	Campeloma decisum	+
93200	Hydrobiidae	+
93900	Elimia sp	+
95100	Physella sp	+
95907	Gyraulus (Torquis) parvus	+
96120	Menetus (Micromenetus) dilatatus	+
96900	Ferrissia sp	+
97601	Corbicula fluminea	+
98600	Sphaerium sp	+

Station: F01G23 PLUM CREEK @ TALLMADGE RD. 0:00 7/31/18

Rivercode: 19-027-000 River Mile: 3.70

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
60	17	14	1	60		14		Exceptional	NORMAL

	Taxa	Quant/Qual			Quant/Qual
00653	Eunapius fragilis	+	86100	Chrysops sp	+
01801	Turbellaria	+	93900	Elimia sp	+
03600	Oligochaeta	+	96900	Ferrissia sp	+
04666	Helobdella papillata	+	98600	Sphaerium sp	+
06201	Hyalella sp	+			
08260	Faxonius sanbornii sanbornii	+			
08601	Hydrachnidia	+			
11120	Baetis flavistriga	+			
11125	Labiobaetis frondalis	+			
11130	Baetis intercalaris	+			
11200	Callibaetis sp	+			
11670	Procloeon viridoculare	+			
13400	Stenacron sp	+			
17200	Caenis sp	+			
21200	Calopteryx sp	+			
22001	Coenagrionidae	+			
22300	Argia sp	+			
23909	Boyeria vinosa	+			
47600	Sialis sp	+			
50301	Chimarra aterrima	+			
50315	Chimarra obscura	+			
51050	Cernotina sp	+			
51550	Plectrocnemia sp	+			
52200	Cheumatopsyche sp	+			
52530	Hydropsyche depravata group	+			
57400	Neophylax sp	+			
57900	Pycnopsyche sp	+			
59300	Mystacides sp	+			
59720	Triaenodes ignitus	+			
67800	Tropisternus sp	+			
68025	Ectopria sp	+			
68201	Scirtidae	+			
68601	Ancyronyx variegatus	+			
68702	Dubiraphia bivittata	+			
68708	Dubiraphia vittata group	+			
68901	Macronychus glabratus	+			
69225	Optioservus fastiditus	+			
69400	Stenelmis sp	+			
71910	Tipula abdominalis	+			
72340	Dixella sp	+			
72700	Anopheles sp	+			
74100	Simulium sp	+			
74501	Ceratopogonidae	+			
77500	Conchapelopia sp	+			
77800	Helopelopia sp	+			
79720	Diamesa sp	+			
82820	Cryptochironomus sp	+			
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+			
83840	Microtendipes pedellus group	+			
84470	Polypedilum (P.) illinoense	+			
84480	Polypedilum (P.) laetum group	+			
84540	Polypedilum (Tripodura) scalaenum group	+			
84888	Xenochironomus xenolabis	+			
85500	Paratanytarsus sp	+			
85625	Rheotanytarsus sp	+			
85800	Tanytarsus sp	+			

Station: F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST. 0:00 7/18/18

Rivercode: 19-027-000 River Mile: 0.15

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
58	13	12	1	58		12		Very Good	ABOVE NO

	Taxa	Quant/Qual
01801	Turbellaria	+
03360	Plumatella sp	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
13561	Maccaffertium pulchellum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
23909	Boyeria vinosa	+
44501	Corixidae	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
57900	Pycnopsyche sp	+
59720	Triaenodes ignitus	+
59728	Triaenodes marginatus	+
61400	Agabus sp	+
63900	Laccophilus sp	+
67750	Sperchopsis tesselatus	+
68130	Helichus sp	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
79720	Diamesa sp	+
80310	Cardiocladius obscurus	+
83040	Dicrotendipes neomodestus	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84300	Phaenopsectra obediens group	+
84470	Polypedilum (P.) illinoense	+
84480	Polypedilum (P.) laetum group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	+
84750	Stictochironomus sp	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
93200	Hydrobiidae	+
94400	Fossaria sp	+
95100	Physella sp	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: 303963 TRIB. TO PLUM CK.(2.77) @ SUNNYBROOK RD. 0:00 7/31/18

Rivercode: 19-027-001 River Mile: 0.35

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
45	10	10	3	45		10		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
11250	Neocloeon sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
50301	Chimarra aterrima	+
50804	Lype diversa	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
59570	Oecetis nocturna	+
59720	Triaenodes ignitus	+
59730	Triaenodes melaca	+
67100	Hydrobius sp	+
68025	Ectopria sp	+
68707	Dubiraphia quadrinotata	+
69400	Stenelmis sp	+
71800	Pseudolimnophila sp	+
71910	Tipula abdominalis	+
74501	Ceratopogonidae	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
79720	Diamesa sp	+
81650	Parametriocnemus sp	+
82200	Tvetenia bavarica group	+
82820	Cryptochironomus sp	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84440	Polypedilum (Uresipedilum) aviceps	+
84480	Polypedilum (P.) laetum group	+
84700	Stenochironomus sp	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85840	Tanytarsus sepp	+
86100	Chrysops sp	+
95100	Physella sp	+
96900	Ferrissia sp	+

Station: 303969 BREAKNECK CREEK @ JOHNNYCAKE RD. 0:00 8/1/18

Rivercode: 19-028-000 River Mile: 18.70

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
47	11	6	0	47		6		Good	NORMAL

	Taxa	Quant/Qual
03600	Oligochaeta	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	+
11130	Baetis intercalaris	+
13400	Stenacron sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
45300	Sigara sp	+
45400	Trichocorixa sp	+
45900	Notonecta sp	+
47600	Sialis sp	+
50804	Lype diversa	+
51550	Plectrocnemia sp	+
51610	Polycentropus sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52530	Hydropsyche depravata group	+
57900	Pycnopsyche sp	+
59720	Triaenodes ignitus	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
71700	Pilaria sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78401	Natarsia species A (sensu Roback, 1978)	+
80204	Brillia flavifrons group	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82820	Cryptochironomus sp	+
83840	Microtendipes pedellus group	+
84155	Paralauterborniella nigrohalteralis	+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
84800	Tribelos jucundum	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
85840	Tanytarsus sepp	+
87540	Hemerodromia sp	+
95100	Physella sp	+
98600	Sphaerium sp	+

Station: F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL 0:00 8/13/18

Rivercode: 19-028-000 River Mile: 14.60

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
46	16	10	0	60	1,737	11	50		0.61 LOW

	Taxa	Quant/Qual
03040	Fredericella sp	+
03600	Oligochaeta	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08310	Procambarus (Ortmannicus) acutus acutus	+
08601	Hydrachnidia	4
11120	Baetis flavistriga	12+
11130	Baetis intercalaris	672+
13400	Stenacron sp	144+
13510	Maccaffertium exiguum	89+
13561	Maccaffertium pulchellum	152+
13590	Maccaffertium vicarium	34+
14950	small Leptophlebiidae	14+
17200	Caenis sp	+
18700	Hexagenia sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
28955	Plathemis lydia	+
34130	Acroneuria frisoni	+
47600	Sialis sp	+
50804	Lype diversa	4+
52200	Cheumatopsyche sp	181+
52430	Ceratopsyche morosa group	6+
52530	Hydropsyche depravata group	12+
57900	Pycnopsyche sp	1+
59720	Triaenodes ignitus	+
60300	Dineutus sp	+
68601	Ancyronyx variegatus	1+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	35+
69400	Stenelmis sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	13
77750	Thienemannimyia sp	16+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	10
80204	Brillia flavifrons group	1
80360	Corynoneura floridaensis	4
80370	Corynoneura lobata	20
80420	Cricotopus (C.) bicinctus	3
81825	Rheocricotopus (Psilocricotopus) robacki	7
82141	Thienemanniella xena	12
82300	Xylotopus par	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	20
84460	Polypedilum (P.) fallax group	3
84540	Polypedilum (Tripodura) scalaenum group	3+
84700	Stenochironomus sp	7
85625	Rheotanytarsus sp	238+
85800	Tanytarsus sp	3+
85802	Tanytarsus n. sp. near curticornis	+
85821	Tanytarsus glabrescens group sp 7	3+
86100	Chrysops sp	+
87540	Hemerodromia sp	4
93200	Hydrobiidae	+
96900	Ferrissia sp	9
98600	Sphaerium sp	+
99100	Pyganodon grandis	+

Station: F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD. 0:00 8/28/18

Rivercode: 19-028-000 River Mile: 7.00

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
50	13	11	0	61	3,903	14	40	N/A	1.00 ABOVE NO

	Taxa	Quant/Qual
00401	Spongillidae	+
01320	Hydra sp	1
03600	Oligochaeta	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	1+
08310	Procambarus (Ortmannicus) acutus acutus	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	134+
11250	Neocloeon sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
11670	Procloeon viridoculare	+
13400	Stenacron sp	44+
13510	Maccaffertium exiguum	9+
13561	Maccaffertium pulchellum	309+
14950	small Leptophlebiidae	16
17200	Caenis sp	29+
18700	Hexagenia sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
34130	Acroneuria frisoni	9
45300	Sigara sp	+
45400	Trichocorixa sp	+
49200	Climacia areolaris	+
50315	Chimarra obscura	16
52200	Cheumatopsyche sp	154+
52530	Hydropsyche depravata group	12
57900	Pycnopsyche sp	+
60400	Gyrinus sp	+
68601	Ancyronyx variegatus	+
68901	Macronychus glabratus	18+
69400	Stenelmis sp	3+
71100	Hexatoma sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77800	Helopelopia sp	+
78401	Natarsia species A (sensu Roback, 1978)	+
78450	Nilotanypus fimbriatus	29
80370	Corynoneura lobata	166
80410	Cricotopus (C.) sp	29+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	29
81825	Rheocricotopus (Psilocricotopus) robacki	86+
82200	Tvetenia bavarica group	86
82820	Cryptochironomus sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	86+
84450	Polypedilum (Uresipedilum) flavum	115+
84460	Polypedilum (P.) fallax group	57
84700	Stenochironomus sp	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85625	Rheotanytarsus sp	2,328+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	86+
86100	Chrysops sp	+
93900	Elimia sp	+
96900	Ferrissia sp	51
97601	Corbicula fluminea	+
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: F01S51 BREAKNECK CREEK @ POWDER MILL RD. 0:00 8/28/18

Rivercode: 19-028-000 River Mile: 3.08

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
55	15	10	0	63	4,635	13	48	N/A	0.80 ABOVE NO

	Taxa	Quant/Qual
01801	Turbellaria	23
03600	Oligochaeta	+
06201	Hyalella sp	+
06700	Crangonyx sp	1+
08250	Faxonius rusticus	1+
08601	Hydrachnidia	16+
11120	Baetis flavistriga	11+
11130	Baetis intercalaris	245+
11155	Iswaeon anoka	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
11670	Procloeon viridoculare	+
13400	Stenacron sp	67+
13510	Maccaffertium exiguum	75
13561	Maccaffertium pulchellum	522+
14950	small Leptophlebiidae	+
17200	Caenis sp	+
18700	Hexagenia sp	+
21200	Calopteryx sp	1+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
45100	Palmacorixa sp	+
45400	Trichocorixa sp	+
50804	Lype diversa	40
52200	Cheumatopsyche sp	862+
52430	Ceratopsyche morosa group	5
52530	Hydropsyche depravata group	254+
53800	Hydroptila sp	10
59300	Mystacides sp	+
59700	Triaenodes sp	+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	48+
69400	Stenelmis sp	1+
71900	Tipula sp	+
74100	Simulium sp	1+
77500	Conchapelopia sp	54
77750	Thienemannimyia sp	18+
77800	Helopelopia sp	+
80370	Corynoneura lobata	246
80410	Cricotopus (C.) sp	+
82820	Cryptochironomus sp	+
82885	Cryptotendipes pseudotener	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	346+
84460	Polypedilum (P.) fallax group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	18+
85625	Rheotanytarsus sp	1,694+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	36
85840	Tanytarsus sepp	+
86100	Chrysops sp	+
93200	Hydrobiidae	+
93900	Elimia sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	40+
97601	Corbicula fluminea	+
98600	Sphaerium sp	+

Station: F01W83 BREAKNECK CREEK NEAR MOUTH 0:00 8/14/18

Rivercode: 19-028-000 River Mile: 0.05

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
40	14	12	0	52	1,826	15	44	N/A	0.68 LOW

	Taxa	Quant/Qual
01801	Turbellaria	2+
03600	Oligochaeta	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08255	Faxonius rusticus x sanbornii	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	484+
13400	Stenacron sp	+
13510	Maccaffertium exiguum	29+
13561	Maccaffertium pulchellum	29+
13570	Maccaffertium terminatum	3
16700	Tricorythodes sp	2+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
23909	Boyeria vinosa	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	177+
52430	Ceratopsyche morosa group	329+
52450	Ceratopsyche sparna	60
52530	Hydropsyche depravata group	177+
53800	Hydroptila sp	1
54160	Ochrotrichia sp	1+
57400	Neophylax sp	+
59720	Triaenodes ignitus	+
60300	Dineutus sp	+
68601	Ancyronyx variegatus	1
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	29+
69400	Stenelmis sp	1+
70600	Antocha sp	2
71900	Tipula sp	+
74100	Simulium sp	120
77500	Conchapelopia sp	8
77750	Thienemannimyia sp	6
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	8+
80351	Corynoneura caudicula	1
82141	Thienemanniella xena	28
82220	Tvetenia discoloripes group	23
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	56
85265	Cladotanytarsus vanderwulpi group sp 5	+
85625	Rheotanytarsus sp	248+
87540	Hemerodromia sp	+
93900	Elimia sp	+
95100	Physella sp	+
96900	Ferrissia sp	1+
97601	Corbicula fluminea	+

Station: 200113 BRIMFIELD DITCH NEAR KENT, NEAR MOUTH 0:00 7/31/18

Rivercode: 19-028-001 River Mile: 0.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
60	11	6	1	60		6		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
04685	Placobdella ornata	+
04930	Erpobdella sp	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
29000	Sympetrum sp	+
42700	Belostoma sp	+
43300	Ranatra sp	+
43570	Neoplea sp	+
45400	Trichocorixa sp	+
45900	Notonecta sp	+
47600	Sialis sp	+
50804	Lype diversa	+
51610	Polycentropus sp	+
52200	Cheumatopsyche sp	+
55300	Ptilostomis sp	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
59550	Oecetis inconspicua complex sp A (sensu Floyd, 1995)	+
59720	Triaenodes ignitus	+
59728	Triaenodes marginatus	+
60800	Haliplus sp	+
60900	Peltodytes sp	+
63300	Hydroporini	+
63600	Hygrotus sp	+
65700	Anacaena sp	+
68601	Ancyronyx variegatus	+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
72222	Bittacomorpha clavipes	+
74100	Simulium sp	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
78350	Meropelopia sp	+
78600	Pentaneura inconspicua	+
78680	Procladius (Psilotanypus) bellus	+
82885	Cryptotendipes pseudotener	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
84800	Tribelos jucundum	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
86100	Chrysops sp	+
92516	Campeloma decisum	+
96002	Helisoma anceps anceps	+
98600	Sphaerium sp	+

Station: F01S53 WAHOO DITCH AT RAVENNA @ MAIN ST. 0:00 7/17/18

Rivercode: 19-028-002 River Mile: 1.22

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
35	3	1	0	35		1		Fair	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03360	Plumatella sp	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
04935	Erpobdella punctata punctata	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
21200	Calopteryx sp	+
21604	Archilestes grandis	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
45900	Notonecta sp	+
47600	Sialis sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
60800	Haliplus sp	+
63600	Hygrotus sp	+
71900	Tipula sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78401	Natarsia species A (sensu Roback, 1978)	+
78655	Procladius (Holotanypus) sp	+
82770	Chironomus (C.) riparius group	+
82820	Cryptochironomus sp	+
84210	Paratendipes albimanus or P. duplicatus	+
84480	Polypedilum (P.) laetum group	+
84520	Polypedilum (Tripodura) halterale group	+
84750	Stictochironomus sp	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
95100	Physella sp	+
96264	Planorbella (Pierosoma) pilsbryi	+

Station: F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD. 0:00 7/17/18

Rivercode: 19-028-002 River Mile: 0.39

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
44	3	1	0	44		1		Low Fair	NORMAL

	Taxa	Quant/Qual
01320	Hydra sp	+
01801	Turbellaria	+
01900	Nemertea	+
03360	Plumatella sp	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
23909	Boyeria vinosa	+
48220	Chauliodes rastricornis	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
60800	Haliplus sp	+
65700	Anacaena sp	+
66901	Helocombus bifidus	+
69400	Stenelmis sp	+
70600	Antocha sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
80420	Cricotopus (C.) bicinctus	+
80510	Cricotopus (Isocladius) sylvestris group	+
82820	Cryptochironomus sp	+
84300	Phaenopsectra obediens group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
93200	Hydrobiidae	+
94400	Fossaria sp	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
97601	Corbicula fluminea	+
98600	Sphaerium sp	+

Station: F01T02 CONGRESS LAKE OUTLET DST. WATERLOO RD. 0:00 8/28/18

Rivercode: 19-028-004 River Mile: 11.70

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
57	11	10	2	73	3,856	14	48	N/A	1.00 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	9+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	1+
08601	Hydrachnidia	+
11120	Baetis flavistriga	4+
11130	Baetis intercalaris	32+
13400	Stenacron sp	2+
14950	small Leptophlebiidae	1
21200	Calopteryx sp	13+
23909	Boyeria vinosa	+
43570	Neoplea sp	+
45300	Sigara sp	+
45400	Trichocorixa sp	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
50804	Lype diversa	5+
51550	Plectrocnemia sp	+
51610	Polycentropus sp	2
52200	Cheumatopsyche sp	426+
52430	Ceratopsyche morosa group	58+
52530	Hydropsyche depravata group	21+
54601	Phryganeidae	+
57900	Pycnopsyche sp	+
67500	Laccobius sp	+
68601	Ancyronyx variegatus	1+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	1
68901	Macronychus glabratus	18+
69400	Stenelmis sp	8+
70600	Antocha sp	1
71100	Hexatoma sp	+
72340	Dixella sp	+
74100	Simulium sp	7+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	93
77800	Helopelopia sp	+
78350	Meropelopia sp	+
80204	Brillia flavifrons group	+
80370	Corynoneura lobata	96
81270	Nanocladius (N.) spiniplenus	31
81650	Parametriocnemus sp	+
81690	Paratrichocladius sp	93
81825	Rheocricotopus (Psilocricotopus) robacki	93
82121	Thienemanniella lobapodema	48
82141	Thienemanniella xena	19
82200	Tvetenia bavarica group	93
82730	Chironomus (C.) decorus group	+
82885	Cryptotendipes pseudotener	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	31+
83840	Microtendipes pedellus group	124
84155	Paralauterborniella nigrohalteralis	+
84315	Phaenopsectra flavipes	+
84450	Polypedilum (Uresipedilum) flavum	186+
84460	Polypedilum (P.) fallax group	124
84470	Polypedilum (P.) illinoense	31
84750	Stictochironomus sp	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85500	Paratanytarsus sp	186+
85625	Rheotanytarsus sp	1,426+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	31+
85821	Tanytarsus glabrescens group sp 7	527+
86100	Chrysops sp	+
86401	Atherix lantha	+
87501	Empididae	1
95100	Physella sp	+
96900	Ferrissia sp	13+
98600	Sphaerium sp	+

Station: F01A19 FEEDER CANAL @ TALMADGE RD. 0:00 8/28/18

Rivercode: 19-028-004 River Mile: 5.63

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
44	7	2	0	53	3,192	3	32	N/A	0.40 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	192+
03600	Oligochaeta	120+
04666	Helobdella papillata	+
05800	Caecidotea sp	88+
06201	Hyalella sp	16+
06700	Crangonyx sp	80+
08310	Procambarus (Ortmannicus) acutus acutus	+
11120	Baetis flavistriga	15
11130	Baetis intercalaris	74+
11200	Callibaetis sp	+
13400	Stenacron sp	9+
13510	Maccaffertium exiguum	8
21200	Calopteryx sp	10+
22001	Coenagrionidae	+
28955	Plathemis lydia	+
42700	Belostoma sp	+
43300	Ranatra sp	+
45400	Trichocorixa sp	+
47600	Sialis sp	+
52200	Cheumatopsyche sp	1,024+
53800	Hydroptila sp	24+
57900	Pycnopsyche sp	5+
59500	Oecetis sp	1
59730	Triaenodes melaca	+
60900	Peltodytes sp	+
63900	Laccophilus sp	+
68702	Dubiraphia bivittata	+
77120	Ablabesmyia mallochi	27+
77150	Ablabesmyia simpsoni	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	13
77750	Thienemannimyia sp	107+
78655	Procladius (Holotanypus) sp	+
80370	Corynoneura lobata	26+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	13+
81825	Rheocricotopus (Psilocricotopus) robacki	27
82820	Cryptochironomus sp	+
83002	Dicrotendipes modestus	13
83840	Microtendipes pedellus group	282+
84450	Polypedilum (Uresipedilum) flavum	336+
84460	Polypedilum (P.) fallax group	107
84470	Polypedilum (P.) illinoense	+
84520	Polypedilum (Tripodura) halterale group	+
84540	Polypedilum (Tripodura) scalaenum group	134
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	107
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	40+
92615	Cipangopaludina japonica	5+
93200	Hydrobiidae	234+
95100	Physella sp	54+
96900	Ferrissia sp	1+
98600	Sphaerium sp	+

Station: F01W71 POTTER CREEK @ TRARES RD. 0:00 8/13/18

Rivercode: 19-028-005 River Mile: 1.47

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
38	10	8	2	53	1,325	11	44	N/A	0.90 LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	108+
04664	Helobdella stagnalis	+
04964	Erpobdella microstoma	1
05800	Caecidotea sp	+
06700	Crangonyx sp	76+
08200	Faxonius sp	1
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	161+
11130	Baetis intercalaris	37+
11430	Diphetor hageni	7+
13400	Stenacron sp	2+
21200	Calopteryx sp	+
23909	Boyeria vinosa	+
50301	Chimarra aterrima	+
50804	Lype diversa	52+
52200	Cheumatopsyche sp	119+
52530	Hydropsyche depravata group	47+
57900	Pycnopsyche sp	10+
59720	Triaenodes ignitus	+
68130	Helichus sp	+
68708	Dubiraphia vittata group	3+
68901	Macronychus glabratus	5
69200	Optioservus sp	+
69400	Stenelmis sp	33+
71900	Tipula sp	+
74100	Simulium sp	19+
77500	Conchapelopia sp	13+
77800	Helopelopia sp	39+
78350	Meropelopia sp	13
80370	Corynoneura lobata	20+
81650	Parametriocnemus sp	39+
81825	Rheocricotopus (Psilocricotopus) robacki	4+
82141	Thienemanniella xena	8
82200	Tvetenia bavarica group	4+
82820	Cryptochironomus sp	4
83840	Microtendipes pedellus group	57+
84210	Paratendipes albimanus or P. duplicatus	48
84450	Polypedilum (Uresipedilum) flavum	9+
84460	Polypedilum (P.) fallax group	13
84480	Polypedilum (P.) laetum group	13
84540	Polypedilum (Tripodura) scalaenum group	206+
84612	Saetheria tylus	9
85264	Cladotanytarsus vanderwulpi group sp 4	9
85500	Paratanytarsus sp	4
85615	Rheotanytarsus pellucidus	4
85625	Rheotanytarsus sp	39+
85800	Tanytarsus sp	22
87540	Hemerodromia sp	5
93900	Elimia sp	25+
95100	Physella sp	+
96900	Ferrissia sp	11+
98600	Sphaerium sp	26+

Station: F01S88 L CUYAHOGA R UPST WINGFOOT LAKE OUTLET, DST UNIVERSAL MATRLS 0:00 8/29/18

Rivercode: 19-030-000 River Mile: 11.20

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
38	8	5	0	51	3,308	9	44	N/A	1.20 NORMAL

	Taxa	Quant/Qual
03600	Oligochaeta	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06810	Gammarus fasciatus	6+
08260	Faxonius sanbornii sanbornii	+
11130	Baetis intercalaris	1,533+
11200	Callibaetis sp	+
13400	Stenacron sp	3+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23600	Aeshna sp	+
43300	Ranatra sp	+
43570	Neoplea sp	+
45100	Palmacorixa sp	+
47600	Sialis sp	+
50301	Chimarra aterrima	16+
50804	Lype diversa	9
52200	Cheumatopsyche sp	73+
52430	Ceratopsyche morosa group	41
52450	Ceratopsyche sparna	77
52530	Hydropsyche depravata group	407+
57900	Pycnopsyche sp	+
60800	Haliplus sp	+
60900	Peltodytes sp	+
68025	Ectopria sp	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	1
68901	Macronychus glabratus	166+
69400	Stenelmis sp	17+
70600	Antocha sp	17
72700	Anopheles sp	+
74100	Simulium sp	24
77500	Conchapelopia sp	10+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
80310	Cardiocladius obscurus	+
80370	Corynoneura lobata	24
81825	Rheocricotopus (Psilocricotopus) robacki	20
82141	Thienemanniella xena	21
82200	Tvetenia bavarica group	10
82820	Cryptochironomus sp	+
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	40
84470	Polypedilum (P.) illinoense	+
85625	Rheotanytarsus sp	775
87540	Hemerodromia sp	18
93900	Elimia sp	+
97601	Corbicula fluminea	+

Station: 200116 L. CUYAHOGA R. AT AKRON, 0.15 MI. DST. ST. RT. 91 0:00 8/16/18

Rivercode: 19-030-000 River Mile: 8.40

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
30	10	8	0	48	337	11	32	Good	0.15 LOW

	Taxa	Quant/Qual
04964	Erpobdella microstoma	+
05800	Caecidotea sp	1+
06810	Gammarus fasciatus	70+
08250	Faxonius rusticus	1+
11120	Baetis flavistriga	16+
11130	Baetis intercalaris	71+
13400	Stenacron sp	21+
13561	Maccaffertium pulchellum	1
50301	Chimarra aterrima	+
50906	Psychomyia flavida	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
57900	Pycnopsyche sp	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	+
68901	Macronychus glabratus	25+
69400	Stenelmis sp	+
70600	Antocha sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	5+
77750	Thienemannimyia sp	1
78450	Nilotanypus fimbriatus	1
80370	Corynoneura lobata	30
80420	Cricotopus (C.) bicinctus	10
80430	Cricotopus (C.) tremulus group	5
81690	Paratrichocladius sp	+
82141	Thienemanniella xena	4
83040	Dicrotendipes neomodestus	4
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	4
83840	Microtendipes pedellus group	8+
84155	Paralauterborniella nigrohalteralis	+
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	7
84460	Polypedilum (P.) fallax group	1
84540	Polypedilum (Tripodura) scalaenum group	4
85261	Cladotanytarsus vanderwulpi	1
85500	Paratanytarsus sp	4
85625	Rheotanytarsus sp	6
85800	Tanytarsus sp	5+
85821	Tanytarsus glabrescens group sp 7	24
85840	Tanytarsus sepp	1
87540	Hemerodromia sp	1
93900	Elimia sp	5+
97601	Corbicula fluminea	+

Station: F01S84 L. CUYAHOGA R. AT AKRON @ MASSILLON RD. 0:00 8/29/18

Rivercode: 19-030-000 River Mile: 7.15

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
27	7	5	2	48	347	5	32	N/A	0.40 NORMAL

	Taxa	Quant/Qual
00556	Ephydatia fluviatilis	+
01801	Turbellaria	+
03600	Oligochaeta	23+
05800	Caecidotea sp	1+
06810	Gammarus fasciatus	23+
08250	Faxonius rusticus	1+
08601	Hydrachnidia	+
11120	Baetis flavistriga	7+
11130	Baetis intercalaris	6+
13400	Stenacron sp	13+
17200	Caenis sp	+
21200	Calopteryx sp	+
22300	Argia sp	+
50301	Chimarra aterrima	1+
52200	Cheumatopsyche sp	18+
52430	Ceratopsyche morosa group	1+
68075	Psephenus herricki	1+
68601	Ancyronyx variegatus	3+
68700	Dubiraphia sp	2
68901	Macronychus glabratus	19+
69400	Stenelmis sp	16+
71900	Tipula sp	1
77500	Conchapelopia sp	30+
77750	Thienemannimyia sp	4
77800	Helopelopia sp	18+
78350	Meropelopia sp	8+
79400	Zavrelimyia (Z.) sp	2+
80370	Corynoneura lobata	2
80410	Cricotopus (C.) sp	6
82730	Chironomus (C.) decorus group	2
82770	Chironomus (C.) riparius group	2
83040	Dicrotendipes neomodestus	6
84210	Paratendipes albimanus or P. duplicatus	6
84450	Polypedilum (Uresipedilum) flavum	6
84460	Polypedilum (P.) fallax group	39
84480	Polypedilum (P.) laetum group	+
84540	Polypedilum (Tripodura) scalaenum group	18
84700	Stenochironomus sp	4
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	6
85625	Rheotanytarsus sp	8
85800	Tanytarsus sp	4
85821	Tanytarsus glabrescens group sp 7	14
85840	Tanytarsus sepp	12
93900	Elimia sp	2+
96900	Ferrissia sp	10
97601	Corbicula fluminea	1
98200	Pisidium sp	1

Station: F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST. 0:00 8/16/18

Rivercode: 19-030-000 River Mile: 5.11

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
21	8	5	2	34	1,856	6	34	N/A	0.90 LOW

	Taxa	Quant/Qual
01801	Turbellaria	1
03600	Oligochaeta	114+
05800	Caecidotea sp	4+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	22+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	50+
11130	Baetis intercalaris	60+
13400	Stenacron sp	+
52200	Cheumatopsyche sp	219+
52430	Ceratopsyche morosa group	77+
52450	Ceratopsyche sparna	36+
52530	Hydropsyche depravata group	125+
54000	Leucotrichia pictipes	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	5
68901	Macronychus glabratus	6
69400	Stenelmis sp	11+
70600	Antocha sp	26+
73601	Simuliidae	1+
77500	Conchapelopia sp	107
77800	Helopelopia sp	60
78450	Nilotanypus fimbriatus	8
81650	Parametriocnemus sp	12
81690	Paratrichocladius sp	36+
83040	Dicrotendipes neomodestus	12
84440	Polypedilum (Uresipedilum) aviceps	12
84450	Polypedilum (Uresipedilum) flavum	429+
85625	Rheotanytarsus sp	238+
85800	Tanytarsus sp	36
85821	Tanytarsus glabrescens group sp 7	71
87540	Hemerodromia sp	2+
96900	Ferrissia sp	74
97601	Corbicula fluminea	2

Station: F01S99 L. CUYAHOGA R. AT AKRON @ CUYAHOGA ST. 0:00 9/4/18

Rivercode: 19-030-000 River Mile: 2.14

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
35	9	4	0	48	1,765	7	38	N/A	0.80 NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	9+
03600	Oligochaeta	77+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	93+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	84+
11130	Baetis intercalaris	25+
13400	Stenacron sp	+
21001	Calopterygidae	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
50301	Chimarra aterrima	9
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	505+
52430	Ceratopsyche morosa group	179+
52450	Ceratopsyche sparna	38+
52530	Hydropsyche depravata group	87+
53800	Hydroptila sp	6+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	2+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	23+
69400	Stenelmis sp	18+
70600	Antocha sp	8+
74100	Simulium sp	1
77500	Conchapelopia sp	100+
77800	Helopelopia sp	33+
80370	Corynoneura lobata	4
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	7
81690	Paratrichocladius sp	7
82141	Thienemanniella xena	4
82220	Tvetenia discoloripes group	7
84450	Polypedilum (Uresipedilum) flavum	133+
84460	Polypedilum (P.) fallax group	13
84470	Polypedilum (P.) illinoense	+
84750	Stictochironomus sp	+
85500	Paratanytarsus sp	47
85625	Rheotanytarsus sp	93
85800	Tanytarsus sp	27+
85821	Tanytarsus glabrescens group sp 7	80
85840	Tanytarsus sepp	7
87540	Hemerodromia sp	24
96900	Ferrissia sp	15+

Station: 502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH 0:00 9/4/18

Rivercode: 19-030-000 River Mile: 0.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
33	9	5	0	33		5		Marginally Good	NORMAL

	Taxa	Quant/Qual
03360	Plumatella sp	+
04964	Erpobdella microstoma	+
06201	Hyalella sp	+
06810	Gammarus fasciatus	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
17200	Caenis sp	+
22001	Coenagrionidae	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
68075	Psephenus herricki	+
68601	Ancyronyx variegatus	+
69400	Stenelmis sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
80430	Cricotopus (C.) tremulus group	+
81690	Paratrichocladius sp	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84612	Saetheria tylus	+
85821	Tanytarsus glabrescens group sp 7	+
96900	Ferrissia sp	+

Station: F01A01 OHIO CANAL (L. CUYAHOGA) AT AKRON @ NORTH ST. 0:00 9/4/18

Rivercode: 19-030-001 River Mile: 0.18

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
23	6	2	0	23		2		Fair	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04930	Erpobdella sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
22001	Coenagrionidae	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
80310	Cardiocladius obscurus	+
80420	Cricotopus (C.) bicinctus	+
80510	Cricotopus (Isocladius) sylvestris group	+
81690	Paratrichocladius sp	+
82770	Chironomus (C.) riparius group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
95100	Physella sp	+

Station: F01S92 SPRINGFIELD LAKE OUTLET @ MOUTH 0:00 8/1/18

Rivercode: 19-031-000 River Mile: 0.01

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
29	7	3	0	29		3		Fair	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04935	Erpobdella punctata punctata	+
04962	Erpobdella fervida	+
04964	Erpobdella microstoma	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
06810	Gammarus fasciatus	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
45900	Notonecta sp	+
50301	Chimarra aterrima	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
69400	Stenelmis sp	+
71910	Tipula abdominalis	+
77800	Helopelopia sp	+
78401	Natarsia species A (sensu Roback, 1978)	+
84315	Phaenopsectra flavipes	+
84480	Polypedilum (P.) laetum group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
87540	Hemerodromia sp	+
96900	Ferrissia sp	+

Station: F01S94 WINGFOOT LAKE OUTLET @ UNNAMED ROAD AT MOUTH 0:00 8/1/18

Rivercode: 19-032-000 River Mile: 0.05

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
31	8	8	2	31		8		Marginally Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
05800	Caecidotea sp	+
06810	Gammarus fasciatus	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
13400	Stenacron sp	+
21200	Calopteryx sp	+
23909	Boyeria vinosa	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
57900	Pycnopsyche sp	+
59720	Triaenodes ignitus	+
67100	Hydrobius sp	+
68901	Macronychus glabratus	+
69225	Optioservus fastiditus	+
69400	Stenelmis sp	+
71900	Tipula sp	+
74100	Simulium sp	+
79720	Diamesa sp	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
84155	Paralauterborniella nigrohalteralis	+
84300	Phaenopsectra obediens group	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
87510	Neoplasta sp	+
93900	Elimia sp	+

Station: F01W72 BLACK BROOK @ FOX RD. 0:00 7/12/18
Rivercode: 19-033-000 River Mile: 1.78

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
77	22	10	3	77		10		Exceptional	NORMAL

	Taxa	Quant/Qual
00401	Spongillidae	+
03360	Plumatella sp	+
03600	Oligochaeta	+
04601	Glossiphoniidae	+
04653	Glossiphonia complanata	+
04935	Erpobdella punctata punctata	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11250	Neocloeon sp	+
13400	Stenacron sp	+
13590	Maccaffertium vicarium	+
14950	small Leptophlebiidae	+
17200	Caenis sp	+
21001	Calopterygidae	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
23804	Basiaeschna janata	+
25510	Stylogomphus albistylus	+
27500	Somatochlora sp	+
29000	Sympetrum sp	+
43300	Ranatra sp	+
47600	Sialis sp	+
49400	Sisyra sp	+
50315	Chimarra obscura	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
55300	Ptilostomis sp	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
58410	Molanna sp	+
59150	Ceraclea resurgens or C. transversa	+
59300	Mystacides sp	+
59520	Oecetis cinerascens	+
59550	Oecetis inconspicua complex sp A (sensu Floyd, 1995)	+
59555	Oecetis inconspicua complex sp F (sensu Floyd, 1995)	+
59580	Oecetis persimilis	+
59728	Triaenodes marginatus	+
60300	Dineutus sp	+
60900	Peltodytes sp	+
63300	Hydroporini	+
67700	Paracymus sp	+
68702	Dubiraphia bivittata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
71900	Tipula sp	+
72340	Dixella sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77355	Clinotanypus pinguis	+
77800	Helopelopia sp	+
78450	Nilotanypus fimbriatus	+
78600	Pentaneura inconspicua	+
79720	Diamesa sp	+
81650	Parametriocnemus sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82820	Cryptochironomus sp	+
83840	Microtendipes pedellus group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	+
84750	Stictochironomus sp	+
84800	Tribelos jucundum	+
84888	Xenochironomus xenolabis	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
87540	Hemerodromia sp	+
94400	Fossaria sp	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01G12 SAWYER BROOK @ TILDEN RD. 0:00 7/12/18

Rivercode: 19-034-000 River Mile: 0.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
44	10	3	1	44		3		Good	LOW

	Taxa	Quant/Qual
03600	Oligochaeta	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
13521	Stenonema femoratum	+
14950	small Leptophlebiidae	+
17200	Caenis sp	+
21001	Calopterygidae	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
24900	Gomphus Complex	+
26100	Cordulegaster sp	+
27500	Somatochlora sp	+
45300	Sigara sp	+
47600	Sialis sp	+
51600	Polycentropus group	+
52200	Cheumatopsyche sp	+
59300	Mystacides sp	+
59550	Oecetis inconspicua complex sp A (sensu Floyd, 1995)	+
59728	Triaenodes marginatus	+
63300	Hydroporini	+
68130	Helichus sp	+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	+
69400	Stenelmis sp	+
70700	Dicranota sp	+
71700	Pilaria sp	+
72340	Dixella sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
83840	Microtendipes pedellus group	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
84800	Tribelos jucundum	+
85500	Paratanytarsus sp	+
85800	Tanytarsus sp	+
86100	Chrysops sp	+
95100	Physella sp	+

Station: F01W74 BRIDGE CREEK @ TAYLOR MAY RD. 0:00 7/12/18

Rivercode: 19-035-000 River Mile: 8.46

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
63	27	24	5	63		24		Exceptional	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
01900	Nemertea	+
04687	Placobdella parasitica	+
05800	Caecidotea sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
11120	Baetis flavistriga	+
11130	Baetis intercalaris	+
12200	Isonychia sp	+
13000	Leucrocuta sp	+
13400	Stenacron sp	+
13500	Maccaffertium sp	+
13521	Stenonema femoratum	+
13561	Maccaffertium pulchellum	+
13590	Maccaffertium vicarium	+
16324	Teloganopsis deficiens	+
16700	Tricorythodes sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23909	Boyeria vinosa	+
34710	Agnetina capitata	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
50804	Lype diversa	+
51550	Plectrocnemia sp	+
51610	Polycentropus sp	+
52200	Cheumatopsyche sp	+
52430	Ceratopsyche morosa group	+
52440	Ceratopsyche slossonae	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
59580	Oecetis persimilis	+
59720	Triaenodes ignitus	+
60300	Dineutus sp	+
68025	Ectopria sp	+
68075	Psephenus herricki	+
68130	Helichus sp	+
68201	Scirtidae	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69210	Optioservus ovalis	+
69400	Stenelmis sp	+
70700	Dicranota sp	+
74100	Simulium sp	+
77800	Helopelopia sp	+
79720	Diamesa sp	+
81650	Parametriocnemus sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
83840	Microtendipes pedellus group	+
84440	Polypedilum (Uresipedilum) aviceps	+
84450	Polypedilum (Uresipedilum) flavum	+
84475	Polypedilum (P.) ophioides	+
84700	Stenochironomus sp	+
84750	Stictochironomus sp	+
85625	Rheotanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
86401	Atherix lantha	+

Station: F01W75 BRIDGE CREEK DST. LADUE RESERVOIR @ STAFFORD RD. 0:00 8/27/18

Rivercode: 19-035-000 River Mile: 1.32

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
53	11	3	0	71	4,232	7	34	N/A	0.40 NORMAL

	Taxa	Quant/Qual
01320	Hydra sp	1
01801	Turbellaria	112+
03360	Plumatella sp	1
03600	Oligochaeta	320+
04664	Helobdella stagnalis	+
04666	Helobdella papillata	+
05800	Caecidotea sp	12+
06201	Hyalella sp	93+
06700	Crangonyx sp	6
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	9
11125	Labiobaetis frondalis	+
11130	Baetis intercalaris	134+
11200	Callibaetis sp	+
13400	Stenacron sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	3+
23804	Basiaeschna janata	+
28500	Libellula sp	+
28955	Plathemis lydia	+
42700	Belostoma sp	+
43300	Ranatra sp	+
43570	Neoplea sp	+
45100	Palmacorixa sp	+
45900	Notonecta sp	+
47600	Sialis sp	+
50315	Chimarra obscura	+
51206	Cyrnellus fraternus	3+
51300	Neureclipsis sp	41
52200	Cheumatopsyche sp	347+
52530	Hydropsyche depravata group	10+
52570	Hydropsyche simulans	1
52590	Hydropsyche venularis	1
53800	Hydroptila sp	1
59520	Oecetis cinerascens	8+
59570	Oecetis nocturna	1+
60300	Dineutus sp	6+
63900	Laccophilus sp	+
67800	Tropisternus sp	+
68702	Dubiraphia bivittata	17+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77130	Ablabesmyia rhamphe group	194+
78600	Pentaneura inconspicua	194+
78655	Procladius (Holotanypus) sp	+
80410	Cricotopus (C.) sp	32
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	32
82730	Chironomus (C.) decorus group	32
82820	Cryptochironomus sp	+
82822	Cryptochironomus eminentia	32
83040	Dicrotendipes neomodestus	194+
83158	Endochironomus nigricans	227+
83300	Glyptotendipes (G.) sp	65+
83860	Microtendipes rydalensis	194
84450	Polypedilum (Uresipedilum) flavum	551
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	551+
84800	Tribelos jucundum	32
85500	Paratanytarsus sp	32+
85615	Rheotanytarsus pellucidus	97+
85625	Rheotanytarsus sp	130+
85800	Tanytarsus sp	+
87540	Hemerodromia sp	1
93200	Hydrobiidae	118
95100	Physella sp	11+
95907	Gyraulus (Torquis) parvus	1+
96120	Menetus (Micromenetus) dilatatus	385

Station: F01G10 TRIB. TO BRIDGE CREEK (0.52) NEAR RAPIDS RD. 0:00 7/11/18

Rivercode: 19-035-001 River Mile: 0.01

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
47	12	6	0	47		6		Good	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11125	Labiobaetis frondalis	+
11200	Callibaetis sp	+
13400	Stenacron sp	+
17200	Caenis sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
24900	Gomphus Complex	+
43300	Ranatra sp	+
44300	Pelocoris sp	+
45100	Palmacorixa sp	+
50804	Lype diversa	+
52200	Cheumatopsyche sp	+
54601	Phryganeidae	+
57900	Pycnopsyche sp	+
59520	Oecetis cinerascens	+
59550	Oecetis inconspicua complex sp A (sensu Floyd, 1995)	+
59580	Oecetis persimilis	+
59728	Triaenodes marginatus	+
60300	Dineutus sp	+
60800	Haliplus sp	+
60900	Peltodytes sp	+
68075	Psephenus herricki	+
68702	Dubiraphia bivittata	+
68901	Macronychus glabratus	+
72700	Anopheles sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77355	Clinotanypus pinguis	+
82820	Cryptochironomus sp	+
82822	Cryptochironomus eminentia	+
83040	Dicrotendipes neomodestus	+
83840	Microtendipes pedellus group	+
83860	Microtendipes rydalensis	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	+
84800	Tribelos jucundum	+
87540	Hemerodromia sp	+
94400	Fossaria sp	+
96930	Laevapex fuscus	+

Station: 303968 TRIB. TO BRIDGE CK. (8.85) @ AUBURN RD. 0:00 7/11/18

Rivercode: 19-035-003 River Mile: 1.40

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
52	6	1	0	52		1		Fair	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04664	Helobdella stagnalis	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
17200	Caenis sp	+
21001	Calopterygidae	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
29000	Sympetrum sp	+
42700	Belostoma sp	+
43300	Ranatra sp	+
45000	Hesperocorixa sp	+
45900	Notonecta sp	+
47600	Sialis sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
59300	Mystacides sp	+
59728	Triaenodes marginatus	+
63300	Hydroporini	+
63700	Ilybius sp	+
63900	Laccophilus sp	+
65700	Anacaena sp	+
67700	Paracymus sp	+
67800	Tropisternus sp	+
68201	Scirtidae	+
68707	Dubiraphia quadrinotata	+
74100	Simulium sp	+
77700	Guttipelopia guttipennis	+
78680	Procladius (Psilotanypus) bellus	+
82700	Chironomus sp	+
82826	Cryptochironomus psittacinus	+
83002	Dicrotendipes modestus	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84500	Polypedilum (P.) trigonus	+
85500	Paratanytarsus sp	+
85625	Rheotanytarsus sp	+
86100	Chrysops sp	+
89501	Ephydridae	+
94400	Fossaria sp	+
95100	Physella sp	+
96120	Menetus (Micromenetus) dilatatus	+
96264	Planorbella (Pierosoma) pilsbryi	+
96930	Laevapex fuscus	+
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: F01G05 W. BR. CUYAHOGA R. @ TAYLOR-WELLS RD. 0:00 9/12/18

Rivercode: 19-036-000 River Mile: 12.30

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
98	30	26	2	98		26		Exceptional	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
04685	Placobdella ornata	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11018	Acerpenna macdunnoughi	+
11120	Baetis flavistriga	+
11125	Labiobaetis frondalis	+
11130	Baetis intercalaris	+
11250	Neocloeon sp	+
11650	Procloeon sp (w/ hindwing pads)	+
11651	Procloeon sp (w/o hindwing pads)	+
11670	Procloeon viridoculare	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
13590	Maccaffertium vicarium	+
15000	Paraleptophlebia sp	+
17200	Caenis sp	+
17600	Baetisca sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23804	Basiaeschna janata	+
23905	Boyeria grafiana	+
23909	Boyeria vinosa	+
43570	Neoplea sp	+
45100	Palmacorixa sp	+
45300	Sigara sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
50804	Lype diversa	+
51050	Cernotina sp	+
51400	Nyctiophylax sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
55300	Ptilostomis sp	+
56902	Hydatophylax argus	+
57400	Neophylax sp	+
58410	Molanna sp	+
58505	Helicopsyche borealis	+
59500	Oecetis sp	+
59728	Triaenodes marginatus	+
59730	Triaenodes melaca	+
60300	Dineutus sp	+
60900	Peltodytes sp	+
68025	Ectopria sp	+
68130	Helichus sp	+
68702	Dubiraphia bivittata	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69225	Optioservus fastiditus	+
69400	Stenelmis sp	+
71100	Hexatoma sp	+
72340	Dixella sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
74501	Ceratopogonidae	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78601	Pentaneura inyoensis	+
78655	Procladius (Holotanypus) sp	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
81231	Nanocladius (N.) crassicornus or N. (N.) "rectinervis"	+
81630	Parakiefferiella sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82101	Thienemanniella taurocapita	+
82200	Tvetenia bavarica group	+
82730	Chironomus (C.) decorus group	+
82885	Cryptotendipes pseudotener	+
83002	Dicrotendipes modestus	+
83040	Dicrotendipes neomodestus	+
83840	Microtendipes pedellus group	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85720	Stempellinella fimbriata	+
85800	Tanytarsus sp	+
85802	Tanytarsus n. sp. near curticornis	+
85840	Tanytarsus sepp	+
86100	Chrysops sp	+
92516	Campeloma decisum	+
94400	Fossaria sp	+
94800	Stagnicola sp	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96280	Planorbella (Pierosoma) trivolvis	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+
99160	Anodontoides ferussacianus	+

Station: F01G44 W. BR. CUYAHOGA R. @ AQUILLA RD. NEAR FISHER RD. 0:00 8/27/18

Rivercode: 19-036-000 River Mile: 5.60

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
78	16	18	1	91	15,414	24	54	N/A	0.80 LOW

	Taxa	Quant/Qual
01320	Hydra sp	429
01801	Turbellaria	12+
03600	Oligochaeta	+
04653	Glossiphonia complanata	+
04935	Erpobdella punctata punctata	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11018	Acerpenna macdunnoughi	19
11125	Labiobaetis frondalis	+
11130	Baetis intercalaris	1,571+
11260	Anafroptilum minor group sp 1	+
11430	Diphetor hageni	2
11651	Procloeon sp (w/o hindwing pads)	+
11670	Procloeon viridoculare	+
12200	Isonychia sp	4
13000	Leucrocuta sp	1
13400	Stenacron sp	19+
13521	Stenonema femoratum	3
13561	Maccaffertium pulchellum	1+
13590	Maccaffertium vicarium	1
14950	small Leptophlebiidae	40+
17200	Caenis sp	9+
17600	Baetisca sp	+
21200	Calopteryx sp	6+
22001	Coenagrionidae	+
22300	Argia sp	+
23804	Basiaeschna janata	+
23909	Boyeria vinosa	+
43300	Ranatra sp	+
47600	Sialis sp	+
50315	Chimarra obscura	1,032+
52200	Cheumatopsyche sp	2,191+
52440	Ceratopsyche slossonae	5
52530	Hydropsyche depravata group	359+
53800	Hydroptila sp	9
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
60300	Dineutus sp	+
64050	Liodessus sp	+
67800	Tropisternus sp	+
68130	Helichus sp	+
68601	Ancyronyx variegatus	2+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	42+
69400	Stenelmis sp	33+
71100	Hexatoma sp	+
72340	Dixella sp	+
74100	Simulium sp	208+
74501	Ceratopogonidae	+
74650	Atrichopogon sp	3
77115	Ablabesmyia janta	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	74+
77750	Thienemannimyia sp	74+
78450	Nilotanypus fimbriatus	74+
78655	Procladius (Holotanypus) sp	+
80420	Cricotopus (C.) bicinctus	+
81825	Rheocricotopus (Psilocricotopus) robacki	740+
82121	Thienemanniella lobapodema	170
82141	Thienemanniella xena	138
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
82822	Cryptochironomus eminentia	+
82885	Cryptotendipes pseudotener	+
83820	Microtendipes "caelum" (sensu Simpson & Bode, 1980)	+
83860	Microtendipes rydalensis	592+
84155	Paralauterborniella nigrohalteralis	+
84450	Polypedilum (Uresipedilum) flavum	1,036+
84540	Polypedilum (Tripodura) scalaenum group	+
84601	Saetheria species 1 (sensu Jackson, 1977)	+
84800	Tribelos jucundum	+
85201	Cladotanytarsus species group A	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	592+
85625	Rheotanytarsus sp	5,474+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	222+
86100	Chrysops sp	+
87540	Hemerodromia sp	4
95100	Physella sp	1+
96002	Helisoma anceps anceps	+
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	222+
98600	Sphaerium sp	+
99100	Pyganodon grandis	+
99240	Lasmigona complanata	+
99280	Lasmigona costata	+
99860	Lampsilis siliquoidea	+

Station: F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD. 0:00 8/27/18

Rivercode: 19-036-000 River Mile: 0.87

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
78	25	20	0	78		20		Exceptional	LOW

	Taxa	Quant/Qual
01801	Turbellaria	+
03600	Oligochaeta	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11020	Acerpenna pygmaea	+
11120	Baetis flavistriga	+
11125	Labiobaetis frondalis	+
11130	Baetis intercalaris	+
11150	Labiobaetis propinquus	+
11260	Anafroptilum minor group sp 1	+
11651	Procloeon sp (w/o hindwing pads)	+
11670	Procloeon viridoculare	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
13561	Maccaffertium pulchellum	+
14950	small Leptophlebiidae	+
17200	Caenis sp	+
17600	Baetisca sp	+
18700	Hexagenia sp	+
21200	Calopteryx sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
23804	Basiaeschna janata	+
42700	Belostoma sp	+
43300	Ranatra sp	+
47600	Sialis sp	+
48620	Nigronia serricornis	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
51050	Cernotina sp	+
51300	Neureclipsis sp	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52530	Hydropsyche depravata group	+
57400	Neophylax sp	+
57900	Pycnopsyche sp	+
58505	Helicopsyche borealis	+
60300	Dineutus sp	+
60400	Gyrinus sp	+
68075	Psephenus herricki	+
68130	Helichus sp	+
68601	Ancyronyx variegatus	+
68708	Dubiraphia vittata group	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
71100	Hexatoma sp	+
72340	Dixella sp	+
72700	Anopheles sp	+
74100	Simulium sp	+
77120	Ablabesmyia mallochi	+
77130	Ablabesmyia rhamphe group	+
77800	Helopelopia sp	+
78600	Pentaneura inconspicua	+
78655	Procladius (Holotanypus) sp	+
80410	Cricotopus (C.) sp	+
80420	Cricotopus (C.) bicinctus	+
81631	Parakiefferiella n.sp 1	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82822	Cryptochironomus eminentia	+
82885	Cryptotendipes pseudotener	+
83040	Dicrotendipes neomodestus	+
83860	Microtendipes rydalensis	+
84116	Paracladopelma nereis	+
84155	Paralauterborniella nigrohalteralis	+
84450	Polypedilum (Uresipedilum) flavum	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84700	Stenochironomus sp	+
85201	Cladotanytarsus species group A	+
85264	Cladotanytarsus vanderwulpi group sp 4	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
85821	Tanytarsus glabrescens group sp 7	+
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01G08 HOPSONS CREEK (DIEDRICH CREEK) @ ST. RT. 87 0:00 7/17/18

Rivercode: 19-036-001 River Mile: 0.60

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
58	23	13	1	58		13		Exceptional	ABOVE NO

	Taxa	Quant/Qual
03600	Oligochaeta	+
04685	Placobdella ornata	+
04687	Placobdella parasitica	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08250	Faxonius rusticus	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11125	Labiobaetis frondalis	+
11130	Baetis intercalaris	+
11150	Labiobaetis propinquus	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
21200	Calopteryx sp	+
21300	Hetaerina sp	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
23804	Basiaeschna janata	+
33100	Leuctra sp	+
44501	Corixidae	+
45900	Notonecta sp	+
47600	Sialis sp	+
50301	Chimarra aterrima	+
50315	Chimarra obscura	+
50804	Lype diversa	+
50906	Psychomyia flavida	+
51550	Plectrocnemia sp	+
52200	Cheumatopsyche sp	+
52450	Ceratopsyche sparna	+
52530	Hydropsyche depravata group	+
53800	Hydroptila sp	+
57900	Pycnopsyche sp	+
59300	Mystacides sp	+
59570	Oecetis nocturna	+
59580	Oecetis persimilis	+
59720	Triaenodes ignitus	+
59730	Triaenodes melaca	+
67800	Tropisternus sp	+
68901	Macronychus glabratus	+
69400	Stenelmis sp	+
71300	Limonia sp	+
71900	Tipula sp	+
74100	Simulium sp	+
77500	Conchapelopia sp	+
77750	Thienemannimyia sp	+
77800	Helopelopia sp	+
83840	Microtendipes pedellus group	+
84470	Polypedilum (P.) illinoense	+
84750	Stictochironomus sp	+
84800	Tribelos jucundum	+
85625	Rheotanytarsus sp	+
93200	Hydrobiidae	+
95100	Physella sp	+
96264	Planorbella (Pierosoma) pilsbryi	+
96900	Ferrissia sp	+
98200	Pisidium sp	+
98600	Sphaerium sp	+

Station: F01G07 BUTTERNUT CREEK @ AQUILLA RD. 0:00 7/11/18

Rivercode: 19-037-000 River Mile: 0.80

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
44	9	5	1	44		5		Good	LOW

	Taxa	Quant/Qual
00653	Eunapius fragilis	+
01801	Turbellaria	+
04666	Helobdella papillata	+
04686	Placobdella papillifera	+
06201	Hyalella sp	+
06700	Crangonyx sp	+
08260	Faxonius sanbornii sanbornii	+
11200	Callibaetis sp	+
11250	Neocloeon sp	+
11651	Procloeon sp (w/o hindwing pads)	+
13521	Stenonema femoratum	+
22001	Coenagrionidae	+
23600	Aeshna sp	+
23804	Basiaeschna janata	+
45400	Trichocorixa sp	+
47600	Sialis sp	+
49200	Climacia areolaris	+
51610	Polycentropus sp	+
57400	Neophylax sp	+
59300	Mystacides sp	+
59570	Oecetis nocturna	+
59728	Triaenodes marginatus	+
60400	Gyrinus sp	+
63300	Hydroporini	+
65800	Berosus sp	+
68025	Ectopria sp	+
68708	Dubiraphia vittata group	+
77120	Ablabesmyia mallochi	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
79210	Thienemannimyia (T.) norena	+
81650	Parametriocnemus sp	+
81825	Rheocricotopus (Psilocricotopus) robacki	+
82730	Chironomus (C.) decorus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84750	Stictochironomus sp	+
84888	Xenochironomus xenolabis	+
85500	Paratanytarsus sp	+
87540	Hemerodromia sp	+
95100	Physella sp	+
96002	Helisoma anceps anceps	+
96900	Ferrissia sp	+
98600	Sphaerium sp	+

Station: F01G04 TARE CREEK @ BURTON-WINDSOR RD. 0:00 7/11/18

Rivercode: 19-038-000 River Mile: 3.10

Qual Taxa	Qual EPT	Qual Sensitive	Coldwater	Total Taxa	Total Number	Sensitive Taxa	ICI	Narrative	Flow
61	7	2	0	61		2		Fair	NORMAL

	Taxa	Quant/Qual
01801	Turbellaria	+
03360	Plumatella sp	+
03600	Oligochaeta	+
04686	Placobdella papillifera	+
04935	Erpobdella punctata punctata	+
05800	Caecidotea sp	+
06201	Hyalella sp	+
08260	Faxonius sanbornii sanbornii	+
08601	Hydrachnidia	+
11120	Baetis flavistriga	+
11200	Callibaetis sp	+
13400	Stenacron sp	+
13521	Stenonema femoratum	+
17200	Caenis sp	+
22001	Coenagrionidae	+
22300	Argia sp	+
27001	Corduliidae	+
43300	Ranatra sp	+
43570	Neoplea sp	+
45100	Palmacorixa sp	+
45400	Trichocorixa sp	+
47600	Sialis sp	+
51610	Polycentropus sp	+
52200	Cheumatopsyche sp	+
60400	Gyrinus sp	+
60900	Peltodytes sp	+
63400	Hydrovatus sp	+
65700	Anacaena sp	+
65800	Berosus sp	+
67800	Tropisternus sp	+
68201	Scirtidae	+
68702	Dubiraphia bivittata	+
68707	Dubiraphia quadrinotata	+
68708	Dubiraphia vittata group	+
72700	Anopheles sp	+
74501	Ceratopogonidae	+
77355	Clinotanypus pinguis	+
77500	Conchapelopia sp	+
77800	Helopelopia sp	+
78655	Procladius (Holotanypus) sp	+
82730	Chironomus (C.) decorus group	+
82820	Cryptochironomus sp	+
82824	Cryptochironomus ponderosus	+
82885	Cryptotendipes pseudotener	+
83040	Dicrotendipes neomodestus	+
83840	Microtendipes pedellus group	+
84210	Paratendipes albimanus or P. duplicatus	+
84300	Phaenopsectra obediens group	+
84470	Polypedilum (P.) illinoense	+
84540	Polypedilum (Tripodura) scalaenum group	+
84750	Stictochironomus sp	+
85230	Cladotanytarsus mancus group	+
85500	Paratanytarsus sp	+
85615	Rheotanytarsus pellucidus	+
85625	Rheotanytarsus sp	+
85800	Tanytarsus sp	+
86100	Chrysops sp	+
87400	Stratiomys sp	+
95100	Physella sp	+
96120	Menetus (Micromenetus) dilatatus	+
98200	Pisidium sp	+

Appendix D – Macroinvertebrate ICI and Metric Scores

Appendix Table C. Invertebrate Community Index metrics for stations sampled in the Cuyahoga basin survey, 2017 & 18.

RM	Drainage Area (sq mi)	Number of Taxa				Percent Composition					QUAL EPT	Eco-region	ICI
		Total	Mayfly	Caddisfly	Dipteran	Mayfly	Caddisfly	Tany-tarsini	Other Dipt/NI	Tolerant Organisms			
19-001-000 CUYAHOGA RIVER													
90.86	18.6	19 (2)	0 (0)	3 (6)	2 (0)	0.0 (0)	2.9 (4)	0.4 (2)	91.8 (0)	1.9 (6)	7 (2)	EOLP	22
90.86	18.6	28 (4)	0 (0)	2 (4)	10 (2)	0.0 (0)	0.5 (2)	1.7 (2)	97.8 (0)	81.4 (0)	3 (0)	EOLP	14
87.26	38.0	42 (6)	4 (2)	6 (6)	20 (6)	2.0 (2)	9.0 (4)	7.3 (2)	80.9 (0)	13.3 (4)	9 (4)	EOLP	36
83.80	82.0	45 (6)	4 (2)	4 (6)	22 (6)	2.6 (2)	9.4 (4)	2.1 (2)	85.7 (0)	8.0 (4)	3 (0)	EOLP	32
75.83	151.0	45 (6)	7 (4)	10 (6)	19 (6)	7.8 (2)	52.2 (6)	6.8 (2)	32.9 (4)	0.3 (6)	17 (6)	EOLP	48
69.96	159.0	43 (6)	9 (6)	9 (6)	16 (4)	22.8 (4)	23.6 (6)	18.4 (4)	33.7 (4)	2.9 (6)	22 (6)	EOLP	52
64.30	178.0	47 (6)	10 (6)	8 (6)	15 (4)	27.4 (4)	5.1 (2)	18.1 (4)	47.7 (2)	9.2 (2)	31 (6)	EOLP	42
57.67	208.0	36 (4)	3 (2)	7 (6)	8 (2)	0.8 (2)	3.3 (2)	1.1 (2)	94.4 (0)	3.0 (6)	9 (2)	EOLP	28
55.80	292.0	40 (6)	7 (4)	8 (6)	15 (4)	6.9 (2)	53.3 (6)	7.5 (2)	32.0 (4)	12.7 (0)	23 (6)	EOLP	40
54.32	293.0	35 (4)	7 (4)	6 (6)	13 (4)	22.8 (4)	28.2 (6)	6.9 (2)	41.0 (2)	1.6 (6)	16 (4)	EOLP	42
52.50	307.0	40 (6)	9 (6)	6 (6)	19 (6)	43.5 (6)	31.5 (6)	3.5 (2)	20.6 (6)	3.6 (4)	18 (6)	EOLP	54
51.00	323.0	34 (4)	8 (4)	6 (6)	16 (6)	17.4 (4)	43.1 (6)	0.3 (2)	39.1 (2)	0.3 (6)	16 (4)	EOLP	44
48.70	331.0	38 (6)	8 (4)	5 (4)	16 (6)	23.8 (4)	57.6 (6)	2.0 (2)	15.6 (6)	0.5 (6)	13 (4)	EOLP	48
42.60	340.0	37 (6)	4 (2)	5 (4)	20 (6)	24.4 (4)	29.7 (6)	14.6 (2)	30.5 (4)	3.7 (4)	11 (2)	EOLP	40
39.70	433.0	41 (6)	6 (4)	7 (6)	19 (6)	17.1 (4)	26.6 (4)	29.4 (4)	25.8 (4)	1.0 (6)	13 (4)	EOLP	48
33.20	480.0	39 (6)	4 (2)	5 (4)	20 (6)	6.6 (2)	19.1 (4)	3.5 (2)	68.2 (0)	17.5 (0)	10 (2)	EOLP	28
33.20	480.0	47 (6)	4 (2)	7 (6)	22 (6)	2.0 (2)	11.9 (2)	25.4 (4)	59.5 (0)	38.1 (0)	10 (2)	EOLP	30
26.50	499.0	27 (4)	2 (0)	5 (4)	14 (4)	13.4 (2)	49.1 (6)	15.1 (2)	21.9 (4)	0.7 (6)	9 (2)	EOLP	34
24.10	555.0	37 (6)	7 (4)	5 (4)	17 (6)	20.6 (4)	38.5 (6)	26.4 (4)	14.4 (6)	1.1 (6)	14 (4)	EOLP	50
20.80	583.0	38 (6)	6 (4)	4 (4)	15 (6)	5.4 (2)	2.6 (2)	39.4 (6)	52.3 (0)	9.7 (0)	8 (2)	EOLP	32
20.67	583.0	40 (6)	7 (4)	6 (6)	19 (6)	24.4 (4)	46.1 (6)	7.9 (2)	21.4 (4)	0.9 (6)	14 (4)	EOLP	48
17.30	597.0	39 (6)	7 (4)	7 (6)	16 (6)	36.9 (6)	32.4 (6)	15.4 (4)	14.9 (6)	0.8 (6)	12 (4)	EOLP	54
15.61	698.0	29 (4)	7 (4)	5 (4)	14 (6)	14.1 (4)	41.3 (6)	10.6 (2)	33.9 (2)	1.3 (6)	16 (4)	EOLP	42
12.00	709.0	38 (6)	7 (4)	6 (6)	17 (6)	38.1 (6)	32.1 (6)	13.5 (2)	15.4 (6)	1.8 (6)	13 (4)	EOLP	52
11.33	730.0	36 (6)	8 (6)	5 (4)	15 (6)	29.8 (6)	42.3 (6)	7.0 (2)	20.4 (4)	1.0 (6)	17 (6)	EOLP	52
10.95	743.0	42 (6)	8 (6)	7 (6)	19 (6)	27.2 (6)	31.7 (6)	21.2 (4)	19.7 (4)	1.3 (6)	13 (4)	EOLP	54
10.30	744.0	44 (6)	8 (6)	7 (6)	22 (6)	18.1 (4)	38.3 (6)	21.2 (4)	22.1 (4)	4.7 (2)	8 (2)	EOLP	46
8.90	745.0	41 (6)	6 (4)	7 (6)	21 (6)	16.6 (4)	47.5 (6)	16.2 (4)	19.1 (4)	5.4 (2)	16 (4)	EOLP	46
7.10	786.0	42 (6)	5 (2)	5 (4)	24 (6)	11.8 (2)	6.6 (2)	46.4 (6)	35.1 (2)	6.2 (0)	11 (2)	EOLP	32
19-001-004 WEST CREEK													
0.19	13.2	34 (4)	2 (0)	6 (6)	22 (6)	8.0 (2)	10.3 (6)	14.4 (4)	65.3 (0)	14.0 (4)	9 (4)	EOLP	36
19-005-000 BIG CREEK													
2.40	34.9	45 (6)	3 (2)	8 (6)	24 (6)	37.1 (6)	18.4 (6)	3.0 (2)	40.5 (4)	11.5 (4)	8 (2)	EOLP	44

Appendix Table C. Invertebrate Community Index metrics for stations sampled in the Cuyahoga basin survey, 2017 & 18.

RM	Drainage Area (sq mi)	Number of Taxa				Percent Composition					QUAL EPT	Eco-region	ICI
		Total	Mayfly	Caddisfly	Dipteran	Mayfly	Caddisfly	Tany-tarsini	Other Dipt/NI	Tolerant Organisms			
19-007-000 TINKERS CREEK													
28.80	4.2	47 (6)	6 (4)	9 (6)	22 (6)	3.2 (2)	11.5 (6)	47.3 (6)	36.4 (4)	3.4 (6)	17 (6)	EOLP	52
18.00	48.0	35 (4)	4 (2)	6 (6)	11 (2)	33.8 (6)	37.4 (6)	0.5 (2)	26.3 (6)	1.8 (6)	12 (4)	EOLP	44
18.00	48.0	38 (6)	6 (4)	7 (6)	14 (4)	51.3 (6)	28.3 (6)	1.0 (2)	15.0 (6)	0.4 (6)	13 (6)	EOLP	52
13.80	53.5	46 (6)	5 (2)	5 (6)	21 (6)	52.1 (6)	23.6 (6)	0.8 (2)	16.1 (6)	2.8 (6)	15 (6)	EOLP	52
8.65	69.0	23 (2)	4 (2)	4 (6)	9 (2)	20.9 (4)	55.2 (6)	1.2 (2)	21.7 (6)	0.6 (6)	11 (4)	EOLP	40
6.32	84.0	27 (4)	3 (2)	5 (6)	13 (2)	17.9 (4)	50.0 (6)	3.9 (2)	27.0 (6)	1.0 (6)	12 (4)	EOLP	42
0.10	96.0	33 (4)	4 (2)	4 (6)	14 (4)	8.6 (2)	60.2 (6)	7.2 (2)	22.7 (6)	1.6 (6)	8 (2)	EOLP	40
19-007-010 BEAVER MEADOW RUN													
0.11	6.1	33 (4)	2 (0)	5 (6)	16 (4)	13.6 (4)	27.0 (6)	12.6 (4)	44.6 (4)	2.4 (6)	6 (2)	EOLP	40
19-009-000 CHIPPEWA CREEK													
0.36	17.6	42 (6)	5 (4)	6 (6)	23 (6)	6.2 (2)	15.2 (6)	30.3 (6)	47.1 (2)	4.4 (6)	12 (6)	EOLP	50
19-020-000 FURNACE RUN													
0.27	20.3	44 (6)	8 (6)	7 (6)	23 (6)	34.2 (6)	42.5 (6)	5.9 (2)	16.1 (6)	1.7 (6)	12 (6)	EOLP	56
19-021-000 YELLOW CREEK													
4.08	22.9	47 (6)	6 (4)	9 (6)	25 (6)	4.3 (2)	23.6 (6)	24.5 (6)	45.9 (4)	15.2 (4)	16 (6)	EOLP	50
0.14	31.0	39 (6)	7 (4)	6 (6)	17 (4)	11.1 (2)	32.2 (6)	25.3 (4)	29.9 (4)	4.1 (6)	10 (4)	EOLP	46
19-024-000 MUD BROOK													
8.34	14.9	45 (6)	4 (2)	3 (6)	24 (6)	13.2 (4)	23.6 (6)	18.7 (4)	39.5 (4)	1.4 (6)	7 (2)	EOLP	46
0.18	29.3	35 (4)	5 (4)	7 (6)	15 (4)	15.6 (4)	29.8 (6)	2.8 (2)	40.3 (4)	9.7 (4)	9 (4)	EOLP	42
19-028-000 BREAKNECK CREEK													
14.60	42.3	33 (4)	7 (4)	5 (6)	17 (4)	64.3 (6)	11.7 (6)	14.1 (2)	7.8 (6)	0.9 (6)	16 (6)	EOLP	50
7.00	56.2	26 (4)	6 (4)	3 (4)	11 (2)	13.9 (2)	4.7 (2)	61.9 (6)	18.9 (6)	2.8 (6)	13 (4)	EOLP	40
3.08	60.7	26 (4)	5 (2)	5 (6)	8 (2)	19.9 (4)	25.3 (6)	37.7 (6)	16.1 (6)	0.9 (6)	15 (6)	EOLP	48
0.05	78.7	26 (4)	5 (2)	6 (6)	10 (2)	30.0 (4)	40.8 (6)	13.6 (2)	14.0 (6)	0.1 (6)	14 (6)	EOLP	44
19-028-004 CONGRESS LAKE OUTLET (FEEDER CANAL)													
11.70	25.6	37 (4)	4 (2)	5 (6)	20 (6)	1.0 (2)	13.3 (6)	56.3 (6)	28.4 (6)	4.6 (6)	11 (4)	EOLP	48
5.63	43.7	31 (4)	4 (2)	4 (6)	13 (2)	3.3 (2)	33.0 (6)	4.6 (2)	58.7 (2)	8.8 (4)	7 (2)	EOLP	32
19-028-005 POTTER CREEK													
1.47	3.2	41 (6)	4 (2)	4 (6)	23 (6)	15.6 (4)	17.2 (6)	5.9 (2)	58.2 (2)	10.0 (6)	10 (6)	EOLP	44
19-030-000 LITTLE CUYAHOGA RIVER													
11.20	17.4	22 (2)	2 (0)	6 (6)	10 (2)	46.4 (6)	18.8 (6)	23.4 (6)	5.7 (6)	0.0 (6)	8 (4)	EOLP	44
8.40	30.0	29 (4)	4 (2)	0 (0)	20 (6)	32.3 (6)	0.0 (0)	12.2 (2)	48.1 (2)	3.3 (6)	10 (4)	EOLP	32
7.15	31.0	40 (6)	3 (2)	3 (6)	21 (6)	7.5 (2)	5.8 (4)	12.7 (2)	62.3 (2)	21.9 (0)	7 (2)	EOLP	32
5.11	47.0	29 (4)	2 (0)	4 (6)	14 (4)	5.9 (2)	24.6 (6)	18.6 (4)	49.7 (2)	10.1 (4)	8 (2)	EOLP	34
2.14	54.0	32 (4)	2 (0)	6 (6)	17 (4)	6.2 (2)	46.7 (6)	14.4 (2)	30.3 (4)	6.0 (6)	9 (4)	EOLP	38

Appendix Table C. Invertebrate Community Index metrics for stations sampled in the Cuyahoga basin survey, 2017 & 18.

RM	Drainage Area (sq mi)	Number of Taxa				Percent Composition					QUAL EPT	Eco-region	ICI
		Total	Mayfly	Caddisfly	Dipteran	Mayfly	Caddisfly	Tany-tarsini	Other Dipt/NI	Tolerant Organisms			
19-035-000 BRIDGE CREEK													
1.32	31.0	42 (6)	1 (0)	9 (6)	17 (4)	3.2 (2)	9.8 (6)	6.1 (2)	80.3 (0)	8.6 (4)	11 (4)	EOLP	34
19-036-000 WEST BRANCH CUYAHOGA RIVER													
5.60	25.4	38 (6)	11 (6)	5 (6)	14 (4)	10.8 (2)	23.3 (6)	40.8 (6)	24.5 (6)	1.5 (6)	16 (6)	EOLP	54

Appendix E – Fish Species Presence and Abundance by Location

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-08-09**
River Mile:	**96.2**	Location:	CUYAHOGA R. @ CHARDON-WINDSOR RD.		
Time Fished:	3600 sec	Drainage:	6.3 sq mi	Depth:	Data Source:
Dist Fished:	0.12 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	15	36.00	12.61	0.00	0.00	0.00
White Sucker		O	S	T	5	12.00	4.20	0.00	0.00	0.00
Golden Shiner		I	M	T	3	7.20	2.52	0.00	0.00	0.00
Yellow Bullhead		I	C	T	6	14.40	5.04	0.00	0.00	0.00
Largemouth Bass		C	C	N	7	16.80	5.88	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	2	4.80	1.68	0.00	0.00	0.00
Green Sunfish		I	C	T	4	9.60	3.36	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	69	165.60	57.98	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	7	16.80	5.88	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.40	0.84	0.00	0.00	0.00
			Data Totals:		119	285.60		0.00		
			Number of Species:		10					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2018-08-13**
River Mile:	**90.9**	Location:	CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608		
Time Fished:	1500 sec	Drainage:	18.6 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	62	124.00	9.78	0.00	0.00	0.00
Spotted Sucker		I	S	N	42	84.00	6.62	0.00	0.00	0.00
Golden Shiner		I	M	T	20	40.00	3.15	0.00	0.00	0.00
Creek Chub		G	N	T	21	42.00	3.31	0.00	0.00	0.00
Common Shiner		I	S	N	10	20.00	1.58	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	92	184.00	14.51	0.00	0.00	0.00
Yellow Bullhead		I	C	T	117	234.00	18.45	0.00	0.00	0.00
Brown Bullhead		I	C	T	1	2.00	0.16	0.00	0.00	0.00
Black Crappie		I	C	N	2	4.00	0.32	0.00	0.00	0.00
Largemouth Bass		C	C	N	125	250.00	19.72	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	6	12.00	0.95	0.00	0.00	0.00
Green Sunfish		I	C	T	8	16.00	1.26	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	100	200.00	15.77	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	14	28.00	2.21	0.00	0.00	0.00
Hybrid x Sunfish				N	3	6.00	0.47	0.00	0.00	0.00
Yellow Perch			M	N	9	18.00	1.42	0.00	0.00	0.00
Logperch		I	S	M	1	2.00	0.16	0.00	0.00	0.00
Johnny Darter		I	C	N	1	2.00	0.16	0.00	0.00	0.00
			Data Totals:		634	1268.00		0.00		
			Number of Species:		18					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-08**
River Mile:	**90.9**	Location:	CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608				
Time Fished:	2700 sec	Drainage:	18.6 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	1	2.00	0.40	0.00	0.00	0.00
Redfin Pickerel		P	M	P	1	2.00	0.40	0.00	0.00	0.00
Northern Pike		P	M	N	1	2.00	0.40	0.00	0.00	0.00
White Sucker		O	S	T	46	92.00	18.40	0.00	0.00	0.00
Spotted Sucker		I	S	N	16	32.00	6.40	0.00	0.00	0.00
Golden Shiner		I	M	T	6	12.00	2.40	0.00	0.00	0.00
Common Shiner		I	S	N	62	124.00	24.80	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	16	32.00	6.40	0.00	0.00	0.00
Yellow Bullhead		I	C	T	19	38.00	7.60	0.00	0.00	0.00
Brown Bullhead		I	C	T	1	2.00	0.40	0.00	0.00	0.00
Black Crappie		I	C	N	1	2.00	0.40	0.00	0.00	0.00
Largemouth Bass		C	C	N	8	16.00	3.20	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	6	12.00	2.40	0.00	0.00	0.00
Green Sunfish		I	C	T	15	30.00	6.00	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	37	74.00	14.80	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	11	22.00	4.40	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.40	0.00	0.00	0.00
Yellow Perch			M	N	1	2.00	0.40	0.00	0.00	0.00
Logperch		I	S	M	1	2.00	0.40	0.00	0.00	0.00
			Data Totals:		250	500.00		0.00		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-09**
River Mile:	**87.3**	Location:	CUYAHOGA R. AT BURTON @ ST. RT. 87				
Time Fished:	3600 sec	Drainage:	38.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.42 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	2	4.71	0.54	0.36	0.43	76.00
Redfin Pickerel		P	M	P	9	21.18	2.43	1.06	1.28	50.00
White Sucker		O	S	T	46	108.24	12.43	31.78	38.51	293.65
Spotted Sucker		I	S	N	74	174.12	20.00	31.31	37.93	179.82
Golden Shiner		I	M	T	1	2.35	0.27	0.05	0.06	22.00
Common Shiner		I	S	N	43	101.18	11.62	3.17	3.84	31.29
Bluntnose Minnow		O	C	T	3	7.06	0.81	0.01	0.02	2.00
Yellow Bullhead		I	C	T	20	47.06	5.41	3.05	3.69	64.78
Brown Bullhead		I	C	T	1	2.35	0.27	0.24	0.29	100.00
Brook Silverside		I	M	M	1	2.35	0.27	0.00	0.00	1.00
Black Crappie		I	C	N	1	2.35	0.27	0.24	0.29	102.00
Rock Bass		C	C	N	4	9.41	1.08	0.53	0.64	56.00
Largemouth Bass		C	C	N	18	42.35	4.86	2.83	3.43	66.89
Green Sunfish		I	C	T	10	23.53	2.70	0.46	0.56	19.60
Bluegill Sunfish		I	C	P	53	124.71	14.32	2.90	3.52	23.27
Pumpkinseed Sunfish		I	C	P	66	155.29	17.84	3.46	4.20	22.30
Hybrid x Sunfish				N	3	7.06	0.81	0.14	0.17	20.00
Yellow Perch			M	N	12	28.24	3.24	0.93	1.13	33.00
Johnny Darter		I	C	N	3	7.06	0.81	0.01	0.01	1.67
			Data Totals:		370	870.59		82.54		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-08**
River Mile:	**83.8**	Location:	CUYAHOGA R. @ RUSSELL PARK				
Time Fished:	3600 sec	Drainage:	82.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	3	6.00	0.87	0.68	0.68	113.00
Redfin Pickerel		P	M	P	1	2.00	0.29	0.04	0.04	18.00
Northern Pike		P	M	N	4	8.00	1.16	5.69	5.73	711.67
Golden Redhorse		I	S	M	10	20.00	2.91	13.90	14.00	695.00
White Sucker		O	S	T	6	12.00	1.74	5.02	5.05	418.00
Spotted Sucker		I	S	N	66	132.00	19.19	17.37	17.49	131.56
Common Carp		O	M	T	6	12.00	1.74	43.20	43.51	3600.00
Golden Shiner		I	M	T	10	20.00	2.91	0.18	0.18	9.00
Common Shiner		I	S	N	57	114.00	16.57	0.89	0.89	7.79
Spotfin Shiner		I	M	N	2	4.00	0.58	0.01	0.01	2.00
Bluntnose Minnow		O	C	T	90	180.00	26.16	0.33	0.33	1.82
Yellow Bullhead		I	C	T	5	10.00	1.45	1.08	1.08	107.60
Brown Bullhead		I	C	T	1	2.00	0.29	0.54	0.55	272.00
Brook Silverside		I	M	M	1	2.00	0.29	0.01	0.01	4.00
Black Crappie		I	C	N	8	16.00	2.33	2.18	2.19	136.00
Rock Bass		C	C	N	5	10.00	1.45	0.79	0.80	79.20
Largemouth Bass		C	C	N	20	40.00	5.81	5.20	5.24	130.00
Green Sunfish		I	C	T	1	2.00	0.29	0.07	0.07	34.00
Bluegill Sunfish		I	C	P	20	40.00	5.81	0.90	0.91	22.47
Pumpkinseed Sunfish		I	C	P	16	32.00	4.65	0.49	0.49	15.33
Hybrid x Sunfish				N	1	2.00	0.29	0.04	0.04	20.00
Yellow Perch			M	N	11	22.00	3.20	0.70	0.71	32.00
			Data Totals:		344	688.00		99.29		
			Number of Species:		22					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-08-09**
River Mile:	**75.8**	Location:	CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.		
Time Fished:	2700 sec	Drainage:	151.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	3	4.50	0.45	0.07	0.16	15.00
Northern Pike		P	M	N	1	1.50	0.15	0.28	0.67	188.00
Northern Hog Sucker		I	S	M	90	135.00	13.39	18.83	44.83	139.44
White Sucker		O	S	T	6	9.00	0.89	2.24	5.32	248.33
River Chub		I	N	I	15	22.50	2.23	1.53	3.65	68.13
Rosyface Shiner		I	S	I	21	31.50	3.13	0.08	0.19	2.57
Common Shiner		I	S	N	98	147.00	14.58	3.75	8.93	25.51
Spotfin Shiner		I	M	N	19	28.50	2.83	0.17	0.40	5.87
Bluntnose Minnow		O	C	T	72	108.00	10.71	0.34	0.81	3.13
Yellow Bullhead		I	C	T	42	63.00	6.25	4.73	11.25	75.00
Brown Bullhead		I	C	T	2	3.00	0.30	0.32	0.77	108.00
Brook Silverside		I	M	M	1	1.50	0.15	0.00	0.01	2.00
Black Crappie		I	C	N	3	4.50	0.45	0.33	0.79	73.33
Rock Bass		C	C	N	7	10.50	1.04	0.75	1.79	71.43
Smallmouth Bass		C	C	M	24	36.00	3.57	4.40	10.47	122.17
Largemouth Bass		C	C	N	5	7.50	0.74	0.25	0.60	33.60
Bluegill Sunfish		I	C	P	11	16.50	1.64	0.42	1.00	25.45
Pumpkinseed Sunfish		I	C	P	2	3.00	0.30	0.11	0.25	35.00
Yellow Perch			M	N	11	16.50	1.64	0.86	2.05	52.18
Logperch		I	S	M	58	87.00	8.63	1.21	2.89	13.96
Johnny Darter		I	C	N	1	1.50	0.15	0.00	0.01	2.00
Greenside Darter		I	S	M	167	250.50	24.85	1.28	3.05	5.11
Rainbow Darter		I	S	M	7	10.50	1.04	0.02	0.05	2.00
Fantail Darter		I	C	N	6	9.00	0.89	0.03	0.06	3.00
			Data Totals:		672	1008.00		41.99		
			Number of Species:		24					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-02**
River Mile:	**70.0**	Location:	CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP.				
Time Fished:	2700 sec	Drainage:	159.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	1.50	0.33	0.11	0.64	74.00
Northern Pike		P	M	N	2	3.00	0.67	4.99	28.98	1662.50
Golden Redhorse		I	S	M	2	3.00	0.67	1.99	11.55	662.50
Northern Hog Sucker		I	S	M	35	52.50	11.67	3.24	18.84	61.76
White Sucker		O	S	T	1	1.50	0.33	0.12	0.70	80.00
Spotted Sucker		I	S	N	3	4.50	1.00	0.36	2.11	80.67
Rosyface Shiner		I	S	I	3	4.50	1.00	0.02	0.09	3.33
Common Shiner		I	S	N	2	3.00	0.67	0.09	0.52	30.00
Spotfin Shiner		I	M	N	5	7.50	1.67	0.05	0.28	6.40
Bluntnose Minnow		O	C	T	58	87.00	19.33	0.22	1.28	2.54
Yellow Bullhead		I	C	T	22	33.00	7.33	1.80	10.46	54.55
Brook Silverside		I	M	M	4	6.00	1.33	0.01	0.03	1.00
Black Crappie		I	C	N	1	1.50	0.33	0.05	0.26	30.00
Rock Bass		C	C	N	13	19.50	4.33	0.65	3.75	33.08
Smallmouth Bass		C	C	M	9	13.50	3.00	2.10	12.22	155.78
Largemouth Bass		C	C	N	2	3.00	0.67	0.03	0.17	10.00
Green Sunfish		I	C	T	4	6.00	1.33	0.09	0.51	14.50
Bluegill Sunfish		I	C	P	47	70.50	15.67	0.52	3.03	7.40
Pumpkinseed Sunfish		I	C	P	4	6.00	1.33	0.07	0.40	11.50
Yellow Perch			M	N	2	3.00	0.67	0.05	0.28	16.00
Blackside Darter		I	S	N	1	1.50	0.33	0.00	0.02	2.00
Logperch		I	S	M	35	52.50	11.67	0.45	2.64	8.65
Johnny Darter		I	C	N	1	1.50	0.33	0.00	0.02	2.00
Greenside Darter		I	S	M	41	61.50	13.67	0.21	1.19	3.33
Rainbow Darter		I	S	M	1	1.50	0.33	0.00	0.02	2.00
Fantail Darter		I	C	N	1	1.50	0.33	0.00	0.01	1.00
			Data Totals:		300	450.00		17.21		
			Number of Species:		26					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-20**
River Mile:	**64.3**	Location:	CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303				
Time Fished:	1800 sec	Drainage:	178.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	80	120.00	15.75	16.28	43.13	135.63
White Sucker		O	S	T	2	3.00	0.39	0.78	2.07	260.00
Spotted Sucker		I	S	N	1	1.50	0.20	0.13	0.35	88.00
River Chub		I	N	I	96	144.00	18.90	4.18	11.08	29.03
Rosyface Shiner		I	S	I	9	13.50	1.77	0.05	0.12	3.33
Common Shiner		I	S	N	15	22.50	2.95	0.55	1.46	24.43
Bluntnose Minnow		O	C	T	4	6.00	0.79	0.03	0.08	5.00
Central Stoneroller		H	N	N	1	1.50	0.20	0.01	0.02	4.00
Yellow Bullhead		I	C	T	25	37.50	4.92	2.33	6.16	62.00
Black Crappie		I	C	N	2	3.00	0.39	0.13	0.34	43.00
Rock Bass		C	C	N	14	21.00	2.76	1.24	3.29	59.08
Smallmouth Bass		C	C	M	41	61.50	8.07	10.01	26.52	162.68
Green Sunfish		I	C	T	4	6.00	0.79	0.01	0.03	2.00
Bluegill Sunfish		I	C	P	23	34.50	4.53	0.34	0.90	9.82
Pumpkinseed Sunfish		I	C	P	2	3.00	0.39	0.08	0.21	26.00
Yellow Perch			M	N	1	1.50	0.20	0.03	0.08	20.00
Logperch		I	S	M	63	94.50	12.40	0.81	2.14	8.55
Johnny Darter		I	C	N	3	4.50	0.59	0.01	0.02	2.00
Greenside Darter		I	S	M	81	121.50	15.94	0.62	1.64	5.10
Rainbow Darter		I	S	M	20	30.00	3.94	0.08	0.20	2.50
Fantail Darter		I	C	N	21	31.50	4.13	0.06	0.17	2.00
			Data Totals:		508	762.00		37.73		
			Number of Species:		21					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-08-03**
River Mile:	**64.3**	Location:	CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303		
Time Fished:	2700 sec	Drainage:	178.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	1.50	0.28	0.01	0.03	6.00
Northern Pike		P	M	N	1	1.50	0.28	6.90	25.98	4600.00
Northern Hog Sucker		I	S	M	45	67.50	12.82	8.72	32.84	129.25
River Chub		I	N	I	43	64.50	12.25	1.86	6.99	28.80
Rosyface Shiner		I	S	I	1	1.50	0.28	0.00	0.01	2.00
Common Shiner		I	S	N	7	10.50	1.99	0.18	0.69	17.50
Yellow Bullhead		I	C	T	21	31.50	5.98	1.28	4.81	40.57
Rock Bass		C	C	N	21	31.50	5.98	1.23	4.64	39.14
Smallmouth Bass		C	C	M	20	30.00	5.70	4.65	17.52	155.10
Green Sunfish		I	C	T	4	6.00	1.14	0.07	0.27	12.00
Bluegill Sunfish		I	C	P	18	27.00	5.13	0.18	0.67	6.63
Yellow Perch			M	N	2	3.00	0.57	0.24	0.90	80.00
Logperch		I	S	M	58	87.00	16.52	0.65	2.46	7.51
Johnny Darter		I	C	N	1	1.50	0.28	0.00	0.01	2.00
Greenside Darter		I	S	M	74	111.00	21.08	0.47	1.78	4.26
Rainbow Darter		I	S	M	21	31.50	5.98	0.06	0.22	1.89
Fantail Darter		I	C	N	13	19.50	3.70	0.04	0.16	2.15
			Data Totals:		351	526.50		26.56		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-07-25**
River Mile:	**57.7**	Location:	CUYAHOGA R. DST. LAKE ROCKWELL @ RAVENNA RD.		
Time Fished:	3600 sec	Drainage:	208.0 sq mi	Depth:	Data Source:
Dist Fished:	0.4 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	7	17.50	1.38	1.93	1.45	110.00
Northern Hog Sucker		I	S	M	7	17.50	1.38	3.58	2.69	204.29
White Sucker		O	S	T	47	117.50	9.29	35.25	26.52	300.00
Spotted Sucker		I	S	N	2	5.00	0.40	0.51	0.38	101.00
Common Carp		O	M	T	10	25.00	1.98	51.11	38.45	2044.44
Golden Shiner		I	M	T	1	2.50	0.20	0.10	0.08	40.00
Common Shiner		I	S	N	1	2.50	0.20	0.08	0.06	30.00
Bluntnose Minnow		O	C	T	7	17.50	1.38	0.08	0.06	4.29
Yellow Bullhead		I	C	T	3	7.50	0.59	0.85	0.64	113.00
Brown Bullhead		I	C	T	2	5.00	0.40	0.34	0.26	68.00
Brook Silverside		I	M	M	2	5.00	0.40	0.04	0.03	8.00
White Perch			M	N	34	85.00	6.72	5.86	4.41	68.94
Black Crappie		I	C	N	124	310.00	24.51	8.24	6.20	26.59
Rock Bass		C	C	N	10	25.00	1.98	2.14	1.61	85.75
Smallmouth Bass		C	C	M	2	5.00	0.40	0.03	0.02	5.00
Largemouth Bass		C	C	N	6	15.00	1.19	3.14	2.36	209.33
Warmouth Sunfish		C	C	N	2	5.00	0.40	0.18	0.13	35.00
Green Sunfish		I	C	T	2	5.00	0.40	0.34	0.25	67.00
Bluegill Sunfish		I	C	P	76	190.00	15.02	9.22	6.93	48.51
Redear Sunfish		I	C	N	1	2.50	0.20	0.15	0.11	58.00
Pumpkinseed Sunfish		I	C	P	37	92.50	7.31	2.91	2.19	31.43
Hybrid x Sunfish				N	2	5.00	0.40	0.31	0.23	62.00
Yellow Perch			M	N	93	232.50	18.38	5.49	4.13	23.63
Logperch		I	S	M	26	65.00	5.14	1.05	0.79	16.08
Greenside Darter		I	S	M	2	5.00	0.40	0.03	0.02	6.00
			Data Totals:		506	1265.00		132.92		
			Number of Species:		25					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-07-27**
River Mile:	**55.8**	Location:	CUYAHOGA R. @ STANDING ROCK CEMETERY (FREE FLOWING)		
Time Fished:	2700 sec	Drainage:	292.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	4	6.00	1.15	0.17	0.71	29.00
Northern Hog Sucker		I	S	M	31	46.50	8.91	6.37	25.98	137.04
White Sucker		O	S	T	8	12.00	2.30	3.00	12.23	250.00
River Chub		I	N	I	34	51.00	9.77	1.71	6.96	33.47
Common Shiner		I	S	N	9	13.50	2.59	0.20	0.83	15.00
Bluntnose Minnow		O	C	T	21	31.50	6.03	0.13	0.51	4.00
Yellow Bullhead		I	C	T	35	52.50	10.06	4.39	17.89	83.57
White Perch			M	N	25	37.50	7.18	2.25	9.17	60.00
Black Crappie		I	C	N	21	31.50	6.03	0.87	3.55	27.62
Rock Bass		C	C	N	14	21.00	4.02	1.19	4.87	56.86
Smallmouth Bass		C	C	M	25	37.50	7.18	1.16	4.71	30.83
Green Sunfish		I	C	T	1	1.50	0.29	0.01	0.05	8.00
Bluegill Sunfish		I	C	P	33	49.50	9.48	1.36	5.53	27.40
Redear Sunfish		I	C	N	1	1.50	0.29	0.03	0.12	20.00
Pumpkinseed Sunfish		I	C	P	4	6.00	1.15	0.13	0.51	21.00
Hybrid x Sunfish				N	1	1.50	0.29	0.03	0.12	20.00
Yellow Perch			M	N	10	15.00	2.87	0.45	1.83	30.00
Logperch		I	S	M	18	27.00	5.17	0.65	2.67	24.22
Greenside Darter		I	S	M	53	79.50	15.23	0.43	1.75	5.41
			Data Totals:		348	522.00		24.53		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-07-27**
River Mile:	**54.3**	Location:	CUYAHOGA R. UPST. KENT WWTP @ FULLER PARK				
Time Fished:	2700 sec	Drainage:	293.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	2	3.00	0.45	0.02	0.10	7.00
Northern Pike		P	M	N	1	1.50	0.22	0.94	4.51	628.00
Northern Hog Sucker		I	S	M	62	93.00	13.87	9.50	45.48	102.19
White Sucker		O	S	T	4	6.00	0.89	0.60	2.89	100.50
River Chub		I	N	I	49	73.50	10.96	1.54	7.36	20.91
Common Shiner		I	S	N	6	9.00	1.34	0.20	0.93	21.67
Spotfin Shiner		I	M	N	33	49.50	7.38	0.22	1.03	4.36
Bluntnose Minnow		O	C	T	78	117.00	17.45	0.22	1.06	1.89
Yellow Bullhead		I	C	T	18	27.00	4.03	2.85	13.64	105.56
Black Crappie		I	C	N	8	12.00	1.79	0.29	1.41	24.50
Rock Bass		C	C	N	37	55.50	8.28	1.13	5.39	20.28
Smallmouth Bass		C	C	M	10	15.00	2.24	1.24	5.91	82.40
Largemouth Bass		C	C	N	1	1.50	0.22	0.03	0.14	20.00
Green Sunfish		I	C	T	15	22.50	3.36	0.22	1.06	9.87
Bluegill Sunfish		I	C	P	51	76.50	11.41	0.90	4.31	11.76
Redear Sunfish		I	C	N	2	3.00	0.45	0.04	0.17	12.00
Pumpkinseed Sunfish		I	C	P	1	1.50	0.22	0.02	0.10	14.00
Hybrid x Sunfish				N	2	3.00	0.45	0.09	0.45	31.00
Yellow Perch			M	N	16	24.00	3.58	0.35	1.68	14.67
Blackside Darter		I	S	N	2	3.00	0.45	0.01	0.06	4.00
Logperch		I	S	M	3	4.50	0.67	0.11	0.50	23.33
Greenside Darter		I	S	M	46	69.00	10.29	0.38	1.82	5.52
			Data Totals:		447	670.50		20.90		
			Number of Species:		22					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-14**
River Mile:	**52.5**	Location:	CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING)				
Time Fished:	3600 sec	Drainage:	307.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	9	18.00	1.65	0.36	0.22	20.25
Northern Pike		P	M	N	4	8.00	0.74	8.60	5.24	1075.00
Northern Hog Sucker		I	S	M	161	322.00	29.60	52.84	32.17	164.09
White Sucker		O	S	T	12	24.00	2.21	10.72	6.53	446.73
Common Carp		O	M	T	7	14.00	1.29	62.53	38.07	4466.67
River Chub		I	N	I	31	62.00	5.70	1.94	1.18	31.33
Common Shiner		I	S	N	6	12.00	1.10	0.03	0.02	2.67
Spotfin Shiner		I	M	N	26	52.00	4.78	0.28	0.17	5.44
Bluntnose Minnow		O	C	T	72	144.00	13.24	0.54	0.33	3.76
Yellow Bullhead		I	C	T	6	12.00	1.10	0.52	0.32	43.20
Black Crappie		I	C	N	10	20.00	1.84	1.26	0.77	63.20
Rock Bass		C	C	N	31	62.00	5.70	2.06	1.26	33.29
Smallmouth Bass		C	C	M	67	134.00	12.32	16.86	10.27	125.85
Largemouth Bass		C	C	N	3	6.00	0.55	0.28	0.17	47.33
Green Sunfish		I	C	T	15	30.00	2.76	0.70	0.42	23.20
Bluegill Sunfish		I	C	P	15	30.00	2.76	1.09	0.66	36.27
Pumpkinseed Sunfish		I	C	P	6	12.00	1.10	0.43	0.26	35.67
Hybrid x Sunfish				N	1	2.00	0.18	0.16	0.09	78.00
Yellow Perch			M	N	37	74.00	6.80	2.72	1.65	36.70
Johnny Darter		I	C	N	1	2.00	0.18	0.00	0.00	2.00
Greenside Darter		I	S	M	24	48.00	4.41	0.32	0.19	6.57
			Data Totals:		544	1088.00		164.25		
			Number of Species:		21					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-01**
River Mile:	**52.5**	Location:	CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING)				
Time Fished:	2700 sec	Drainage:	307.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.34 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Pike		P	M	N	2	5.97	0.61	7.01	4.08	1175.00
Northern Hog Sucker		I	S	M	74	220.90	22.42	44.12	25.69	199.75
White Sucker		O	S	T	19	56.72	5.76	21.94	12.77	386.84
Common Carp		O	M	T	6	17.91	1.82	61.27	35.67	3420.83
River Chub		I	N	I	18	53.73	5.45	3.32	1.93	61.75
Common Shiner		I	S	N	1	2.99	0.30	0.09	0.05	30.00
Spotfin Shiner		I	M	N	8	23.88	2.42	0.17	0.10	7.25
Bluntnose Minnow		O	C	T	35	104.48	10.61	0.32	0.19	3.06
Central Stoneroller		H	N	N	1	2.99	0.30	0.04	0.02	14.00
Yellow Bullhead		I	C	T	7	20.90	2.12	1.96	1.14	94.00
Western Mosquitofish		I	N	N	1	2.99	0.30	0.01	0.01	4.00
White Perch			M	N	1	2.99	0.30	0.23	0.14	78.00
Black Crappie		I	C	N	6	17.91	1.82	1.79	1.04	100.00
Rock Bass		C	C	N	30	89.55	9.09	3.30	1.92	36.87
Smallmouth Bass		C	C	M	38	113.43	11.52	20.73	12.07	182.79
Largemouth Bass		C	C	N	1	2.99	0.30	0.06	0.03	20.00
Green Sunfish		I	C	T	3	8.96	0.91	0.15	0.09	16.67
Bluegill Sunfish		I	C	P	21	62.69	6.36	1.62	0.94	25.80
Redear Sunfish		I	C	N	1	2.99	0.30	0.11	0.07	38.00
Pumpkinseed Sunfish		I	C	P	4	11.94	1.21	0.30	0.17	25.00
Hybrid x Sunfish				N	1	2.99	0.30	0.24	0.14	82.00
Yellow Perch			M	N	27	80.60	8.18	2.25	1.31	27.93
Logperch		I	S	M	6	17.91	1.82	0.40	0.23	22.33
Greenside Darter		I	S	M	19	56.72	5.76	0.30	0.18	5.37
			Data Totals:		330	985.07		171.76		
			Number of Species:		24					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-07-27**
River Mile:	**51.0**	Location:	CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)				
Time Fished:	2700 sec	Drainage:	323.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	5	7.50	0.75	0.06	0.16	7.60
Northern Hog Sucker		I	S	M	89	133.50	13.32	19.77	55.55	148.13
White Sucker		O	S	T	29	43.50	4.34	2.74	7.70	63.03
River Chub		I	N	I	46	69.00	6.89	3.61	10.14	52.32
Creek Chub		G	N	T	4	6.00	0.60	0.01	0.02	1.00
Common Shiner		I	S	N	4	6.00	0.60	0.44	1.22	72.50
Spotfin Shiner		I	M	N	34	51.00	5.09	0.31	0.87	6.06
Bluntnose Minnow		O	C	T	215	322.50	32.19	0.99	2.78	3.07
Central Stoneroller		H	N	N	8	12.00	1.20	0.12	0.33	9.83
Yellow Bullhead		I	C	T	20	30.00	2.99	1.46	4.11	48.80
Black Crappie		I	C	N	2	3.00	0.30	0.10	0.28	33.00
Rock Bass		C	C	N	20	30.00	2.99	0.81	2.28	27.10
Smallmouth Bass		C	C	M	13	19.50	1.95	2.68	7.52	137.23
Largemouth Bass		C	C	N	1	1.50	0.15	0.14	0.38	90.00
Warmouth Sunfish		C	C	N	1	1.50	0.15	0.06	0.17	40.00
Green Sunfish		I	C	T	2	3.00	0.30	0.03	0.08	9.00
Bluegill Sunfish		I	C	P	36	54.00	5.39	0.69	1.94	12.78
Pumpkinseed Sunfish		I	C	P	1	1.50	0.15	0.03	0.08	20.00
Yellow Perch			M	N	11	16.50	1.65	0.53	1.48	32.00
Johnny Darter		I	C	N	7	10.50	1.05	0.03	0.08	2.57
Greenside Darter		I	S	M	120	180.00	17.96	1.00	2.82	5.57
			Data Totals:		668	1002.00		35.60		
			Number of Species:		21					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-20**
River Mile:	**50.0**	Location:	CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOWING)				
Time Fished:	1800 sec	Drainage:	326.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	2	3.00	0.40	0.04	0.09	13.00
Northern Hog Sucker		I	S	M	121	181.50	24.10	23.36	56.17	128.70
White Sucker		O	S	T	35	52.50	6.97	6.02	14.48	114.71
River Chub		I	N	I	46	69.00	9.16	2.79	6.72	40.48
Creek Chub		G	N	T	4	6.00	0.80	0.02	0.05	3.33
Common Shiner		I	S	N	23	34.50	4.58	1.03	2.47	29.81
Spotfin Shiner		I	M	N	42	63.00	8.37	0.35	0.85	5.60
Bluntnose Minnow		O	C	T	43	64.50	8.57	0.32	0.77	4.95
Central Stoneroller		H	N	N	40	60.00	7.97	1.32	3.17	21.95
Yellow Bullhead		I	C	T	27	40.50	5.38	2.14	5.15	52.88
White Perch			M	N	1	1.50	0.20	0.05	0.13	36.00
Black Crappie		I	C	N	2	3.00	0.40	0.15	0.37	51.00
Rock Bass		C	C	N	9	13.50	1.79	0.66	1.58	48.67
Smallmouth Bass		C	C	M	9	13.50	1.79	0.29	0.69	21.11
Largemouth Bass		C	C	N	3	4.50	0.60	0.40	0.97	89.33
Green Sunfish		I	C	T	4	6.00	0.80	0.12	0.29	20.00
Bluegill Sunfish		I	C	P	37	55.50	7.37	1.80	4.33	32.43
Redear Sunfish		I	C	N	1	1.50	0.20	0.04	0.09	26.00
Hybrid x Sunfish				N	1	1.50	0.20	0.06	0.14	40.00
Yellow Perch			M	N	1	1.50	0.20	0.08	0.20	56.00
Johnny Darter		I	C	N	1	1.50	0.20	0.00	0.01	2.00
Greenside Darter		I	S	M	50	75.00	9.96	0.53	1.29	7.13
			Data Totals:		502	753.00		41.58		
			Number of Species:		22					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-07-27**
River Mile:	**50.0**	Location:	CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOWING)		
Time Fished:	2700 sec	Drainage:	326.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	1.50	0.26	0.02	0.09	10.00
Northern Hog Sucker		I	S	M	29	43.50	7.40	6.82	42.56	156.69
White Sucker		O	S	T	6	9.00	1.53	0.64	3.97	70.67
River Chub		I	N	I	28	42.00	7.14	1.78	11.12	42.38
Creek Chub		G	N	T	1	1.50	0.26	0.00	0.02	2.00
Common Shiner		I	S	N	9	13.50	2.30	0.40	2.47	29.33
Spotfin Shiner		I	M	N	114	171.00	29.08	1.01	6.31	5.91
Bluntnose Minnow		O	C	T	32	48.00	8.16	0.17	1.08	3.60
Central Stoneroller		H	N	N	35	52.50	8.93	1.32	8.26	25.21
Yellow Bullhead		I	C	T	14	21.00	3.57	0.83	5.21	39.71
Black Crappie		I	C	N	1	1.50	0.26	0.08	0.52	56.00
Rock Bass		C	C	N	9	13.50	2.30	0.28	1.74	20.67
Smallmouth Bass		C	C	M	7	10.50	1.79	1.01	6.31	96.29
Largemouth Bass		C	C	N	3	4.50	0.77	0.34	2.14	76.00
Green Sunfish		I	C	T	2	3.00	0.51	0.05	0.34	18.00
Bluegill Sunfish		I	C	P	13	19.50	3.32	0.48	3.00	24.67
Yellow Perch			M	N	2	3.00	0.51	0.06	0.37	20.00
Johnny Darter		I	C	N	4	6.00	1.02	0.01	0.07	2.00
Greenside Darter		I	S	M	82	123.00	20.92	0.71	4.40	5.73
			Data Totals:		392	588.00		16.01		
			Number of Species:		19					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-20**
River Mile:	**48.7**	Location:	CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK				
Time Fished:	1800 sec	Drainage:	331.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	2	3.00	0.32	0.08	0.27	25.00
Northern Hog Sucker		I	S	M	150	225.00	24.00	9.91	36.31	44.03
White Sucker		O	S	T	26	39.00	4.16	3.68	13.47	94.23
Common Carp		O	M	T	1	1.50	0.16	3.00	11.00	2000.00
River Chub		I	N	I	31	46.50	4.96	1.53	5.60	32.83
Common Shiner		I	S	N	15	22.50	2.40	0.06	0.23	2.80
Spotfin Shiner		I	M	N	86	129.00	13.76	0.55	2.03	4.30
Bluntnose Minnow		O	C	T	151	226.50	24.16	0.80	2.95	3.55
Central Stoneroller		H	N	N	3	4.50	0.48	0.02	0.07	4.00
Channel Catfish			C	N	2	3.00	0.32	0.09	0.34	31.00
Yellow Bullhead		I	C	T	16	24.00	2.56	2.40	8.80	100.00
Black Crappie		I	C	N	4	6.00	0.64	0.47	1.74	79.00
Rock Bass		C	C	N	8	12.00	1.28	0.97	3.55	80.75
Smallmouth Bass		C	C	M	42	63.00	6.72	2.27	8.34	36.10
Bluegill Sunfish		I	C	P	10	15.00	1.60	0.64	2.33	42.40
Yellow Perch			M	N	8	12.00	1.28	0.30	1.10	25.00
Logperch		I	S	M	4	6.00	0.64	0.19	0.69	31.50
Johnny Darter		I	C	N	35	52.50	5.60	0.10	0.36	1.85
Greenside Darter		I	S	M	31	46.50	4.96	0.23	0.83	4.87
			Data Totals:		625	937.50		27.28		
			Number of Species:		19					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-01**
River Mile:	**48.7**	Location:	CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK				
Time Fished:	2700 sec	Drainage:	331.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	2	3.00	0.31	0.08	0.17	28.00
Northern Hog Sucker		I	S	M	97	145.50	15.06	15.35	30.96	105.48
White Sucker		O	S	T	18	27.00	2.80	3.64	7.34	134.82
Common Carp		O	M	T	6	9.00	0.93	22.95	46.29	2550.00
River Chub		I	N	I	12	18.00	1.86	0.37	0.74	20.42
Creek Chub		G	N	T	1	1.50	0.16	0.00	0.01	2.00
Common Shiner		I	S	N	1	1.50	0.16	0.00	0.01	2.00
Spotfin Shiner		I	M	N	135	202.50	20.96	0.86	1.73	4.23
Bluntnose Minnow		O	C	T	219	328.50	34.01	1.00	2.02	3.05
Central Stoneroller		H	N	N	2	3.00	0.31	0.01	0.01	2.00
Yellow Bullhead		I	C	T	9	13.50	1.40	1.33	2.67	98.22
Black Crappie		I	C	N	3	4.50	0.47	0.39	0.79	86.67
Rock Bass		C	C	N	4	6.00	0.62	0.18	0.36	29.50
Smallmouth Bass		C	C	M	18	27.00	2.80	1.45	2.93	53.78
Largemouth Bass		C	C	N	2	3.00	0.31	0.57	1.15	190.00
Green Sunfish		I	C	T	1	1.50	0.16	0.02	0.04	14.00
Bluegill Sunfish		I	C	P	17	25.50	2.64	0.45	0.90	17.53
Yellow Perch			M	N	9	13.50	1.40	0.38	0.77	28.44
Logperch		I	S	M	1	1.50	0.16	0.05	0.09	30.00
Johnny Darter		I	C	N	37	55.50	5.75	0.09	0.17	1.56
Greenside Darter		I	S	M	50	75.00	7.76	0.42	0.84	5.55
			Data Totals:		644	966.00		49.57		
			Number of Species:		21					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-07-26**
River Mile:	**42.6**	Location:	CUYAHOGA R. AT AKRON @ CUYAHOGA ST.				
Time Fished:	2700 sec	Drainage:	340.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.4 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	6	15.00	1.29	0.50	1.04	33.00
Redfin Pickerel		P	M	P	2	5.00	0.43	0.06	0.13	12.00
Northern Hog Sucker		I	S	M	80	200.00	17.24	21.11	44.43	105.56
White Sucker		O	S	T	38	95.00	8.19	13.06	27.48	137.44
River Chub		I	N	I	25	62.50	5.39	0.81	1.70	12.91
Common Shiner		I	S	N	53	132.50	11.42	0.73	1.53	5.47
Spotfin Shiner		I	M	N	11	27.50	2.37	0.13	0.27	4.73
Bluntnose Minnow		O	C	T	27	67.50	5.82	0.25	0.52	3.63
Central Stoneroller		H	N	N	58	145.00	12.50	1.13	2.37	7.77
Yellow Bullhead		I	C	T	5	12.50	1.08	1.00	2.10	80.00
Black Crappie		I	C	N	3	7.50	0.65	1.02	2.15	136.00
Rock Bass		C	C	N	1	2.50	0.22	0.72	1.50	286.00
Smallmouth Bass		C	C	M	16	40.00	3.45	4.65	9.79	116.33
Largemouth Bass		C	C	N	2	5.00	0.43	0.57	1.20	114.00
Warmouth Sunfish		C	C	N	1	2.50	0.22	0.05	0.11	20.00
Green Sunfish		I	C	T	6	15.00	1.29	0.27	0.57	18.00
Bluegill Sunfish		I	C	P	11	27.50	2.37	0.33	0.69	11.91
Pumpkinseed Sunfish		I	C	P	2	5.00	0.43	0.13	0.27	26.00
Hybrid x Sunfish				N	1	2.50	0.22	0.06	0.13	24.00
Yellow Perch			M	N	1	2.50	0.22	0.08	0.16	30.00
Greenside Darter		I	S	M	74	185.00	15.95	0.75	1.57	4.03
Rainbow Darter		I	S	M	31	77.50	6.68	0.11	0.23	1.42
Fantail Darter		I	C	N	10	25.00	2.16	0.03	0.06	1.20
			Data Totals:		464	1160.00		47.51		
			Number of Species:		23					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2019-10-03**
River Mile:	**41.7**	Location:	CUYAHOGA R. 0.55 MI. DST. L. CUYAHOGA R. @ GOLF COURSE		
Time Fished:	2700 sec	Drainage:	402.0 sq mi	Depth:	Data Source:
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	2.00	0.72	0.08	0.08	38.00
Northern Hog Sucker		I	S	M	2	4.00	1.45	0.50	0.51	125.00
White Sucker		O	S	T	8	16.00	5.80	6.45	6.54	403.13
Common Carp		O	M	T	11	22.00	7.97	78.30	79.41	3559.09
River Chub		I	N	I	6	12.00	4.35	0.55	0.56	46.00
Common Shiner		I	S	N	4	8.00	2.90	0.24	0.25	30.50
Spotfin Shiner		I	M	N	11	22.00	7.97	0.07	0.07	3.20
Silverjaw Minnow		I	M	N	6	12.00	4.35	0.01	0.01	0.80
Bluntnose Minnow		O	C	T	1	2.00	0.72	0.01	0.01	4.00
Yellow Bullhead		I	C	T	4	8.00	2.90	0.40	0.41	50.00
Black Crappie		I	C	N	1	2.00	0.72	0.21	0.21	106.00
Smallmouth Bass		C	C	M	18	36.00	13.04	9.25	9.38	256.94
Green Sunfish		I	C	T	3	6.00	2.17	0.08	0.08	13.33
Bluegill Sunfish		I	C	P	11	22.00	7.97	0.99	1.00	45.00
Redear Sunfish		I	C	N	1	2.00	0.72	0.32	0.32	158.00
Yellow Perch			M	N	17	34.00	12.32	1.00	1.01	29.38
Logperch		I	S	M	1	2.00	0.72	0.02	0.02	12.00
Johnny Darter		I	C	N	3	6.00	2.17	0.01	0.01	2.00
Greenside Darter		I	S	M	4	8.00	2.90	0.03	0.03	4.00
Rainbow Darter		I	S	M	18	36.00	13.04	0.04	0.04	1.22
Fantail Darter		I	C	N	7	14.00	5.07	0.04	0.04	2.57
			Data Totals:		138	276.00		98.60		
			Number of Species:		21					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-09-13**
River Mile:	**39.7**	Location:	CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL		
Time Fished:	3600 sec	Drainage:	433.0 sq mi	Depth:	Data Source:
Dist Fished:	0.55 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	12	21.82	2.34	2.05	2.06	93.75
Northern Pike		P	M	N	1	1.82	0.20	2.55	2.56	1400.00
Northern Hog Sucker		I	S	M	150	272.73	29.30	29.29	29.43	107.38
White Sucker		O	S	T	40	72.73	7.81	14.42	14.49	198.21
Common Carp		O	M	T	6	10.91	1.17	27.59	27.73	2529.17
River Chub		I	N	I	24	43.64	4.69	0.55	0.55	12.55
Blacknose Dace		G	S	T	3	5.45	0.59	0.01	0.01	2.00
Common Shiner		I	S	N	33	60.00	6.45	0.37	0.38	6.24
Spotfin Shiner		I	M	N	22	40.00	4.30	0.16	0.16	4.10
Silverjaw Minnow		I	M	N	1	1.82	0.20	0.00	0.00	1.00
Bluntnose Minnow		O	C	T	9	16.36	1.76	0.10	0.10	6.00
Central Stoneroller		H	N	N	19	34.55	3.71	0.90	0.90	26.00
Yellow Bullhead		I	C	T	17	30.91	3.32	2.32	2.33	75.12
White Perch			M	N	6	10.91	1.17	0.71	0.72	65.33
Black Crappie		I	C	N	3	5.45	0.59	0.29	0.30	54.00
Rock Bass		C	C	N	1	1.82	0.20	0.16	0.16	86.00
Smallmouth Bass		C	C	M	37	67.27	7.23	13.64	13.70	202.70
Green Sunfish		I	C	T	30	54.55	5.86	1.35	1.35	24.67
Bluegill Sunfish		I	C	P	62	112.73	12.11	2.03	2.04	18.03
Pumpkinseed Sunfish		I	C	P	14	25.45	2.73	0.62	0.62	24.43
Hybrid x Sunfish				N	2	3.64	0.39	0.14	0.14	38.00
Yellow Perch			M	N	4	7.27	0.78	0.20	0.20	27.00
Greenside Darter		I	S	M	4	7.27	0.78	0.04	0.04	6.00
Rainbow Darter		I	S	M	10	18.18	1.95	0.03	0.03	1.60
Fantail Darter		I	C	N	2	3.64	0.39	0.01	0.01	1.50
			Data Totals:		512	930.91		99.51		
			Number of Species:		25					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-03**
River Mile:	**39.7**	Location:	CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL				
Time Fished:	2700 sec	Drainage:	433.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	133	266.00	30.72	23.28	18.34	87.51
White Sucker		O	S	T	52	104.00	12.01	24.30	19.14	233.65
Common Carp		O	M	T	9	18.00	2.08	54.50	42.94	3027.78
River Chub		I	N	I	3	6.00	0.69	0.54	0.43	90.00
Creek Chub		G	N	T	1	2.00	0.23	0.01	0.01	6.00
Common Shiner		I	S	N	30	60.00	6.93	0.56	0.44	9.33
Spotfin Shiner		I	M	N	51	102.00	11.78	0.43	0.34	4.20
Silverjaw Minnow		I	M	N	1	2.00	0.23	0.01	0.01	4.00
Bluntnose Minnow		O	C	T	19	38.00	4.39	0.16	0.13	4.21
Central Stoneroller		H	N	N	14	28.00	3.23	0.32	0.25	11.54
Yellow Bullhead		I	C	T	10	20.00	2.31	1.27	1.00	63.33
White Perch			M	N	9	18.00	2.08	0.94	0.74	52.00
Black Crappie		I	C	N	2	4.00	0.46	0.06	0.05	15.00
Rock Bass		C	C	N	2	4.00	0.46	1.02	0.80	255.00
Smallmouth Bass		C	C	M	41	82.00	9.47	17.28	13.62	210.77
Green Sunfish		I	C	T	15	30.00	3.46	0.71	0.56	23.60
Bluegill Sunfish		I	C	P	15	30.00	3.46	0.68	0.54	22.67
Pumpkinseed Sunfish		I	C	P	17	34.00	3.93	0.55	0.43	16.12
Hybrid x Sunfish				N	3	6.00	0.69	0.16	0.13	27.00
Yellow Perch			M	N	1	2.00	0.23	0.05	0.04	26.00
Logperch		I	S	M	2	4.00	0.46	0.08	0.06	20.00
Greenside Darter		I	S	M	2	4.00	0.46	0.02	0.02	5.00
Rainbow Darter		I	S	M	1	2.00	0.23	0.00	0.00	2.00
			Data Totals:		433	866.00		126.93		
			Number of Species:		23					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-12**
River Mile:	**33.2**	Location:	CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.				
Time Fished:	3600 sec	Drainage:	480.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	1	2.00	0.22	0.33	0.47	166.00
Northern Hog Sucker		I	S	M	123	246.00	27.15	20.32	28.95	82.61
White Sucker		O	S	T	137	274.00	30.24	38.25	54.50	139.62
River Chub		I	N	I	3	6.00	0.66	0.13	0.18	21.33
Creek Chub		G	N	T	8	16.00	1.77	0.58	0.83	36.33
Common Shiner		I	S	N	20	40.00	4.42	1.23	1.75	30.67
Spotfin Shiner		I	M	N	49	98.00	10.82	0.52	0.74	5.33
Sand Shiner		I	M	M	1	2.00	0.22	0.01	0.01	4.00
Silverjaw Minnow		I	M	N	5	10.00	1.10	0.04	0.06	4.00
Bluntnose Minnow		O	C	T	21	42.00	4.64	0.15	0.22	3.62
Central Stoneroller		H	N	N	5	10.00	1.10	0.23	0.33	23.20
Yellow Bullhead		I	C	T	20	40.00	4.42	2.27	3.23	56.74
Smallmouth Bass		C	C	M	11	22.00	2.43	4.40	6.26	199.82
Largemouth Bass		C	C	N	1	2.00	0.22	0.03	0.04	14.00
Green Sunfish		I	C	T	25	50.00	5.52	0.92	1.31	18.33
Bluegill Sunfish		I	C	P	8	16.00	1.77	0.34	0.48	21.14
Pumpkinseed Sunfish		I	C	P	1	2.00	0.22	0.07	0.10	34.00
Hybrid x Sunfish				N	2	4.00	0.44	0.10	0.14	24.00
Yellow Perch			M	N	2	4.00	0.44	0.17	0.24	42.00
Greenside Darter		I	S	M	7	14.00	1.55	0.10	0.15	7.43
Rainbow Darter		I	S	M	3	6.00	0.66	0.01	0.02	2.00
			Data Totals:		453	906.00		70.20		
			Number of Species:		21					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-07-26**
River Mile:	**33.2**	Location:	CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.				
Time Fished:	2907 sec	Drainage:	480.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	7	14.00	1.53	0.08	0.11	6.00
Central Mudminnow		I	C	T	1	2.00	0.22	0.00	0.00	1.00
Northern Hog Sucker		I	S	M	87	174.00	19.04	13.04	16.99	74.94
White Sucker		O	S	T	94	188.00	20.57	27.34	35.63	145.40
Common Carp		O	M	T	4	8.00	0.88	21.20	27.63	2650.00
River Chub		I	N	I	1	2.00	0.22	0.18	0.24	92.00
Creek Chub		G	N	T	5	10.00	1.09	0.32	0.42	32.40
Common Shiner		I	S	N	26	52.00	5.69	1.52	1.98	29.22
Spotfin Shiner		I	M	N	66	132.00	14.44	0.53	0.69	4.03
Sand Shiner		I	M	M	42	84.00	9.19	0.19	0.25	2.25
Silverjaw Minnow		I	M	N	14	28.00	3.06	0.09	0.11	3.09
Bluntnose Minnow		O	C	T	23	46.00	5.03	0.12	0.15	2.55
Central Stoneroller		H	N	N	5	10.00	1.09	0.14	0.19	14.40
Yellow Bullhead		I	C	T	10	20.00	2.19	1.67	2.17	83.40
White Perch			M	N	1	2.00	0.22	0.17	0.22	86.00
Black Crappie		I	C	N	1	2.00	0.22	0.25	0.32	124.00
Rock Bass		C	C	N	3	6.00	0.66	0.14	0.18	23.33
Smallmouth Bass		C	C	M	19	38.00	4.16	8.36	10.90	220.00
Green Sunfish		I	C	T	30	60.00	6.56	0.73	0.95	12.14
Bluegill Sunfish		I	C	P	9	18.00	1.97	0.48	0.63	26.67
Hybrid x Sunfish				N	2	4.00	0.44	0.08	0.11	21.00
Logperch		I	S	M	1	2.00	0.22	0.04	0.06	22.00
Greenside Darter		I	S	M	6	12.00	1.31	0.05	0.06	4.00
			Data Totals:		457	914.00		76.73		
			Number of Species:		23					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-02**
River Mile:	**26.5**	Location:	CUYAHOGA R. @ BOSTON MILLS RD.				
Time Fished:	3600 sec	Drainage:	499.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.4 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	7	17.50	2.36	1.56	1.22	89.29
Northern Hog Sucker		I	S	M	97	242.50	32.77	10.22	7.98	42.16
White Sucker		O	S	T	33	82.50	11.15	18.30	14.28	221.88
Common Carp		O	M	T	4	10.00	1.35	41.88	32.68	4187.50
Common Shiner		I	S	N	25	62.50	8.45	0.89	0.69	14.24
Spotfin Shiner		I	M	N	34	85.00	11.49	0.48	0.37	5.63
Silverjaw Minnow		I	M	N	1	2.50	0.34	0.01	0.01	4.00
Bluntnose Minnow		O	C	T	6	15.00	2.03	0.08	0.06	5.00
Central Stoneroller		H	N	N	9	22.50	3.04	0.29	0.22	12.67
Channel Catfish			C	N	7	17.50	2.36	35.00	27.31	2000.00
Yellow Bullhead		I	C	T	2	5.00	0.68	0.45	0.35	90.00
White Perch			M	N	10	25.00	3.38	0.78	0.60	31.00
Black Crappie		I	C	N	2	5.00	0.68	0.30	0.23	59.00
Rock Bass		C	C	N	2	5.00	0.68	1.45	1.13	290.00
Smallmouth Bass		C	C	M	12	30.00	4.05	15.00	11.71	500.00
Green Sunfish		I	C	T	3	7.50	1.01	0.03	0.02	4.00
Bluegill Sunfish		I	C	P	22	55.00	7.43	1.25	0.97	22.67
Pumpkinseed Sunfish		I	C	P	2	5.00	0.68	0.03	0.02	6.00
Greenside Darter		I	S	M	18	45.00	6.08	0.17	0.13	3.78
			Data Totals:		296	740.00		128.15		
			Number of Species:		19					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-13**
River Mile:	**24.1**	Location:	CUYAHOGA R. AT JAITE @ HIGHLAND RD.				
Time Fished:	3600 sec	Drainage:	555.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Pike		P	M	N	1	2.00	0.20	6.20	6.21	3100.00
Northern Hog Sucker		I	S	M	117	234.00	23.78	14.74	14.76	62.99
White Sucker		O	S	T	57	114.00	11.59	24.23	24.26	212.50
Common Carp		O	M	T	4	8.00	0.81	29.05	29.10	3631.25
Blacknose Dace		G	S	T	4	8.00	0.81	0.01	0.01	1.00
Creek Chub		G	N	T	5	10.00	1.02	0.03	0.03	3.20
Common Shiner		I	S	N	60	120.00	12.20	1.53	1.53	12.73
Spotfin Shiner		I	M	N	52	104.00	10.57	0.50	0.50	4.81
Sand Shiner		I	M	M	3	6.00	0.61	0.02	0.02	3.00
Silverjaw Minnow		I	M	N	1	2.00	0.20	0.00	0.00	1.00
Bluntnose Minnow		O	C	T	40	80.00	8.13	0.40	0.40	5.03
Central Stoneroller		H	N	N	17	34.00	3.46	0.78	0.78	22.94
Channel Catfish			C	N	2	4.00	0.41	8.20	8.21	2050.00
Yellow Bullhead		I	C	T	6	12.00	1.22	1.67	1.67	139.33
White Perch			M	N	2	4.00	0.41	0.16	0.16	39.00
Smallmouth Bass		C	C	M	14	28.00	2.85	10.62	10.64	379.43
Largemouth Bass		C	C	N	2	4.00	0.41	0.03	0.03	7.00
Green Sunfish		I	C	T	47	94.00	9.55	0.50	0.50	5.28
Bluegill Sunfish		I	C	P	27	54.00	5.49	0.83	0.83	15.31
Hybrid x Sunfish				N	1	2.00	0.20	0.12	0.12	58.00
Johnny Darter		I	C	N	2	4.00	0.41	0.01	0.01	2.00
Greenside Darter		I	S	M	12	24.00	2.44	0.15	0.15	6.20
Rainbow Darter		I	S	M	14	28.00	2.85	0.07	0.07	2.67
Fantail Darter		I	C	N	2	4.00	0.41	0.00	0.00	1.00
			Data Totals:		492	984.00		99.84		
			Number of Species:		24					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-02**
River Mile:	**24.1**	Location:	CUYAHOGA R. AT JAITE @ HIGHLAND RD.				
Time Fished:	2700 sec	Drainage:	555.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	124	248.00	33.24	18.15	14.72	73.19
White Sucker		O	S	T	62	124.00	16.62	26.60	21.57	214.55
Common Carp		O	M	T	7	14.00	1.88	50.81	41.20	3629.17
Common Shiner		I	S	N	32	64.00	8.58	0.90	0.73	14.13
Spotfin Shiner		I	M	N	25	50.00	6.70	0.19	0.15	3.74
Silverjaw Minnow		I	M	N	1	2.00	0.27	0.01	0.01	4.00
Bluntnose Minnow		O	C	T	1	2.00	0.27	0.01	0.01	4.00
Central Stoneroller		H	N	N	8	16.00	2.14	0.31	0.25	19.25
Channel Catfish			C	N	2	4.00	0.54	3.40	2.76	849.50
Yellow Bullhead		I	C	T	7	14.00	1.88	1.16	0.94	83.14
White Perch			M	N	14	28.00	3.75	0.70	0.57	25.00
Smallmouth Bass		C	C	M	29	58.00	7.77	19.61	15.90	338.07
Green Sunfish		I	C	T	8	16.00	2.14	0.24	0.19	15.00
Bluegill Sunfish		I	C	P	26	52.00	6.97	0.69	0.56	13.23
Pumpkinseed Sunfish		I	C	P	5	10.00	1.34	0.13	0.10	12.80
Hybrid x Sunfish				N	1	2.00	0.27	0.06	0.05	30.00
Yellow Perch			M	N	3	6.00	0.80	0.31	0.25	52.00
Greenside Darter		I	S	M	17	34.00	4.56	0.06	0.04	1.63
Rainbow Darter		I	S	M	1	2.00	0.27	0.00	0.00	2.00
			Data Totals:		373	746.00		123.33		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-08-10**
River Mile:	**22.4**	Location:	CUYAHOGA R. NEAR OLD CARRIAGE TRAIL		
Time Fished:	2700 sec	Drainage:	559.0 sq mi	Depth:	Data Source:
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	80	160.00	17.35	9.49	19.56	59.33
White Sucker		O	S	T	67	134.00	14.53	21.78	44.87	162.50
Blacknose Dace		G	S	T	1	2.00	0.22	0.00	0.01	2.00
Creek Chub		G	N	T	2	4.00	0.43	0.01	0.02	2.00
Common Shiner		I	S	N	58	116.00	12.58	1.55	3.18	13.32
Spotfin Shiner		I	M	N	70	140.00	15.18	0.42	0.87	3.03
Sand Shiner		I	M	M	18	36.00	3.90	0.07	0.15	2.00
Silverjaw Minnow		I	M	N	12	24.00	2.60	0.07	0.13	2.73
Fathead Minnow		O	C	T	3	6.00	0.65	0.01	0.02	2.00
Bluntnose Minnow		O	C	T	64	128.00	13.88	0.38	0.78	2.97
Central Stoneroller		H	N	N	17	34.00	3.69	0.31	0.64	9.13
Channel Catfish			C	N	1	2.00	0.22	6.00	12.37	3000.00
Yellow Bullhead		I	C	T	5	10.00	1.08	0.92	1.90	92.40
White Perch			M	N	10	20.00	2.17	0.93	1.92	46.67
Smallmouth Bass		C	C	M	7	14.00	1.52	4.60	9.48	328.57
Largemouth Bass		C	C	N	2	4.00	0.43	0.26	0.54	65.00
Green Sunfish		I	C	T	1	2.00	0.22	0.02	0.04	10.00
Bluegill Sunfish		I	C	P	36	72.00	7.81	1.04	2.15	14.46
Pumpkinseed Sunfish		I	C	P	1	2.00	0.22	0.04	0.08	20.00
Hybrid x Sunfish				N	1	2.00	0.22	0.14	0.28	68.00
Yellow Perch			M	N	2	4.00	0.43	0.47	0.96	117.00
Greenside Darter		I	S	M	1	2.00	0.22	0.00	0.01	2.00
Rainbow Darter		I	S	M	1	2.00	0.22	0.00	0.01	2.00
Fantail Darter		I	C	N	1	2.00	0.22	0.00	0.01	2.00
			Data Totals:		461	922.00		48.52		
			Number of Species:		24					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-10**
River Mile:	**20.8**	Location:	CUYAHOGA R. @ STATION RD. (IMPOUNDED)				
Time Fished:	2700 sec	Drainage:	583.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	3	6.00	1.05	0.73	1.70	121.33
Central Mudminnow		I	C	T	1	2.00	0.35	0.00	0.01	2.00
Northern Hog Sucker		I	S	M	15	30.00	5.26	2.81	6.58	93.71
White Sucker		O	S	T	68	136.00	23.86	17.10	40.02	125.76
Goldfish		O	M	T	1	2.00	0.35	0.86	2.01	430.00
Common Shiner		I	S	N	34	68.00	11.93	1.44	3.36	21.13
Spotfin Shiner		I	M	N	21	42.00	7.37	0.12	0.28	2.84
Bluntnose Minnow		O	C	T	4	8.00	1.40	0.04	0.10	5.50
Central Stoneroller		H	N	N	1	2.00	0.35	0.04	0.09	20.00
Channel Catfish			C	N	1	2.00	0.35	3.90	9.13	1950.00
Yellow Bullhead		I	C	T	4	8.00	1.40	0.98	2.28	122.00
White Perch			M	N	28	56.00	9.82	1.63	3.82	29.17
Smallmouth Bass		C	C	M	9	18.00	3.16	10.12	23.69	562.44
Largemouth Bass		C	C	N	2	4.00	0.70	0.54	1.27	136.00
Green Sunfish		I	C	T	30	60.00	10.53	1.06	2.47	17.59
Bluegill Sunfish		I	C	P	56	112.00	19.65	1.11	2.60	9.92
Pumpkinseed Sunfish		I	C	P	4	8.00	1.40	0.19	0.45	24.00
Yellow Perch			M	N	1	2.00	0.35	0.05	0.11	24.00
Johnny Darter		I	C	N	2	4.00	0.70	0.00	0.01	1.00
			Data Totals:		285	570.00		42.73		
			Number of Species:		19					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-11**
River Mile:	**20.7**	Location:	CUYAHOGA R. NEAR BRECKSVILLE @ ST. RT. 82 (DST DAM)				
Time Fished:	3600 sec	Drainage:	583.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	15	30.00	3.30	4.65	3.26	155.00
Quillback		O	M	N	5	10.00	1.10	9.00	6.31	900.00
Silver Redhorse		I	S	M	1	2.00	0.22	3.80	2.66	1900.00
Golden Redhorse		I	S	M	9	18.00	1.98	11.86	8.31	658.78
Shorthead Redhorse		I	S	M	21	42.00	4.62	3.11	2.18	74.00
Northern Hog Sucker		I	S	M	84	168.00	18.46	16.93	11.87	100.75
White Sucker		O	S	T	7	14.00	1.54	1.79	1.26	128.00
Common Carp		O	M	T	9	18.00	1.98	34.00	23.84	1888.89
Goldfish		O	M	T	1	2.00	0.22	2.10	1.47	1050.00
Common Shiner		I	S	N	18	36.00	3.96	0.12	0.09	3.44
Spotfin Shiner		I	M	N	128	256.00	28.13	0.87	0.61	3.39
Sand Shiner		I	M	M	18	36.00	3.96	0.09	0.07	2.63
Silverjaw Minnow		I	M	N	2	4.00	0.44	0.01	0.01	2.00
Fathead Minnow		O	C	T	1	2.00	0.22	0.00	0.00	2.00
Bluntnose Minnow		O	C	T	32	64.00	7.03	0.18	0.13	2.83
Central Stoneroller		H	N	N	2	4.00	0.44	0.01	0.01	2.00
Channel Catfish			C	N	7	14.00	1.54	15.99	11.21	1142.14
Yellow Bullhead		I	C	T	1	2.00	0.22	0.12	0.08	58.00
Flathead Catfish		P	C	N	3	6.00	0.66	11.80	8.27	1966.67
Stonecat Madtom		I	C	I	1	2.00	0.22	0.22	0.16	112.00
White Bass		P	M	N	1	2.00	0.22	0.70	0.49	350.00
White Perch			M	N	1	2.00	0.22	0.06	0.04	30.00
Rock Bass		C	C	N	1	2.00	0.22	0.06	0.04	30.00
Smallmouth Bass		C	C	M	29	58.00	6.37	15.47	10.85	266.74
Largemouth Bass		C	C	N	2	4.00	0.44	0.07	0.05	17.00
Green Sunfish		I	C	T	5	10.00	1.10	0.12	0.08	11.60
Bluegill Sunfish		I	C	P	8	16.00	1.76	0.18	0.13	11.50
Pumpkinseed Sunfish		I	C	P	1	2.00	0.22	0.04	0.03	22.00
Hybrid x Sunfish				N	1	2.00	0.22	0.16	0.11	78.00
Walleye		P	S	N	1	2.00	0.22	1.00	0.70	500.00
Greenside Darter		I	S	M	28	56.00	6.15	0.23	0.16	4.14
Rainbow Darter		I	S	M	2	4.00	0.44	0.01	0.01	3.00
Freshwater Drum			M	P	3	6.00	0.66	7.80	5.47	1300.00
Round Goby				N	7	14.00	1.54	0.08	0.06	5.71
			Data Totals:		455	910.00		142.63		
			Number of Species:		34					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-07-19**
River Mile:	**15.6**	Location:	CUYAHOGA R. @ HILLSIDE RD.				
Time Fished:	3361 sec	Drainage:	698.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	47	94.00	16.15	6.10	3.81	64.89
Quillback		O	M	N	2	4.00	0.69	5.44	3.40	1361.00
Silver Redhorse		I	S	M	2	4.00	0.69	1.70	1.06	425.00
Golden Redhorse		I	S	M	15	30.00	5.15	12.63	7.88	420.87
Shorthead Redhorse		I	S	M	21	42.00	7.22	4.41	2.75	105.00
Northern Hog Sucker		I	S	M	36	72.00	12.37	5.50	3.43	76.39
White Sucker		O	S	T	3	6.00	1.03	1.40	0.87	232.67
Common Carp		O	M	T	9	18.00	3.09	35.16	21.95	1953.22
Common Shiner		I	S	N	4	8.00	1.37	0.10	0.06	13.00
Spotfin Shiner		I	M	N	64	128.00	21.99	0.45	0.28	3.50
Sand Shiner		I	M	M	4	8.00	1.37	0.03	0.02	3.25
Bluntnose Minnow		O	C	T	1	2.00	0.34	0.02	0.01	8.00
Channel Catfish			C	N	17	34.00	5.84	46.06	28.76	1354.71
Flathead Catfish		P	C	N	6	12.00	2.06	23.77	14.84	1980.83
White Perch			M	N	3	6.00	1.03	0.30	0.19	50.00
Rock Bass		C	C	N	2	4.00	0.69	0.75	0.47	187.50
Smallmouth Bass		C	C	M	22	44.00	7.56	6.38	3.98	144.91
Largemouth Bass		C	C	N	1	2.00	0.34	0.40	0.25	200.00
Green Sunfish		I	C	T	9	18.00	3.09	0.22	0.14	12.22
Bluegill Sunfish		I	C	P	12	24.00	4.12	0.51	0.32	21.25
Pumpkinseed Sunfish		I	C	P	2	4.00	0.69	0.10	0.06	25.00
Walleye		P	S	N	2	4.00	0.69	2.27	1.42	567.00
Logperch		I	S	M	1	2.00	0.34	0.04	0.02	20.00
Greenside Darter		I	S	M	1	2.00	0.34	0.01	0.01	6.00
Freshwater Drum			M	P	2	4.00	0.69	6.35	3.96	1587.50
Round Goby				N	3	6.00	1.03	0.09	0.05	14.33
			Data Totals:		291	582.00		160.17		
			Number of Species:		26					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-08-28**
River Mile:	**12.0**	Location:	CUYAHOGA R. AT VALLEY VIEW @ I-480 BRIDGE		
Time Fished:	3600 sec	Drainage:	709.0 sq mi	Depth:	Data Source:
Dist Fished:	0.6 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	80	133.33	20.89	10.88	12.25	81.56
Quillback		O	M	N	1	1.67	0.26	0.17	0.19	100.00
Silver Redhorse		I	S	M	2	3.33	0.52	2.17	2.44	650.00
Golden Redhorse		I	S	M	17	28.33	4.44	2.58	2.91	91.18
Shorthead Redhorse		I	S	M	11	18.33	2.87	1.98	2.23	108.18
Northern Hog Sucker		I	S	M	15	25.00	3.92	3.08	3.47	123.33
White Sucker		O	S	T	3	5.00	0.78	1.08	1.22	216.67
Common Carp		O	M	T	2	3.33	0.52	2.88	3.24	864.00
Creek Chub		G	N	T	1	1.67	0.26	0.00	0.00	2.00
Common Shiner		I	S	N	8	13.33	2.09	0.04	0.05	3.00
Spotfin Shiner		I	M	N	62	103.33	16.19	0.43	0.49	4.18
Sand Shiner		I	M	M	42	70.00	10.97	0.15	0.17	2.15
Mimic Shiner		I	M	I	1	1.67	0.26	0.00	0.00	2.00
Fathead Minnow		O	C	T	1	1.67	0.26	0.00	0.00	2.00
Bluntnose Minnow		O	C	T	11	18.33	2.87	0.03	0.04	1.80
Channel Catfish			C	N	20	33.33	5.22	27.75	31.25	832.50
Flathead Catfish		P	C	N	4	6.67	1.04	10.04	11.31	1506.00
White Perch			M	N	2	3.33	0.52	0.52	0.59	156.00
Black Crappie		I	C	N	1	1.67	0.26	0.10	0.11	58.00
Rock Bass		C	C	N	1	1.67	0.26	0.05	0.06	30.00
Smallmouth Bass		C	C	M	35	58.33	9.14	17.38	19.58	298.00
Largemouth Bass		C	C	N	2	3.33	0.52	0.07	0.08	20.00
Green Sunfish		I	C	T	3	5.00	0.78	0.04	0.05	8.67
Bluegill Sunfish		I	C	P	22	36.67	5.74	0.81	0.92	22.18
Hybrid x Sunfish				N	1	1.67	0.26	0.02	0.03	14.00
Walleye		P	S	N	1	1.67	0.26	1.17	1.31	700.00
Yellow Perch			M	N	1	1.67	0.26	0.03	0.03	16.00
Logperch		I	S	M	2	3.33	0.52	0.05	0.06	16.00
Greenside Darter		I	S	M	10	16.67	2.61	0.04	0.05	2.60
Rainbow Darter		I	S	M	3	5.00	0.78	0.01	0.01	2.00
Freshwater Drum			M	P	2	3.33	0.52	5.17	5.82	1550.00
Round Goby				N	16	26.67	4.18	0.06	0.07	2.20
		Data Totals:			383	638.33		88.80		
		Number of Species:			32					
		Number of Hybrids:			1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-17**
River Mile:	**11.3**	Location:	CUYAHOGA R. UPST CLEVELAND SOUTHERLY WWTP @ RR & S.R. 21				
Time Fished:	2444 sec	Drainage:	730.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	1	2.00	0.34	0.48	2.17	240.00
Shorthead Redhorse		I	S	M	10	20.00	3.39	3.57	16.13	178.57
Northern Hog Sucker		I	S	M	7	14.00	2.37	2.35	10.62	167.86
Creek Chub		G	N	T	10	20.00	3.39	0.04	0.16	1.80
Common Shiner		I	S	N	90	180.00	30.51	0.23	1.05	1.29
Spotfin Shiner		I	M	N	85	170.00	28.81	0.64	2.91	3.79
Sand Shiner		I	M	M	19	38.00	6.44	0.09	0.42	2.42
Fathead Minnow		O	C	T	2	4.00	0.68	0.01	0.03	1.50
Bluntnose Minnow		O	C	T	2	4.00	0.68	0.00	0.02	1.00
Central Stoneroller		H	N	N	1	2.00	0.34	0.00	0.02	2.00
Channel Catfish			C	N	2	4.00	0.68	5.30	23.94	1325.00
Flathead Catfish		P	C	N	1	2.00	0.34	0.60	2.71	300.00
Rock Bass		C	C	N	2	4.00	0.68	0.42	1.90	105.00
Smallmouth Bass		C	C	M	17	34.00	5.76	6.54	29.54	192.29
Bluegill Sunfish		I	C	P	5	10.00	1.69	0.25	1.13	25.00
Logperch		I	S	M	2	4.00	0.68	0.04	0.20	11.00
Greenside Darter		I	S	M	3	6.00	1.02	0.01	0.05	2.00
Rainbow Darter		I	S	M	1	2.00	0.34	0.00	0.01	1.00
Freshwater Drum			M	P	1	2.00	0.34	1.20	5.42	600.00
Round Goby				N	34	68.00	11.53	0.35	1.58	5.15
			Data Totals:		295	590.00		22.14		
			Number of Species:		20					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-28**
River Mile:	**11.0**	Location:	CUYAHOGA R. UPST. CLEVELAND SOUTHERLY WWTP				
Time Fished:	3600 sec	Drainage:	743.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	20	40.00	5.41	3.85	3.91	96.25
Quillback		O	M	N	1	2.00	0.27	1.50	1.52	750.00
Silver Redhorse		I	S	M	1	2.00	0.27	0.24	0.24	118.00
Golden Redhorse		I	S	M	6	12.00	1.62	8.93	9.06	744.00
Shorthead Redhorse		I	S	M	19	38.00	5.14	7.96	8.07	209.37
Northern Hog Sucker		I	S	M	34	68.00	9.19	7.05	7.15	103.65
White Sucker		O	S	T	5	10.00	1.35	1.01	1.02	100.80
Common Carp		O	M	T	4	8.00	1.08	17.40	17.66	2175.00
Blacknose Dace		G	S	T	8	16.00	2.16	0.03	0.03	2.00
Creek Chub		G	N	T	1	2.00	0.27	0.01	0.01	4.00
Emerald Shiner		I	M	N	1	2.00	0.27	0.01	0.01	6.00
Common Shiner		I	S	N	61	122.00	16.49	0.26	0.26	2.10
Spotfin Shiner		I	M	N	62	124.00	16.76	0.49	0.50	3.97
Sand Shiner		I	M	M	13	26.00	3.51	0.04	0.04	1.38
Bluntnose Minnow		O	C	T	2	4.00	0.54	0.01	0.01	2.00
Central Stoneroller		H	N	N	25	50.00	6.76	0.09	0.09	1.74
Channel Catfish			C	N	11	22.00	2.97	20.20	20.50	918.18
Yellow Bullhead		I	C	T	3	6.00	0.81	0.18	0.18	30.00
Flathead Catfish		P	C	N	3	6.00	0.81	10.18	10.33	1696.00
White Perch			M	N	4	8.00	1.08	0.88	0.89	109.50
Black Crappie		I	C	N	1	2.00	0.27	0.56	0.56	278.00
Smallmouth Bass		C	C	M	19	38.00	5.14	9.20	9.33	242.00
Green Sunfish		I	C	T	3	6.00	0.81	0.17	0.17	28.00
Bluegill Sunfish		I	C	P	10	20.00	2.70	0.39	0.40	19.60
Yellow Perch			M	N	4	8.00	1.08	0.23	0.23	28.50
Logperch		I	S	M	4	8.00	1.08	0.13	0.13	16.00
Johnny Darter		I	C	N	1	2.00	0.27	0.00	0.00	2.00
Greenside Darter		I	S	M	3	6.00	0.81	0.04	0.04	6.67
Freshwater Drum			M	P	3	6.00	0.81	7.20	7.31	1200.00
Round Goby				N	38	76.00	10.27	0.34	0.34	4.42
			Data Totals:		370	740.00		98.54		
			Number of Species:		30					
			Number of Hybrids:		0					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-30**
River Mile:	**10.3**	Location:	CUYAHOGA R. DST. CLEVELAND SOUTHERLY WWTP				
Time Fished:	3600 sec	Drainage:	744.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	34	68.00	9.32	1.90	1.23	27.88
Golden Redhorse		I	S	M	2	4.00	0.55	3.00	1.95	750.00
Shorthead Redhorse		I	S	M	15	30.00	4.11	3.00	1.95	100.00
Northern Hog Sucker		I	S	M	26	52.00	7.12	4.55	2.96	87.50
White Sucker		O	S	T	5	10.00	1.37	0.27	0.18	27.00
Common Carp		O	M	T	10	20.00	2.74	41.80	27.19	2090.00
Goldfish		O	M	T	1	2.00	0.27	0.41	0.27	206.00
Blacknose Dace		G	S	T	9	18.00	2.47	0.03	0.02	1.56
Creek Chub		G	N	T	5	10.00	1.37	0.02	0.01	2.00
Common Shiner		I	S	N	73	146.00	20.00	0.28	0.18	1.89
Spotfin Shiner		I	M	N	23	46.00	6.30	0.16	0.10	3.48
Sand Shiner		I	M	M	41	82.00	11.23	0.14	0.09	1.71
Fathead Minnow		O	C	T	6	12.00	1.64	0.02	0.02	2.00
Bluntnose Minnow		O	C	T	7	14.00	1.92	0.02	0.01	1.43
Central Stoneroller		H	N	N	9	18.00	2.47	0.07	0.05	4.00
Channel Catfish			C	N	24	48.00	6.58	66.60	43.32	1387.50
Flathead Catfish		P	C	N	4	8.00	1.10	12.28	7.99	1534.75
Smallmouth Bass		C	C	M	24	48.00	6.58	18.60	12.10	387.50
Green Sunfish		I	C	T	3	6.00	0.82	0.04	0.03	6.67
Bluegill Sunfish		I	C	P	2	4.00	0.55	0.17	0.11	42.00
Pumpkinseed Sunfish		I	C	P	1	2.00	0.27	0.01	0.01	6.00
Hybrid x Sunfish				N	1	2.00	0.27	0.14	0.09	68.00
Logperch		I	S	M	3	6.00	0.82	0.07	0.05	12.00
Greenside Darter		I	S	M	2	4.00	0.55	0.01	0.01	2.00
Round Goby				N	35	70.00	9.59	0.16	0.10	2.29
			Data Totals:		365	730.00		153.74		
			Number of Species:		25					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-30**
River Mile:	**9.7**	Location:	CUYAHOGA R. DST. SOUTHERLY WWTP @ CONRAIL RR				
Time Fished:	3600 sec	Drainage:	744.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	100	200.00	22.62	2.20	3.15	10.99
Northern Pike		P	M	N	1	2.00	0.23	5.45	7.82	2725.00
Golden Redhorse		I	S	M	3	6.00	0.68	4.20	6.03	700.00
Shorthead Redhorse		I	S	M	26	52.00	5.88	10.19	14.62	196.00
Northern Hog Sucker		I	S	M	18	36.00	4.07	4.92	7.06	136.67
White Sucker		O	S	T	1	2.00	0.23	0.07	0.10	34.00
Common Carp		O	M	T	1	2.00	0.23	3.50	5.02	1750.00
Goldfish		O	M	T	1	2.00	0.23	0.71	1.02	356.00
Blacknose Dace		G	S	T	14	28.00	3.17	0.04	0.06	1.43
Creek Chub		G	N	T	6	12.00	1.36	0.03	0.05	2.67
Common Shiner		I	S	N	64	128.00	14.48	0.27	0.38	2.10
Spotfin Shiner		I	M	N	35	70.00	7.92	0.26	0.37	3.69
Sand Shiner		I	M	M	31	62.00	7.01	0.07	0.10	1.16
Mimic Shiner		I	M	I	1	2.00	0.23	0.00	0.00	1.00
Silverjaw Minnow		I	M	N	3	6.00	0.68	0.01	0.02	2.00
Fathead Minnow		O	C	T	9	18.00	2.04	0.04	0.06	2.44
Bluntnose Minnow		O	C	T	9	18.00	2.04	0.04	0.06	2.44
Central Stoneroller		H	N	N	37	74.00	8.37	0.23	0.33	3.09
Channel Catfish			C	N	6	12.00	1.36	9.36	13.43	780.00
Flathead Catfish		P	C	N	1	2.00	0.23	10.60	15.21	5300.00
White Perch			M	N	2	4.00	0.45	0.51	0.73	127.00
Smallmouth Bass		C	C	M	20	40.00	4.52	10.40	14.92	259.95
Largemouth Bass		C	C	N	3	6.00	0.68	0.15	0.21	24.67
Green Sunfish		I	C	T	1	2.00	0.23	0.02	0.03	10.00
Bluegill Sunfish		I	C	P	12	24.00	2.71	0.29	0.41	12.00
Hybrid x Sunfish				N	1	2.00	0.23	0.19	0.27	94.00
Yellow Perch			M	N	4	8.00	0.90	0.03	0.04	3.50
Logperch		I	S	M	1	2.00	0.23	0.02	0.03	12.00
Greenside Darter		I	S	M	1	2.00	0.23	0.02	0.02	8.00
Freshwater Drum			M	P	1	2.00	0.23	5.65	8.11	2825.00
Round Goby				N	29	58.00	6.56	0.22	0.32	3.86
			Data Totals:		442	884.00		69.69		
			Number of Species:		31					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-29**
River Mile:	**8.9**	Location:	CUYAHOGA R. 1.7 MILES DST. CLEVELAND SOUTHERLY WWTP				
Time Fished:	3600 sec	Drainage:	745.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	92	184.00	21.10	6.44	8.03	35.00
Black Redhorse		I	S	I	1	2.00	0.23	1.20	1.50	600.00
Golden Redhorse		I	S	M	2	4.00	0.46	3.00	3.74	750.00
Shorthead Redhorse		I	S	M	31	62.00	7.11	4.55	5.67	73.33
Northern Hog Sucker		I	S	M	58	116.00	13.30	10.65	13.28	91.79
White Sucker		O	S	T	1	2.00	0.23	0.02	0.02	8.00
Common Carp		O	M	T	2	4.00	0.46	17.00	21.20	4250.00
Blacknose Dace		G	S	T	4	8.00	0.92	0.02	0.02	2.00
Creek Chub		G	N	T	9	18.00	2.06	0.03	0.03	1.56
Emerald Shiner		I	M	N	2	4.00	0.46	0.02	0.02	5.00
Common Shiner		I	S	N	40	80.00	9.17	0.30	0.37	3.74
Spotfin Shiner		I	M	N	21	42.00	4.82	0.16	0.20	3.79
Sand Shiner		I	M	M	24	48.00	5.50	0.10	0.12	2.00
Mimic Shiner		I	M	I	3	6.00	0.69	0.01	0.01	2.00
Fathead Minnow		O	C	T	11	22.00	2.52	0.06	0.07	2.55
Bluntnose Minnow		O	C	T	9	18.00	2.06	0.07	0.08	3.75
Central Stoneroller		H	N	N	33	66.00	7.57	0.40	0.50	6.13
Channel Catfish			C	N	5	10.00	1.15	11.67	14.55	1166.80
Smallmouth Bass		C	C	M	18	36.00	4.13	12.85	16.03	357.06
Largemouth Bass		C	C	N	3	6.00	0.69	0.06	0.08	10.67
Green Sunfish		I	C	T	6	12.00	1.38	0.16	0.20	13.20
Bluegill Sunfish		I	C	P	4	8.00	0.92	0.14	0.18	18.00
Hybrid x Sunfish				N	2	4.00	0.46	0.16	0.20	40.00
Walleye		P	S	N	1	2.00	0.23	1.20	1.50	600.00
Logperch		I	S	M	2	4.00	0.46	0.04	0.05	10.00
Greenside Darter		I	S	M	1	2.00	0.23	0.01	0.01	4.00
Rainbow Darter		I	S	M	1	2.00	0.23	0.00	0.00	2.00
Freshwater Drum			M	P	5	10.00	1.15	9.60	11.97	960.00
Round Goby				N	45	90.00	10.32	0.26	0.33	2.91
			Data Totals:		436	872.00		80.17		
			Number of Species:		29					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-29**
River Mile:	**7.1**	Location:	CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.				
Time Fished:	3600 sec	Drainage:	786.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	150	300.00	40.76	7.71	15.61	25.71
Central Mudminnow		I	C	T	1	2.00	0.27	0.00	0.01	2.00
Golden Redhorse		I	S	M	2	4.00	0.54	2.90	5.87	725.00
Shorthead Redhorse		I	S	M	6	12.00	1.63	0.18	0.37	15.33
Northern Hog Sucker		I	S	M	19	38.00	5.16	3.50	7.08	92.11
White Sucker		O	S	T	1	2.00	0.27	0.24	0.49	122.00
Common Carp		O	M	T	2	4.00	0.54	10.50	21.24	2625.00
Creek Chub		G	N	T	19	38.00	5.16	0.06	0.12	1.56
Emerald Shiner		I	M	N	2	4.00	0.54	0.02	0.03	4.00
Common Shiner		I	S	N	30	60.00	8.15	0.12	0.23	1.93
Spotfin Shiner		I	M	N	14	28.00	3.80	0.10	0.20	3.57
Sand Shiner		I	M	M	4	8.00	1.09	0.02	0.03	2.00
Fathead Minnow		O	C	T	1	2.00	0.27	0.00	0.01	2.00
Bluntnose Minnow		O	C	T	38	76.00	10.33	0.13	0.27	1.76
Central Stoneroller		H	N	N	10	20.00	2.72	0.05	0.11	2.60
Channel Catfish			C	N	3	6.00	0.82	6.60	13.35	1100.00
Yellow Bullhead		I	C	T	2	4.00	0.54	0.32	0.64	79.00
Flathead Catfish		P	C	N	1	2.00	0.27	0.14	0.28	70.00
Smallmouth Bass		C	C	M	19	38.00	5.16	14.48	29.30	381.11
Largemouth Bass		C	C	N	4	8.00	1.09	1.97	3.99	246.25
Green Sunfish		I	C	T	3	6.00	0.82	0.01	0.02	2.00
Bluegill Sunfish		I	C	P	4	8.00	1.09	0.04	0.07	4.50
Hybrid x Sunfish				N	2	4.00	0.54	0.12	0.23	29.00
Logperch		I	S	M	4	8.00	1.09	0.04	0.08	5.00
Rainbow Darter		I	S	M	1	2.00	0.27	0.00	0.01	2.00
Round Goby				N	26	52.00	7.07	0.17	0.34	3.19
			Data Totals:		368	736.00		49.43		
			Number of Species:		26					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-09-14**
River Mile:	**5.9**	Location:	CUYAHOGA R. @ LTV FOOTBRIDGE				
Time Fished:	3600 sec	Drainage:	788.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	A

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	71	142.00	52.99	3.36	1.81	23.66
Bigmouth Buffalo		I	M	N	5	10.00	3.73	57.40	30.87	5740.00
Smallmouth Buffalo		I	M	N	4	8.00	2.99	39.55	21.27	4943.75
Common Carp		O	M	T	5	10.00	3.73	60.25	32.40	6025.00
Creek Chub		G	N	T	1	2.00	0.75	0.01	0.00	4.00
Emerald Shiner		I	M	N	5	10.00	3.73	0.02	0.01	2.00
Common Shiner		I	S	N	1	2.00	0.75	0.01	0.00	4.00
Spotfin Shiner		I	M	N	1	2.00	0.75	0.00	0.00	2.00
Sand Shiner		I	M	M	1	2.00	0.75	0.00	0.00	1.00
Bluntnose Minnow		O	C	T	6	12.00	4.48	0.02	0.01	2.00
Grass Carp			M	N	1	2.00	0.75	17.40	9.36	8700.00
Smallmouth Bass		C	C	M	3	6.00	2.24	3.70	1.99	617.00
Largemouth Bass		C	C	N	9	18.00	6.72	0.86	0.46	47.56
Green Sunfish		I	C	T	6	12.00	4.48	0.11	0.06	9.00
Bluegill Sunfish		I	C	P	8	16.00	5.97	0.15	0.08	9.50
Hybrid x Sunfish				N	1	2.00	0.75	0.13	0.07	66.00
Yellow Perch			M	N	2	4.00	1.49	0.06	0.03	14.00
Freshwater Drum			M	P	1	2.00	0.75	2.90	1.56	1450.00
Round Goby				N	3	6.00	2.24	0.02	0.01	2.67
			Data Totals:		134	268.00		185.95		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**			Sample Date:	**2017-08-14**
River Mile:	**2.7**	Location:	CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS				
Time Fished:	2920 sec	Drainage:	806.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	O

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	338	202.80	67.33	6.42	23.28	31.66
Shorthead Redhorse		I	S	M	3	1.80	0.60	0.16	0.57	86.67
White Sucker		O	S	T	2	1.20	0.40	0.10	0.36	82.50
Spotted Sucker		I	S	N	5	3.00	1.00	0.23	0.85	78.00
Common Carp		O	M	T	11	6.60	2.19	11.28	40.90	1709.09
Goldfish		O	M	T	1	0.60	0.20	0.54	1.96	900.00
Golden Shiner		I	M	T	10	6.00	1.99	0.16	0.59	26.90
Emerald Shiner		I	M	N	1	0.60	0.20	0.01	0.03	15.00
Common Shiner		I	S	N	18	10.80	3.59	0.06	0.22	5.67
Bluntnose Minnow		O	C	T	23	13.80	4.58	0.05	0.18	3.70
Channel Catfish			C	N	1	0.60	0.20	1.41	5.11	2350.00
Yellow Bullhead		I	C	T	2	1.20	0.40	0.61	2.22	511.00
White Bass		P	M	N	3	1.80	0.60	0.14	0.49	75.00
White Perch			M	N	2	1.20	0.40	0.03	0.12	27.50
Largemouth Bass		C	C	N	50	30.00	9.96	4.74	17.19	158.00
Green Sunfish		I	C	T	4	2.40	0.80	0.13	0.46	52.50
Bluegill Sunfish		I	C	P	11	6.60	2.19	0.14	0.52	21.82
Pumpkinseed Sunfish		I	C	P	8	4.80	1.59	0.20	0.72	41.50
Hybrid x Sunfish				N	1	0.60	0.20	0.04	0.13	60.00
Yellow Perch			M	N	6	3.60	1.20	0.17	0.60	45.83
Freshwater Drum			M	P	1	0.60	0.20	0.96	3.48	1600.00
Round Goby				N	1	0.60	0.20	0.00	0.02	8.00
			Data Totals:		502	301.20		27.58		
			Number of Species:		22					
			Number of Hybrids:		1					

River Code:	**19-001-000**	Stream:	**CUYAHOGA RIVER**	Sample Date:	**2017-06-22**
River Mile:	**2.7**	Location:	CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS		
Time Fished:	2326 sec	Drainage:	806.0 sq mi	Depth:	Data Source:
Dist Fished:	0.5 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: O

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	74	44.40	29.84	1.59	4.51	35.86
Northern Pike		P	M	N	1	0.60	0.40	0.63	1.78	1050.00
Golden Redhorse		I	S	M	9	5.40	3.63	0.20	0.56	36.67
White Sucker		O	S	T	8	4.80	3.23	0.28	0.80	58.75
Spotted Sucker		I	S	N	12	7.20	4.84	0.37	1.04	51.25
Common Carp		O	M	T	10	6.00	4.03	10.86	30.74	1810.00
Goldfish		O	M	T	27	16.20	10.89	4.74	13.42	292.59
Golden Shiner		I	M	T	5	3.00	2.02	0.05	0.13	15.00
Emerald Shiner		I	M	N	1	0.60	0.40	0.00	0.01	3.00
Channel Catfish			C	N	8	4.80	3.23	9.15	25.90	1906.25
Yellow Bullhead		I	C	T	3	1.80	1.21	0.43	1.21	238.33
Brown Bullhead		I	C	T	5	3.00	2.02	2.28	6.45	760.00
Flathead Catfish		P	C	N	6	3.60	2.42	0.62	1.77	173.33
White Bass		P	M	N	3	1.80	1.21	0.08	0.21	41.67
Rock Bass		C	C	N	1	0.60	0.40	0.02	0.04	25.00
Smallmouth Bass		C	C	M	5	3.00	2.02	0.15	0.42	49.40
Largemouth Bass		C	C	N	15	9.00	6.05	1.59	4.50	176.67
Warmouth Sunfish		C	C	N	1	0.60	0.40	0.04	0.11	65.00
Green Sunfish		I	C	T	3	1.80	1.21	0.04	0.11	21.00
Bluegill Sunfish		I	C	P	33	19.80	13.31	0.77	2.17	38.64
Pumpkinseed Sunfish		I	C	P	8	4.80	3.23	0.18	0.51	37.50
Hybrid x Sunfish				N	2	1.20	0.81	0.04	0.12	35.00
Yellow Perch			M	N	1	0.60	0.40	0.02	0.05	30.00
Freshwater Drum			M	P	1	0.60	0.40	1.14	3.23	1900.00
Round Goby				N	6	3.60	2.42	0.08	0.21	21.00
			Data Totals:		248	148.80		35.33		
			Number of Species:		25					
			Number of Hybrids:		1					

River Code:	**19-001-004**	Stream:	**WEST CREEK**			Sample Date:	**2018-06-28**
River Mile:	**3.7**	Location:	WEST CREEK AT PARMA @ BROADVIEW RD.				
Time Fished:	1800 sec	Drainage:	4.8 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	4	6.00	0.53	0.00	0.00	0.00
Goldfish		O	M	T	1	1.50	0.13	0.00	0.00	0.00
Blacknose Dace		G	S	T	462	693.00	60.79	0.00	0.00	0.00
Creek Chub		G	N	T	157	235.50	20.66	0.00	0.00	0.00
Central Stoneroller		H	N	N	136	204.00	17.89	0.00	0.00	0.00
			Data Totals:		760	1140.00		0.00		
			Number of Species:		5					
			Number of Hybrids:		0					

River Code:	**19-001-004**	Stream:	**WEST CREEK**			Sample Date:	**2018-08-01**
River Mile:	**0.2**	Location:	WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)				
Time Fished:	1800 sec	Drainage:	13.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Rainbow Trout			N	N	1	2.00	0.14	0.00	0.00	0.00
Quillback		O	M	N	1	2.00	0.14	0.00	0.00	0.00
Shorthead Redhorse		I	S	M	1	2.00	0.14	0.00	0.00	0.00
White Sucker		O	S	T	111	222.00	15.27	0.00	0.00	0.00
Blacknose Dace		G	S	T	73	146.00	10.04	0.00	0.00	0.00
Creek Chub		G	N	T	204	408.00	28.06	0.00	0.00	0.00
Common Shiner		I	S	N	6	12.00	0.83	0.00	0.00	0.00
Sand Shiner		I	M	M	6	12.00	0.83	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	6	12.00	0.83	0.00	0.00	0.00
Central Stoneroller		H	N	N	281	562.00	38.65	0.00	0.00	0.00
Yellow Bullhead		I	C	T	34	68.00	4.68	0.00	0.00	0.00
White Perch			M	N	1	2.00	0.14	0.00	0.00	0.00
Fantail Darter		I	C	N	1	2.00	0.14	0.00	0.00	0.00
Round Goby				N	1	2.00	0.14	0.00	0.00	0.00
			Data Totals:		727	1454.00		0.00		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-001-011**	Stream:	**SAGAMORE CREEK**	Sample Date:	**2018-07-18**
River Mile:	**2.9**	Location:	SAGAMORE CREEK UPST. SAGAMORE RD.		
Time Fished:	2100 sec	Drainage:	3.3 sq mi	Depth:	Data Source:
Dist Fished:	0.16 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	6	10.91	0.59	0.00	0.00	0.00
Blacknose Dace		G	S	T	83	150.91	8.20	0.00	0.00	0.00
Creek Chub		G	N	T	214	389.09	21.15	0.00	0.00	0.00
Central Stoneroller		H	N	N	698	1269.09	68.97	0.00	0.00	0.00
Yellow Bullhead		I	C	T	3	5.45	0.30	0.00	0.00	0.00
Largemouth Bass		C	C	N	5	9.09	0.49	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	3.64	0.20	0.00	0.00	0.00
Fantail Darter		I	C	N	1	1.82	0.10	0.00	0.00	0.00
			Data Totals:		1012	1840.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		0					

River Code:	**19-001-011**	Stream:	**SAGAMORE CREEK**	Sample Date:	**2018-08-31**
River Mile:	**0.2**	Location:	SAGAMORE CREEK @ CANAL RD.		
Time Fished:	3349 sec	Drainage:	6.2 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Rainbow Trout			N	N	75	150.00	6.36	0.00	0.00	0.00
White Sucker		O	S	T	67	134.00	5.68	0.00	0.00	0.00
Blacknose Dace		G	S	T	44	88.00	3.73	0.00	0.00	0.00
Creek Chub		G	N	T	125	250.00	10.60	0.00	0.00	0.00
Striped Shiner		I	S	N	14	28.00	1.19	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	5	10.00	0.42	0.00	0.00	0.00
Central Stoneroller		H	N	N	582	1164.00	49.36	0.00	0.00	0.00
Yellow Bullhead		I	C	T	17	34.00	1.44	0.00	0.00	0.00
Largemouth Bass		C	C	N	4	8.00	0.34	0.00	0.00	0.00
Green Sunfish		I	C	T	6	12.00	0.51	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	1	2.00	0.08	0.00	0.00	0.00
Johnny Darter		I	C	N	2	4.00	0.17	0.00	0.00	0.00
Greenside Darter		I	S	M	1	2.00	0.08	0.00	0.00	0.00
Rainbow Darter		I	S	M	227	454.00	19.25	0.00	0.00	0.00
Fantail Darter		I	C	N	9	18.00	0.76	0.00	0.00	0.00
			Data Totals:		1179	2358.00		0.00		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-001-012**	Stream:	**SPRING CREEK**			Sample Date:	**2018-06-28**
River Mile:	**0.9**	Location:	SPRING CREEK @ BUCKEYE TRAIL UPST. BLUE HEN FALLS				
Time Fished:	1500 sec	Drainage:	1.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	74	148.00	87.06	0.00	0.00	0.00
Creek Chub		G	N	T	11	22.00	12.94	0.00	0.00	0.00
			Data Totals:		85	170.00		0.00		
			Number of Species:		2					
			Number of Hybrids:		0					

River Code:	**19-001-012**	Stream:	**SPRING CREEK**			Sample Date:	**2019-08-21**
River Mile:	**0.8**	Location:	SPRING CREEK @ BUCKEYE TRAIL DST. BLUE HEN FALLS				
Time Fished:	2760 sec	Drainage:	1.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	F

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	84	168.00	48.28	0.00	0.00	0.00
Creek Chub		G	N	T	90	180.00	51.72	0.00	0.00	0.00
			Data Totals:		174	348.00		0.00		
			Number of Species:		2					
			Number of Hybrids:		0					

River Code:	**19-001-014**	Stream:	**SAND RUN**	Sample Date:	**2018-08-16**
River Mile:	**0.1**	Location:	SAND RUN @ RIVERVIEW RD N OF AKRON		
Time Fished:	1800 sec	Drainage:	3.1 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	10	20.00	0.64	0.00	0.00	0.00
White Sucker		O	S	T	37	74.00	2.38	0.00	0.00	0.00
Blacknose Dace		G	S	T	544	1088.00	35.05	0.00	0.00	0.00
Creek Chub		G	N	T	129	258.00	8.31	0.00	0.00	0.00
Common Shiner		I	S	N	249	498.00	16.04	0.00	0.00	0.00
Spotfin Shiner		I	M	N	5	10.00	0.32	0.00	0.00	0.00
Sand Shiner		I	M	M	1	2.00	0.06	0.00	0.00	0.00
Silverjaw Minnow		I	M	N	25	50.00	1.61	0.00	0.00	0.00
Fathead Minnow		O	C	T	6	12.00	0.39	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	3	6.00	0.19	0.00	0.00	0.00
Central Stoneroller		H	N	N	492	984.00	31.70	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	4.00	0.13	0.00	0.00	0.00
Green Sunfish		I	C	T	24	48.00	1.55	0.00	0.00	0.00
Rainbow Darter		I	S	M	12	24.00	0.77	0.00	0.00	0.00
Fantail Darter		I	C	N	13	26.00	0.84	0.00	0.00	0.00
			Data Totals:		1552	3104.00		0.00		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-001-020**	Stream:	**HARPER DITCH**	Sample Date:	**2018-08-28**
River Mile:	**0.2**	Location:	HARPER DITCH @ BECK RD.		
Time Fished:	1800 sec	Drainage:	4.7 sq mi	Depth:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N
				Data Source:	
				Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	4	8.00	1.17	0.00	0.00	0.00
Redfin Pickerel		P	M	P	14	28.00	4.09	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	4	8.00	1.17	0.00	0.00	0.00
White Sucker		O	S	T	9	18.00	2.63	0.00	0.00	0.00
Common Carp		O	M	T	2	4.00	0.58	0.00	0.00	0.00
Creek Chub		G	N	T	12	24.00	3.51	0.00	0.00	0.00
Common Shiner		I	S	N	2	4.00	0.58	0.00	0.00	0.00
Central Stoneroller		H	N	N	2	4.00	0.58	0.00	0.00	0.00
Yellow Bullhead		I	C	T	15	30.00	4.39	0.00	0.00	0.00
Largemouth Bass		C	C	N	14	28.00	4.09	0.00	0.00	0.00
Green Sunfish		I	C	T	51	102.00	14.91	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	41	82.00	11.99	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	3	6.00	0.88	0.00	0.00	0.00
Yellow Perch			M	N	11	22.00	3.22	0.00	0.00	0.00
Johnny Darter		I	C	N	13	26.00	3.80	0.00	0.00	0.00
Greenside Darter		I	S	M	25	50.00	7.31	0.00	0.00	0.00
Rainbow Darter		I	S	M	105	210.00	30.70	0.00	0.00	0.00
Fantail Darter		I	C	N	15	30.00	4.39	0.00	0.00	0.00
			Data Totals:		342	684.00		0.00		
			Number of Species:		18					
			Number of Hybrids:		0					

River Code:	**19-001-022**	Stream:	**TRIB. TO CUYAHOGA R. (63.43)**			Sample Date:	**2018-07-25**
River Mile:	**0.1**	Location:	TRIB. TO CUYAHOGA R. (63.43) @ ST. RT. 303				
Time Fished:	1800 sec	Drainage:	2.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	4	8.00	1.74	0.00	0.00	0.00
Redfin Pickerel		P	M	P	14	28.00	6.09	0.00	0.00	0.00
White Sucker		O	S	T	9	18.00	3.91	0.00	0.00	0.00
Creek Chub		G	N	T	102	204.00	44.35	0.00	0.00	0.00
Central Stoneroller		H	N	N	9	18.00	3.91	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	4.00	0.87	0.00	0.00	0.00
Green Sunfish		I	C	T	4	8.00	1.74	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	3	6.00	1.30	0.00	0.00	0.00
Johnny Darter		I	C	N	35	70.00	15.22	0.00	0.00	0.00
Fantail Darter		I	C	N	48	96.00	20.87	0.00	0.00	0.00
			Data Totals:		230	460.00		0.00		
			Number of Species:		10					
			Number of Hybrids:		0					

River Code:	**19-001-023**	Stream:	**TRIB. TO CUYAHOGA R. (RM 65.19)**			Sample Date:	**2018-08-28**
River Mile:	**0.3**	Location:	TRIB. TO CUYAHOGA R. (65.19) E OF STREETSBORO, NEAR COIT RD				
Time Fished:	1800 sec	Drainage:	3.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	5	10.00	14.29	0.00	0.00	0.00
Redfin Pickerel		P	M	P	11	22.00	31.43	0.00	0.00	0.00
Central Stoneroller		H	N	N	6	12.00	17.14	0.00	0.00	0.00
Yellow Bullhead		I	C	T	1	2.00	2.86	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	11	22.00	31.43	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	2.86	0.00	0.00	0.00
			Data Totals:		35	70.00		0.00		
			Number of Species:		6					
			Number of Hybrids:		1					

River Code:	**19-001-024**	Stream:	**TRIB. TO CUYAHOGA R. (RM 69.43)**			Sample Date:	**2018-08-15**
River Mile:	**0.2**	Location:	TRIB. TO CUYAHOGA R. (69.43) @ CANADA RD.				
Time Fished:	1800 sec	Drainage:	3.8 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	2	4.00	0.29	0.00	0.00	0.00
Redfin Pickerel		P	M	P	6	12.00	0.86	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	2	4.00	0.29	0.00	0.00	0.00
White Sucker		O	S	T	83	166.00	11.94	0.00	0.00	0.00
Creek Chub		G	N	T	103	206.00	14.82	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	3	6.00	0.43	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	4.00	0.29	0.00	0.00	0.00
Smallmouth Bass		C	C	M	1	2.00	0.14	0.00	0.00	0.00
Largemouth Bass		C	C	N	32	64.00	4.60	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	11	22.00	1.58	0.00	0.00	0.00
Logperch		I	S	M	1	2.00	0.14	0.00	0.00	0.00
Johnny Darter		I	C	N	419	838.00	60.29	0.00	0.00	0.00
Greenside Darter		I	S	M	7	14.00	1.01	0.00	0.00	0.00
Rainbow Darter		I	S	M	23	46.00	3.31	0.00	0.00	0.00
			Data Totals:		695	1390.00		0.00		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-001-041**	Stream:	**TRIB. TO CUYAHOGA R. (63.82)**			Sample Date:	**2018-07-25**
River Mile:	**0.1**	Location:	TRIB. TO CUYAHOGA R. (63.82) @ ST. RT. 303				
Time Fished:	1800 sec	Drainage:	3.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	11	22.00	7.64	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	1	2.00	0.69	0.00	0.00	0.00
White Sucker		O	S	T	10	20.00	6.94	0.00	0.00	0.00
Central Stoneroller		H	N	N	5	10.00	3.47	0.00	0.00	0.00
Yellow Bullhead		I	C	T	8	16.00	5.56	0.00	0.00	0.00
Black Bullhead		I	C	P	3	6.00	2.08	0.00	0.00	0.00
Largemouth Bass		C	C	N	10	20.00	6.94	0.00	0.00	0.00
Green Sunfish		I	C	T	24	48.00	16.67	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	5	10.00	3.47	0.00	0.00	0.00
Johnny Darter		I	C	N	6	12.00	4.17	0.00	0.00	0.00
Greenside Darter		I	S	M	1	2.00	0.69	0.00	0.00	0.00
Rainbow Darter		I	S	M	25	50.00	17.36	0.00	0.00	0.00
Fantail Darter		I	C	N	35	70.00	24.31	0.00	0.00	0.00
			Data Totals:		144	288.00		0.00		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-001-045**	Stream:	**TRIB TO CUYAHOGA R. (25.41) @ RIVERVIEW RD**			Sample Date:	**2018-08-13**
River Mile:	**0.2**	Location:	TRIB TO CUYAHOGA R. (25.41) @ RIVERVIEW RD.				
Time Fished:	2880 sec	Drainage:	2.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	2.00	0.11	0.00	0.00	0.00
White Sucker		O	S	T	151	302.00	16.03	0.00	0.00	0.00
Blacknose Dace		G	S	T	178	356.00	18.90	0.00	0.00	0.00
Creek Chub		G	N	T	258	516.00	27.39	0.00	0.00	0.00
South. Redbelly Dace		H	S	N	1	2.00	0.11	0.00	0.00	0.00
Redside Dace		I	S	I	1	2.00	0.11	0.00	0.00	0.00
Common Shiner		I	S	N	11	22.00	1.17	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	3	6.00	0.32	0.00	0.00	0.00
Central Stoneroller		H	N	N	185	370.00	19.64	0.00	0.00	0.00
Yellow Bullhead		I	C	T	1	2.00	0.11	0.00	0.00	0.00
Largemouth Bass		C	C	N	5	10.00	0.53	0.00	0.00	0.00
Green Sunfish		I	C	T	6	12.00	0.64	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	3	6.00	0.32	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	2	4.00	0.21	0.00	0.00	0.00
Johnny Darter		I	C	N	1	2.00	0.11	0.00	0.00	0.00
Rainbow Darter		I	S	M	23	46.00	2.44	0.00	0.00	0.00
Fantail Darter		I	C	N	112	224.00	11.89	0.00	0.00	0.00
			Data Totals:		942	1884.00		0.00		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-005-000**	Stream:	**BIG CREEK**			Sample Date:	**2018-08-01**
River Mile:	**7.8**	Location:	BIG CREEK @ BIG CREEK PARKWAY				
Time Fished:	1800 sec	Drainage:	10.9 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	25	50.00	2.55	0.00	0.00	0.00
Blacknose Dace		G	S	T	192	384.00	19.55	0.00	0.00	0.00
Creek Chub		G	N	T	152	304.00	15.48	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	67	134.00	6.82	0.00	0.00	0.00
Central Stoneroller		H	N	N	520	1040.00	52.95	0.00	0.00	0.00
Yellow Bullhead		I	C	T	4	8.00	0.41	0.00	0.00	0.00
Green Sunfish		I	C	T	21	42.00	2.14	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.10	0.00	0.00	0.00
			Data Totals:		982	1964.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		1					

River Code:	**19-005-000**	Stream:	**BIG CREEK**	Sample Date:	**2018-08-01**
River Mile:	**4.4**	Location:	BIG CREEK AT BROOKLYN, UPST. FORD BRANCH		
Time Fished:	2700 sec	Drainage:	19.3 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	5	7.50	0.30	0.05	0.72	7.20
Blacknose Dace		G	S	T	254	381.00	15.40	1.12	15.02	2.94
Creek Chub		G	N	T	333	499.50	20.19	1.96	26.33	3.93
Bigmouth Shiner		I	M	N	90	135.00	5.46	0.26	3.52	1.94
Sand Shiner		I	M	M	43	64.50	2.61	0.13	1.69	1.95
Bluntnose Minnow		O	C	T	83	124.50	5.03	0.29	3.87	2.32
Central Stoneroller		H	N	N	832	1248.00	50.45	3.54	47.52	2.84
Yellow Bullhead		I	C	T	4	6.00	0.24	0.03	0.44	5.50
Green Sunfish		I	C	T	5	7.50	0.30	0.07	0.89	8.80
			Data Totals:		1649	2473.50		7.46		
			Number of Species:		9					
			Number of Hybrids:		0					

River Code:	**19-005-000**	Stream:	**BIG CREEK**			Sample Date:	**2018-07-31**
River Mile:	**2.4**	Location:	BIG CREEK @ USGS GAGE				
Time Fished:	2700 sec	Drainage:	34.9 sq mi	Depth:		Data Source:	
Dist Fished:	0.22 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	34	45.33	1.55	1.01	7.56	22.33
Common Carp		O	M	T	3	4.00	0.14	0.02	0.12	4.00
Blacknose Dace		G	S	T	104	138.67	4.73	0.33	2.46	2.38
Creek Chub		G	N	T	279	372.00	12.69	1.97	14.72	5.30
Bigmouth Shiner		I	M	N	48	64.00	2.18	0.14	1.08	2.25
Sand Shiner		I	M	M	39	52.00	1.77	0.13	0.96	2.46
Fathead Minnow		O	C	T	1	1.33	0.05	0.00	0.02	2.00
Bluntnose Minnow		O	C	T	102	136.00	4.64	0.55	4.10	4.04
Central Stoneroller		H	N	N	1562	2082.67	71.06	8.46	63.22	4.06
Yellow Bullhead		I	C	T	18	24.00	0.82	0.57	4.28	23.89
Green Sunfish		I	C	T	8	10.67	0.36	0.20	1.48	18.57
			Data Totals:		2198	2930.67		13.39		
			Number of Species:		11					
			Number of Hybrids:		0					

River Code:	**19-005-000**	Stream:	**BIG CREEK**			Sample Date:	**2018-10-03**
River Mile:	**0.2**	Location:	BIG CREEK @ JENNINGS AVE.				
Time Fished:	1500 sec	Drainage:	37.1 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	96	192.00	38.10	2.55	48.94	13.30
Blacknose Dace		G	S	T	3	6.00	1.19	0.01	0.23	2.00
Creek Chub		G	N	T	23	46.00	9.13	0.69	13.23	15.00
Sand Shiner		I	M	M	1	2.00	0.40	0.00	0.04	1.00
Central Stoneroller		H	N	N	118	236.00	46.83	1.54	29.52	6.53
Yellow Bullhead		I	C	T	5	10.00	1.98	0.24	4.60	24.00
Green Sunfish		I	C	T	2	4.00	0.79	0.10	1.92	25.00
Bluegill Sunfish		I	C	P	1	2.00	0.40	0.02	0.31	8.00
Logperch		I	S	M	2	4.00	0.79	0.06	1.15	15.00
Greenside Darter		I	S	M	1	2.00	0.40	0.00	0.08	2.00
			Data Totals:		252	504.00		5.22		
			Number of Species:		10					
			Number of Hybrids:		0					

River Code:	**19-006-000**	Stream:	**MILL CREEK**			Sample Date:	**2018-07-03**
River Mile:	**4.2**	Location:	MILL CREEK @ BROADWAY RD.				
Time Fished:	3780 sec	Drainage:	12.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Goldfish		O	M	T	3	6.00	0.21	0.00	0.00	0.00
Golden Shiner		I	M	T	2	4.00	0.14	0.00	0.00	0.00
Blacknose Dace		G	S	T	1163	2326.00	82.13	0.00	0.00	0.00
Creek Chub		G	N	T	239	478.00	16.88	0.00	0.00	0.00
Fathead Minnow		O	C	T	8	16.00	0.56	0.00	0.00	0.00
Green Sunfish		I	C	T	1	2.00	0.07	0.00	0.00	0.00
				Data Totals:	1416	2832.00		0.00		
				Number of Species:	6					
				Number of Hybrids:	0					

River Code:	**19-006-000**	Stream:	**MILL CREEK**			Sample Date:	**2018-10-03**
River Mile:	**0.1**	Location:	MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.				
Time Fished:	1800 sec	Drainage:	18.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Rainbow Trout			N	N	4	8.00	0.78	0.00	0.00	0.00
White Sucker		O	S	T	171	342.00	33.53	0.00	0.00	0.00
Blacknose Dace		G	S	T	16	32.00	3.14	0.00	0.00	0.00
Creek Chub		G	N	T	33	66.00	6.47	0.00	0.00	0.00
Common Shiner		I	S	N	23	46.00	4.51	0.00	0.00	0.00
Spotfin Shiner		I	M	N	9	18.00	1.76	0.00	0.00	0.00
Sand Shiner		I	M	M	32	64.00	6.27	0.00	0.00	0.00
Fathead Minnow		O	C	T	1	2.00	0.20	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	10	20.00	1.96	0.00	0.00	0.00
Central Stoneroller		H	N	N	186	372.00	36.47	0.00	0.00	0.00
Yellow Bullhead		I	C	T	13	26.00	2.55	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	4.00	0.39	0.00	0.00	0.00
Green Sunfish		I	C	T	1	2.00	0.20	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	4.00	0.39	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.20	0.00	0.00	0.00
Yellow Perch			M	N	1	2.00	0.20	0.00	0.00	0.00
Greenside Darter		I	S	M	5	10.00	0.98	0.00	0.00	0.00
			Data Totals:		510	1020.00		0.00		
			Number of Species:		17					
			Number of Hybrids:		1					

River Code:	**19-006-000**	Stream:	**MILL CREEK**			Sample Date:	**2018-07-26**
River Mile:	**0.1**	Location:	MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.				
Time Fished:	2700 sec	Drainage:	18.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	2	4.00	0.13	0.00	0.00	0.00
White Sucker		O	S	T	540	1080.00	34.07	0.00	0.00	0.00
Golden Shiner		I	M	T	1	2.00	0.06	0.00	0.00	0.00
Blacknose Dace		G	S	T	21	42.00	1.32	0.00	0.00	0.00
Creek Chub		G	N	T	69	138.00	4.35	0.00	0.00	0.00
Common Shiner		I	S	N	106	212.00	6.69	0.00	0.00	0.00
Sand Shiner		I	M	M	73	146.00	4.61	0.00	0.00	0.00
Silverjaw Minnow		I	M	N	2	4.00	0.13	0.00	0.00	0.00
Fathead Minnow		O	C	T	6	12.00	0.38	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	10	20.00	0.63	0.00	0.00	0.00
Central Stoneroller		H	N	N	704	1408.00	44.42	0.00	0.00	0.00
Yellow Bullhead		I	C	T	15	30.00	0.95	0.00	0.00	0.00
White Perch			M	N	3	6.00	0.19	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	4.00	0.13	0.00	0.00	0.00
Green Sunfish		I	C	T	17	34.00	1.07	0.00	0.00	0.00
Yellow Perch			M	N	5	10.00	0.32	0.00	0.00	0.00
Greenside Darter		I	S	M	6	12.00	0.38	0.00	0.00	0.00
Rainbow Darter		I	S	M	3	6.00	0.19	0.00	0.00	0.00
			Data Totals:		1585	3170.00		0.00		
			Number of Species:		18					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-08-28**
River Mile:	**28.8**	Location:	TINKERS CREEK SE OF HUDSON @ SEASONS RD.				
Time Fished:	3000 sec	Drainage:	4.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	40	80.00	11.90	0.00	0.00	0.00
Redfin Pickerel		P	M	P	11	22.00	3.27	0.00	0.00	0.00
White Sucker		O	S	T	19	38.00	5.65	0.00	0.00	0.00
Creek Chub		G	N	T	89	178.00	26.49	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	76	152.00	22.62	0.00	0.00	0.00
Central Stoneroller		H	N	N	8	16.00	2.38	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	4.00	0.60	0.00	0.00	0.00
Green Sunfish		I	C	T	30	60.00	8.93	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	3	6.00	0.89	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	5	10.00	1.49	0.00	0.00	0.00
Johnny Darter		I	C	N	51	102.00	15.18	0.00	0.00	0.00
Rainbow Darter		I	S	M	2	4.00	0.60	0.00	0.00	0.00
			Data Totals:		336	672.00		0.00		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-07-05**
River Mile:	**28.8**	Location:	TINKERS CREEK SE OF HUDSON @ SEASONS RD.				
Time Fished:	3000 sec	Drainage:	4.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.12 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	71	177.50	16.82	0.00	0.00	0.00
Redfin Pickerel		P	M	P	9	22.50	2.13	0.00	0.00	0.00
White Sucker		O	S	T	42	105.00	9.95	0.00	0.00	0.00
Creek Chub		G	N	T	104	260.00	24.64	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	25	62.50	5.92	0.00	0.00	0.00
Central Stoneroller		H	N	N	24	60.00	5.69	0.00	0.00	0.00
Yellow Bullhead		I	C	T	4	10.00	0.95	0.00	0.00	0.00
Brown Bullhead		I	C	T	1	2.50	0.24	0.00	0.00	0.00
Green Sunfish		I	C	T	73	182.50	17.30	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	6	15.00	1.42	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	12	30.00	2.84	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.50	0.24	0.00	0.00	0.00
Johnny Darter		I	C	N	44	110.00	10.43	0.00	0.00	0.00
Rainbow Darter		I	S	M	6	15.00	1.42	0.00	0.00	0.00
			Data Totals:		422	1055.00		0.00		
			Number of Species:		14					
			Number of Hybrids:		1					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**	Sample Date:	**2018-07-31**
River Mile:	**18.0**	Location:	TINKERS CREEK NEAR TWINSBURG, 0.36 MI. UPST. RTS. 82 & 14		
Time Fished:	2700 sec	Drainage:	48.0 sq mi	Depth:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N
				Data Source:	
				Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	1.50	0.36	0.02	0.05	10.00
Northern Hog Sucker		I	S	M	3	4.50	1.08	1.32	3.96	293.00
White Sucker		O	S	T	74	111.00	26.62	23.49	70.50	211.62
Bluntnose Minnow		O	C	T	6	9.00	2.16	0.03	0.10	3.67
Yellow Bullhead		I	C	T	12	18.00	4.32	1.40	4.21	78.00
Rock Bass		C	C	N	18	27.00	6.47	0.77	2.31	28.44
Smallmouth Bass		C	C	M	27	40.50	9.71	3.81	11.43	94.00
Largemouth Bass		C	C	N	7	10.50	2.52	0.05	0.15	4.86
Green Sunfish		I	C	T	47	70.50	16.91	0.90	2.71	12.80
Bluegill Sunfish		I	C	P	41	61.50	14.75	0.50	1.49	8.05
Pumpkinseed Sunfish		I	C	P	36	54.00	12.95	1.03	3.09	19.06
Johnny Darter		I	C	N	6	9.00	2.16	0.00	0.01	0.50
			Data Totals:		278	417.00		33.32		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-09-24**
River Mile:	**13.8**	Location:	TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.				
Time Fished:	2700 sec	Drainage:	53.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	3	6.00	1.63	0.12	0.29	19.33
Northern Hog Sucker		I	S	M	11	22.00	5.98	3.07	7.74	139.64
White Sucker		O	S	T	19	38.00	10.33	7.45	18.76	196.05
Common Carp		O	M	T	3	6.00	1.63	20.10	50.62	3350.00
Bluntnose Minnow		O	C	T	43	86.00	23.37	0.24	0.60	2.79
Yellow Bullhead		I	C	T	3	6.00	1.63	0.99	2.49	164.67
Rock Bass		C	C	N	32	64.00	17.39	3.30	8.30	51.48
Smallmouth Bass		C	C	M	27	54.00	14.67	2.79	7.02	51.63
Largemouth Bass		C	C	N	1	2.00	0.54	0.02	0.05	10.00
Green Sunfish		I	C	T	27	54.00	14.67	1.19	2.99	22.00
Bluegill Sunfish		I	C	P	8	16.00	4.35	0.05	0.13	3.13
Pumpkinseed Sunfish		I	C	P	2	4.00	1.09	0.26	0.64	64.00
Hybrid x Sunfish				N	1	2.00	0.54	0.13	0.33	66.00
Johnny Darter		I	C	N	4	8.00	2.17	0.02	0.04	2.00
			Data Totals:		184	368.00		39.71		
			Number of Species:		14					
			Number of Hybrids:		1					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-07-31**
River Mile:	**13.8**	Location:	TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.				
Time Fished:	2700 sec	Drainage:	53.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	1.50	0.39	0.00	0.01	2.00
Redfin Pickerel		P	M	P	3	4.50	1.18	0.03	0.07	7.33
Northern Hog Sucker		I	S	M	26	39.00	10.20	6.59	14.98	169.08
White Sucker		O	S	T	42	63.00	16.47	13.97	31.72	221.71
Common Carp		O	M	T	4	6.00	1.57	13.43	30.49	2237.50
Creek Chub		G	N	T	2	3.00	0.78	0.01	0.02	2.50
Bluntnose Minnow		O	C	T	30	45.00	11.76	0.19	0.42	4.13
Central Stoneroller		H	N	N	4	6.00	1.57	0.02	0.03	2.50
Yellow Bullhead		I	C	T	3	4.50	1.18	0.43	0.98	96.00
Rock Bass		C	C	N	39	58.50	15.29	3.40	7.73	58.15
Smallmouth Bass		C	C	M	51	76.50	20.00	4.99	11.34	65.25
Largemouth Bass		C	C	N	2	3.00	0.78	0.03	0.07	10.00
Green Sunfish		I	C	T	23	34.50	9.02	0.57	1.29	16.52
Bluegill Sunfish		I	C	P	19	28.50	7.45	0.32	0.72	11.05
Pumpkinseed Sunfish		I	C	P	1	1.50	0.39	0.05	0.10	30.00
Johnny Darter		I	C	N	5	7.50	1.96	0.02	0.03	2.00
			Data Totals:		255	382.50		44.03		
			Number of Species:		16					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**	Sample Date:	**2018-09-19**
River Mile:	**8.7**	Location:	TINKERS CREEK AT GLEN WILLOW, DST. RICHMOND RD.		
Time Fished:	2700 sec	Drainage:	69.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	1.50	0.44	0.15	0.33	98.00
Northern Hog Sucker		I	S	M	19	28.50	8.44	4.75	10.68	166.67
White Sucker		O	S	T	29	43.50	12.89	12.05	27.11	277.12
Common Carp		O	M	T	5	7.50	2.22	20.63	46.38	2750.00
Bluntnose Minnow		O	C	T	32	48.00	14.22	0.05	0.12	1.07
Central Stoneroller		H	N	N	6	9.00	2.67	0.02	0.05	2.40
Yellow Bullhead		I	C	T	7	10.50	3.11	0.61	1.38	58.29
Rock Bass		C	C	N	5	7.50	2.22	0.75	1.69	100.40
Smallmouth Bass		C	C	M	31	46.50	13.78	3.49	7.84	75.00
Largemouth Bass		C	C	N	1	1.50	0.44	0.02	0.03	10.00
Green Sunfish		I	C	T	73	109.50	32.44	1.79	4.01	16.30
Bluegill Sunfish		I	C	P	14	21.00	6.22	0.16	0.36	7.71
Johnny Darter		I	C	N	2	3.00	0.89	0.01	0.01	2.00
			Data Totals:		225	337.50		44.47		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-07-31**
River Mile:	**8.7**	Location:	TINKERS CREEK AT GLEN WILLOW, DST. RICHMOND RD.				
Time Fished:	2700 sec	Drainage:	69.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	3	4.50	0.80	0.06	0.11	13.33
Northern Hog Sucker		I	S	M	18	27.00	4.81	3.71	7.10	137.56
White Sucker		O	S	T	48	72.00	12.83	19.07	36.48	264.91
Common Carp		O	M	T	5	7.50	1.34	19.78	37.83	2637.50
Blacknose Dace		G	S	T	2	3.00	0.53	0.01	0.01	2.00
Creek Chub		G	N	T	24	36.00	6.42	0.05	0.09	1.33
Bluntnose Minnow		O	C	T	35	52.50	9.36	0.04	0.07	0.69
Central Stoneroller		H	N	N	54	81.00	14.44	0.12	0.23	1.48
Yellow Bullhead		I	C	T	3	4.50	0.80	0.18	0.34	39.33
Rock Bass		C	C	N	8	12.00	2.14	0.78	1.50	65.25
Smallmouth Bass		C	C	M	47	70.50	12.57	5.65	10.80	80.11
Largemouth Bass		C	C	N	4	6.00	1.07	0.03	0.06	5.50
Green Sunfish		I	C	T	112	168.00	29.95	2.78	5.31	16.52
Bluegill Sunfish		I	C	P	8	12.00	2.14	0.03	0.05	2.25
Johnny Darter		I	C	N	3	4.50	0.80	0.01	0.02	2.00
			Data Totals:		374	561.00		52.29		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-07-30**
River Mile:	**6.3**	Location:	TINKERS CREEK AT BEDFORD @ ST. RT. 14				
Time Fished:	3600 sec	Drainage:	84.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.22 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	26	34.67	7.26	0.82	4.29	23.54
White Sucker		O	S	T	26	34.67	7.26	7.03	36.95	202.88
Blacknose Dace		G	S	T	12	16.00	3.35	0.02	0.12	1.42
Creek Chub		G	N	T	63	84.00	17.60	0.09	0.48	1.09
Bluntnose Minnow		O	C	T	24	32.00	6.70	0.06	0.30	1.80
Central Stoneroller		H	N	N	71	94.67	19.83	0.19	1.01	2.03
Yellow Bullhead		I	C	T	11	14.67	3.07	0.30	1.56	20.20
Rock Bass		C	C	N	6	8.00	1.68	0.50	2.61	62.00
Smallmouth Bass		C	C	M	96	128.00	26.82	9.60	50.44	75.00
Green Sunfish		I	C	T	18	24.00	5.03	0.40	2.12	16.82
Pumpkinseed Sunfish		I	C	P	1	1.33	0.28	0.02	0.10	14.00
Johnny Darter		I	C	N	4	5.33	1.12	0.01	0.03	1.00
			Data Totals:		358	477.33		19.03		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**	Sample Date:	**2018-09-24**
River Mile:	**2.5**	Location:	TINKERS CREEK UPST. WOOD CREEK, ADJ. BUTTON RD.		
Time Fished:	2700 sec	Drainage:	91.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	19	28.50	3.73	0.47	2.18	16.32
Northern Hog Sucker		I	S	M	35	52.50	6.86	3.56	16.67	67.86
White Sucker		O	S	T	50	75.00	9.80	1.43	6.67	19.00
Blacknose Dace		G	S	T	2	3.00	0.39	0.01	0.03	2.00
Creek Chub		G	N	T	10	15.00	1.96	0.10	0.45	6.44
Common Shiner		I	S	N	24	36.00	4.71	0.41	1.90	11.30
Spotfin Shiner		I	M	N	57	85.50	11.18	0.55	2.59	6.48
Sand Shiner		I	M	M	26	39.00	5.10	0.09	0.41	2.27
Silverjaw Minnow		I	M	N	1	1.50	0.20	0.01	0.03	4.00
Bluntnose Minnow		O	C	T	26	39.00	5.10	0.17	0.77	4.23
Central Stoneroller		H	N	N	50	75.00	9.80	0.45	2.09	5.96
Channel Catfish			C	N	1	1.50	0.20	2.55	11.94	1700.00
Yellow Bullhead		I	C	T	4	6.00	0.78	0.21	0.98	35.00
Stonecat Madtom		I	C	I	4	6.00	0.78	0.37	1.74	62.00
Rock Bass		C	C	N	2	3.00	0.39	0.34	1.57	112.00
Smallmouth Bass		C	C	M	66	99.00	12.94	9.21	43.09	92.98
Largemouth Bass		C	C	N	2	3.00	0.39	0.03	0.13	9.00
Green Sunfish		I	C	T	19	28.50	3.73	0.40	1.88	14.11
Bluegill Sunfish		I	C	P	9	13.50	1.76	0.42	1.97	31.11
Greenside Darter		I	S	M	79	118.50	15.49	0.52	2.45	4.42
Rainbow Darter		I	S	M	23	34.50	4.51	0.09	0.41	2.52
Round Goby				N	1	1.50	0.20	0.01	0.04	6.00
			Data Totals:		510	765.00		21.37		
			Number of Species:		22					
			Number of Hybrids:		0					

River Code:	**19-007-000**	Stream:	**TINKERS CREEK**			Sample Date:	**2018-07-30**
River Mile:	**0.1**	Location:	TINKERS CREEK AT MOUTH @ CANAL RD.				
Time Fished:	2700 sec	Drainage:	96.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.25 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	8	9.60	1.00	1.57	10.81	163.75
White Sucker		O	S	T	47	56.40	5.85	0.95	6.52	16.81
Blacknose Dace		G	S	T	2	2.40	0.25	0.00	0.02	1.00
Creek Chub		G	N	T	19	22.80	2.37	0.04	0.26	1.68
Common Shiner		I	S	N	115	138.00	14.32	0.89	6.15	6.48
Spotfin Shiner		I	M	N	68	81.60	8.47	0.43	2.97	5.29
Sand Shiner		I	M	M	39	46.80	4.86	0.10	0.71	2.21
Bluntnose Minnow		O	C	T	15	18.00	1.87	0.04	0.27	2.15
Central Stoneroller		H	N	N	80	96.00	9.96	0.14	0.99	1.50
Channel Catfish			C	N	3	3.60	0.37	2.33	16.02	647.33
Yellow Bullhead		I	C	T	29	34.80	3.61	1.26	8.66	36.21
Stonecat Madtom		I	C	I	7	8.40	0.87	0.19	1.29	22.29
Smallmouth Bass		C	C	M	48	57.60	5.98	5.21	35.84	90.48
Largemouth Bass		C	C	N	6	7.20	0.75	0.05	0.36	7.33
Green Sunfish		I	C	T	23	27.60	2.86	0.39	2.66	14.00
Bluegill Sunfish		I	C	P	6	7.20	0.75	0.11	0.74	15.00
Logperch		I	S	M	6	7.20	0.75	0.12	0.85	17.20
Johnny Darter		I	C	N	7	8.40	0.87	0.01	0.05	0.80
Greenside Darter		I	S	M	203	243.60	25.28	0.36	2.45	1.46
Rainbow Darter		I	S	M	45	54.00	5.60	0.04	0.31	0.83
Round Goby				N	27	32.40	3.36	0.30	2.08	9.33
			Data Totals:		803	963.60		14.54		
			Number of Species:		21					
			Number of Hybrids:		0					

River Code:	**19-007-001**	Stream:	**WOOD CREEK**			Sample Date:	**2018-10-11**
River Mile:	**0.2**	Location:	WOOD CREEK DST. BEDFORD WWTP, NEAR MOUTH				
Time Fished:	1359 sec	Drainage:	3.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	14	28.00	14.58	0.00	0.00	0.00
Creek Chub		G	N	T	82	164.00	85.42	0.00	0.00	0.00
			Data Totals:		96	192.00		0.00		
			Number of Species:		2					
			Number of Hybrids:		0					

River Code:	**19-007-001**	Stream:	**WOOD CREEK**			Sample Date:	**2018-06-28**
River Mile:	**0.2**	Location:	WOOD CREEK DST. BEDFORD WWTP, NEAR MOUTH				
Time Fished:	1626 sec	Drainage:	3.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	14	28.00	34.15	0.00	0.00	0.00
Creek Chub		G	N	T	27	54.00	65.85	0.00	0.00	0.00
			Data Totals:		41	82.00		0.00		
			Number of Species:		2					
			Number of Hybrids:		0					

River Code:	**19-007-007**	Stream:	**BEAR CREEK**	Sample Date:	**2018-07-11**
River Mile:	**0.2**	Location:	BEAR CREEK W OF I-271 @ SOLON RD.		
Time Fished:	2700 sec	Drainage:	4.5 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	68	102.00	4.53	0.00	0.00	0.00
Blacknose Dace		G	S	T	545	817.50	36.28	2.33	28.65	2.84
Creek Chub		G	N	T	242	363.00	16.11	2.37	29.21	6.53
Bluntnose Minnow		O	C	T	2	3.00	0.13	0.00	0.00	0.00
Central Stoneroller		H	N	N	645	967.50	42.94	3.42	42.14	3.53
			Data Totals:		1502	2253.00		8.12		
			Number of Species:		5					
			Number of Hybrids:		0					

River Code:	**19-007-008**	Stream:	**HAWTHORN CREEK**	Sample Date:	**2018-07-11**
River Mile:	**0.8**	Location:	HAWTHORNE CREEK @ RICHMOND RD.		
Time Fished:	3000 sec	Drainage:	6.5 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	34	51.00	3.18	0.00	0.00	0.00
Blacknose Dace		G	S	T	682	1023.00	63.74	3.01	100.00	2.94
Creek Chub		G	N	T	198	297.00	18.50	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	3	4.50	0.28	0.00	0.00	0.00
Central Stoneroller		H	N	N	151	226.50	14.11	0.00	0.00	0.00
Green Sunfish		I	C	T	2	3.00	0.19	0.00	0.00	0.00
			Data Totals:		1070	1605.00		3.01		
			Number of Species:		6					
			Number of Hybrids:		0					

River Code:	**19-007-010**	Stream:	**BEAVER MEADOW RUN**			Sample Date:	**2018-07-11**
River Mile:	**0.1**	Location:	BEAVER MEADOW RUN DST. SOLON WWTP @ OLD COCHRAN RD.				
Time Fished:	2400 sec	Drainage:	6.1 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	1	1.50	0.52	0.00	0.00	0.00
White Sucker		O	S	T	19	28.50	9.90	0.00	0.00	0.00
Blacknose Dace		G	S	T	1	1.50	0.52	0.00	0.00	0.00
Creek Chub		G	N	T	23	34.50	11.98	0.00	0.00	0.00
Common Shiner		I	S	N	1	1.50	0.52	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	6	9.00	3.13	0.00	0.00	0.00
Central Stoneroller		H	N	N	63	94.50	32.81	0.00	0.00	0.00
Yellow Bullhead		I	C	T	11	16.50	5.73	0.00	0.00	0.00
Rock Bass		C	C	N	1	1.50	0.52	0.00	0.00	0.00
Smallmouth Bass		C	C	M	17	25.50	8.85	0.00	0.00	0.00
Largemouth Bass		C	C	N	28	42.00	14.58	0.00	0.00	0.00
Green Sunfish		I	C	T	18	27.00	9.38	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	1	1.50	0.52	0.00	0.00	0.00
Hybrid x Sunfish				N	1	1.50	0.52	0.00	0.00	0.00
Johnny Darter		I	C	N	1	1.50	0.52	0.00	0.00	0.00
			Data Totals:		192	288.00		0.00		
			Number of Species:		15					
			Number of Hybrids:		1					

River Code:	**19-008-000**	Stream:	**POND BROOK**	Sample Date:	**2019-09-10**
River Mile:	**2.4**	Location:	POND BROOK JUST DST. OF TRIB.		
Time Fished:	1500 sec	Drainage:	10.9 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	5	10.00	3.62	0.00	0.00	0.00
Redfin Pickerel		P	M	P	12	24.00	8.70	0.00	0.00	0.00
White Sucker		O	S	T	17	34.00	12.32	0.00	0.00	0.00
Common Carp		O	M	T	2	4.00	1.45	0.00	0.00	0.00
Golden Shiner		I	M	T	29	58.00	21.01	0.00	0.00	0.00
Creek Chub		G	N	T	5	10.00	3.62	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	6	12.00	4.35	0.00	0.00	0.00
Yellow Bullhead		I	C	T	19	38.00	13.77	0.00	0.00	0.00
Largemouth Bass		C	C	N	7	14.00	5.07	0.00	0.00	0.00
Green Sunfish		I	C	T	5	10.00	3.62	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	10	20.00	7.25	0.00	0.00	0.00
Yellow Perch			M	N	13	26.00	9.42	0.00	0.00	0.00
Johnny Darter		I	C	N	8	16.00	5.80	0.00	0.00	0.00
			Data Totals:		138	276.00		0.00		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-008-000**	Stream:	**POND BROOK**	Sample Date:	**2018-07-11**
River Mile:	**1.4**	Location:	POND BROOK NEAR AURORA @ ST. RT. 82		
Time Fished:	2700 sec	Drainage:	15.7 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	24	36.00	6.76	0.00	0.00	0.00
Redfin Pickerel		P	M	P	46	69.00	12.96	0.00	0.00	0.00
White Sucker		O	S	T	21	31.50	5.92	0.00	0.00	0.00
Common Carp		O	M	T	18	27.00	5.07	0.00	0.00	0.00
Golden Shiner		I	M	T	52	78.00	14.65	0.00	0.00	0.00
Creek Chub		G	N	T	1	1.50	0.28	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	86	129.00	24.23	0.00	0.00	0.00
Yellow Bullhead		I	C	T	11	16.50	3.10	0.00	0.00	0.00
Black Bullhead		I	C	P	1	1.50	0.28	0.00	0.00	0.00
Largemouth Bass		C	C	N	3	4.50	0.85	0.00	0.00	0.00
Green Sunfish		I	C	T	6	9.00	1.69	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	15	22.50	4.23	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	56	84.00	15.77	0.00	0.00	0.00
Yellow Perch			M	N	2	3.00	0.56	0.00	0.00	0.00
Johnny Darter		I	C	N	13	19.50	3.66	0.00	0.00	0.00
			Data Totals:		355	532.50		0.00		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-009-000**	Stream:	**CHIPPEWA CREEK**	Sample Date:	**2018-07-12**
River Mile:	**6.0**	Location:	CHIPPEWA CREEK UPST. BROADVIEW HEIGHTS LANDFILL		
Time Fished:	3000 sec	Drainage:	6.3 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	21	31.50	1.02	0.00	0.00	0.00
Blacknose Dace		G	S	T	681	1021.50	33.11	2.22	18.04	2.17
Creek Chub		G	N	T	288	432.00	14.00	2.33	18.93	5.40
Central Stoneroller		H	N	N	849	1273.50	41.27	7.76	63.03	6.10
Green Sunfish		I	C	T	7	10.50	0.34	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	3.00	0.10	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	14	21.00	0.68	0.00	0.00	0.00
Johnny Darter		I	C	N	54	81.00	2.63	0.00	0.00	0.00
Rainbow Darter		I	S	M	141	211.50	6.85	0.00	0.00	0.00
			Data Totals:		2057	3085.50		12.31		
			Number of Species:		9					
			Number of Hybrids:		0					

River Code:	**19-009-000**	Stream:	**CHIPPEWA CREEK**	Sample Date:	**2018-09-05**
River Mile:	**0.4**	Location:	CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD.		
Time Fished:	2700 sec	Drainage:	17.6 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	3	6.00	0.15	0.00	0.00	0.00
White Sucker		O	S	T	47	94.00	2.30	0.00	0.00	0.00
Blacknose Dace		G	S	T	133	266.00	6.51	0.00	0.00	0.00
Creek Chub		G	N	T	39	78.00	1.91	0.00	0.00	0.00
Common Shiner		I	S	N	376	752.00	18.41	0.00	0.00	0.00
Sand Shiner		I	M	M	10	20.00	0.49	0.00	0.00	0.00
Silverjaw Minnow		I	M	N	21	42.00	1.03	0.00	0.00	0.00
Fathead Minnow		O	C	T	4	8.00	0.20	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	58	116.00	2.84	0.00	0.00	0.00
Central Stoneroller		H	N	N	775	1550.00	37.95	0.00	0.00	0.00
Yellow Bullhead		I	C	T	7	14.00	0.34	0.00	0.00	0.00
Green Sunfish		I	C	T	12	24.00	0.59	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	1	2.00	0.05	0.00	0.00	0.00
Johnny Darter		I	C	N	43	86.00	2.11	0.00	0.00	0.00
Greenside Darter		I	S	M	7	14.00	0.34	0.00	0.00	0.00
Rainbow Darter		I	S	M	331	662.00	16.21	0.00	0.00	0.00
Fantail Darter		I	C	N	175	350.00	8.57	0.00	0.00	0.00
			Data Totals:		2042	4084.00		0.00		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-009-001**	Stream:	**TRIB. TO CHIPPEWA CREEK (RM 3.70)**			Sample Date:	**2018-06-28**
River Mile:	**0.1**	Location:	TRIB. TO CHIPPEWA CREEK (0.80) NEAR BRECKSVILLE, NEAR MOUTH				
Time Fished:	2700 sec	Drainage:	1.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	83	166.00	24.70	0.00	0.00	0.00
Creek Chub		G	N	T	126	252.00	37.50	0.00	0.00	0.00
Common Shiner		I	S	N	2	4.00	0.60	0.00	0.00	0.00
Central Stoneroller		H	N	N	36	72.00	10.71	0.00	0.00	0.00
Common Shiner x Creek Chub				N	1	2.00	0.30	0.00	0.00	0.00
Green Sunfish		I	C	T	4	8.00	1.19	0.00	0.00	0.00
Rainbow Darter		I	S	M	29	58.00	8.63	0.00	0.00	0.00
Fantail Darter		I	C	N	55	110.00	16.37	0.00	0.00	0.00
			Data Totals:		336	672.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		1					

River Code:	**19-010-000**	Stream:	**BRANDYWINE CREEK**			Sample Date:	**2018-07-18**
River Mile:	**7.0**	Location:	BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.				
Time Fished:	2700 sec	Drainage:	8.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	3	6.00	0.80	0.00	0.00	0.00
White Sucker		O	S	T	54	108.00	14.48	0.00	0.00	0.00
Golden Shiner		I	M	T	1	2.00	0.27	0.00	0.00	0.00
Blacknose Dace		G	S	T	1	2.00	0.27	0.00	0.00	0.00
Creek Chub		G	N	T	102	204.00	27.35	0.00	0.00	0.00
Common Shiner		I	S	N	11	22.00	2.95	0.00	0.00	0.00
Fathead Minnow		O	C	T	2	4.00	0.54	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	55	110.00	14.75	0.00	0.00	0.00
Central Stoneroller		H	N	N	76	152.00	20.38	0.00	0.00	0.00
Yellow Bullhead		I	C	T	11	22.00	2.95	0.00	0.00	0.00
Largemouth Bass		C	C	N	17	34.00	4.56	0.00	0.00	0.00
Green Sunfish		I	C	T	28	56.00	7.51	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	12	24.00	3.22	0.00	0.00	0.00
			Data Totals:		373	746.00		0.00		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-010-000**	Stream:	**BRANDYWINE CREEK**			Sample Date:	**2018-09-13**
River Mile:	**4.3**	Location:	BRANDYWINE CREEK NEAR NORTHFIELD CENTER @ ST. RT. 8				
Time Fished:	2700 sec	Drainage:	15.9 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	37	74.00	12.37	0.00	0.00	0.00
Blacknose Dace		G	S	T	2	4.00	0.67	0.00	0.00	0.00
Creek Chub		G	N	T	40	80.00	13.38	0.00	0.00	0.00
Common Shiner		I	S	N	20	40.00	6.69	0.00	0.00	0.00
Fathead Minnow		O	C	T	1	2.00	0.33	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	26	52.00	8.70	0.00	0.00	0.00
Central Stoneroller		H	N	N	43	86.00	14.38	0.00	0.00	0.00
Yellow Bullhead		I	C	T	24	48.00	8.03	0.00	0.00	0.00
Largemouth Bass		C	C	N	4	8.00	1.34	0.00	0.00	0.00
Green Sunfish		I	C	T	99	198.00	33.11	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	1	2.00	0.33	0.00	0.00	0.00
Fantail Darter		I	C	N	2	4.00	0.67	0.00	0.00	0.00
			Data Totals:		299	598.00		0.00		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-010-000**	Stream:	**BRANDYWINE CREEK**			Sample Date:	**2018-09-06**
River Mile:	**0.3**	Location:	BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE				
Time Fished:	2700 sec	Drainage:	27.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	5	10.00	0.19	0.21	0.83	21.20
White Sucker		O	S	T	84	168.00	3.20	2.42	9.55	14.43
Golden Shiner		I	M	T	4	8.00	0.15	0.04	0.17	5.50
Blacknose Dace		G	S	T	11	22.00	0.42	0.05	0.19	2.18
Creek Chub		G	N	T	42	84.00	1.60	0.74	2.92	8.84
Common Shiner		I	S	N	339	678.00	12.93	7.57	29.79	11.16
Spotfin Shiner		I	M	N	22	44.00	0.84	0.26	1.02	5.90
Sand Shiner		I	M	M	20	40.00	0.76	0.12	0.46	2.90
Silverjaw Minnow		I	M	N	69	138.00	2.63	0.55	2.16	3.97
Fathead Minnow		O	C	T	8	16.00	0.31	0.05	0.20	3.20
Bluntnose Minnow		O	C	T	125	250.00	4.77	0.87	3.42	3.48
Central Stoneroller		H	N	N	1276	2552.00	48.67	7.54	29.68	2.95
Yellow Bullhead		I	C	T	36	72.00	1.37	2.07	8.16	28.78
Largemouth Bass		C	C	N	3	6.00	0.11	0.02	0.09	4.00
Green Sunfish		I	C	T	21	42.00	0.80	0.64	2.52	15.24
Bluegill Sunfish		I	C	P	29	58.00	1.11	0.74	2.91	12.76
Hybrid x Sunfish				N	1	2.00	0.04	0.06	0.24	30.00
Johnny Darter		I	C	N	25	50.00	0.95	0.06	0.25	1.28
Greenside Darter		I	S	M	199	398.00	7.59	0.82	3.21	2.05
Rainbow Darter		I	S	M	47	94.00	1.79	0.17	0.68	1.83
Fantail Darter		I	C	N	256	512.00	9.76	0.39	1.54	0.76
			Data Totals:		2622	5244.00		25.40		
			Number of Species:		21					
			Number of Hybrids:		1					

River Code:	**19-010-001**	Stream:	**INDIAN CREEK**	Sample Date:	**2019-08-14**
River Mile:	**0.0**	Location:	INDIAN CREEK AT MACEDONIA @ MOUTH		
Time Fished:	1800 sec	Drainage:	6.5 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	24	36.00	2.14	0.00	0.00	0.00
Blacknose Dace		G	S	T	385	577.50	34.41	0.00	0.00	0.00
Creek Chub		G	N	T	158	237.00	14.12	0.00	0.00	0.00
Common Shiner		I	S	N	171	256.50	15.28	0.00	0.00	0.00
Fathead Minnow		O	C	T	15	22.50	1.34	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	121	181.50	10.81	0.00	0.00	0.00
Central Stoneroller		H	N	N	212	318.00	18.95	0.00	0.00	0.00
Common Shiner x Creek Chub				N	1	1.50	0.09	0.00	0.00	0.00
Yellow Bullhead		I	C	T	3	4.50	0.27	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	3.00	0.18	0.00	0.00	0.00
Green Sunfish		I	C	T	21	31.50	1.88	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	4	6.00	0.36	0.00	0.00	0.00
Hybrid x Sunfish				N	2	3.00	0.18	0.00	0.00	0.00
			Data Totals:		1119	1678.50		0.00		
			Number of Species:		13					
			Number of Hybrids:		2					

River Code:	**19-010-001**	Stream:	**INDIAN CREEK**			Sample Date:	**2018-09-13**
River Mile:	**0.0**	Location:	INDIAN CREEK AT MACEDONIA @ MOUTH				
Time Fished:	2700 sec	Drainage:	6.5 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	53	106.00	15.41	0.00	0.00	0.00
Blacknose Dace		G	S	T	40	80.00	11.63	0.00	0.00	0.00
Creek Chub		G	N	T	72	144.00	20.93	0.00	0.00	0.00
Common Shiner		I	S	N	33	66.00	9.59	0.00	0.00	0.00
Fathead Minnow		O	C	T	6	12.00	1.74	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	70	140.00	20.35	0.00	0.00	0.00
Central Stoneroller		H	N	N	53	106.00	15.41	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	4.00	0.58	0.00	0.00	0.00
Green Sunfish		I	C	T	12	24.00	3.49	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	4.00	0.58	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.29	0.00	0.00	0.00
			Data Totals:		344	688.00		0.00		
			Number of Species:		11					
			Number of Hybrids:		1					

River Code:	**19-011-000**	Stream:	**STANFORD RUN**			Sample Date:	**2018-07-10**
River Mile:	**0.9**	Location:	STANFORD RUN @ HINES HILL RD.				
Time Fished:	1500 sec	Drainage:	1.9 sq mi	Depth:		Data Source:	
Dist Fished:	0.12 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	21	52.50	5.75	0.00	0.00	0.00
Blacknose Dace		G	S	T	130	325.00	35.62	0.00	0.00	0.00
Creek Chub		G	N	T	169	422.50	46.30	0.00	0.00	0.00
Redside Dace		I	S	I	16	40.00	4.38	0.00	0.00	0.00
Common Shiner		I	S	N	1	2.50	0.27	0.00	0.00	0.00
Central Stoneroller		H	N	N	21	52.50	5.75	0.00	0.00	0.00
Green Sunfish		I	C	T	1	2.50	0.27	0.00	0.00	0.00
Johnny Darter		I	C	N	1	2.50	0.27	0.00	0.00	0.00
Fantail Darter		I	C	N	5	12.50	1.37	0.00	0.00	0.00
			Data Totals:		365	912.50		0.00		
			Number of Species:		9					
			Number of Hybrids:		0					

River Code:	**19-012-000**	Stream:	**SLIPPER RUN**			Sample Date:	**2018-07-18**
River Mile:	**0.2**	Location:	SLIPPER RUN @ RIVERVIEW RD.				
Time Fished:	1500 sec	Drainage:	1.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	223	446.00	46.17	0.00	0.00	0.00
Creek Chub		G	N	T	169	338.00	34.99	0.00	0.00	0.00
South. Redbelly Dace		H	S	N	2	4.00	0.41	0.00	0.00	0.00
Common Shiner		I	S	N	1	2.00	0.21	0.00	0.00	0.00
Central Stoneroller		H	N	N	74	148.00	15.32	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	2.00	0.21	0.00	0.00	0.00
Green Sunfish		I	C	T	1	2.00	0.21	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	4.00	0.41	0.00	0.00	0.00
Fantail Darter		I	C	N	10	20.00	2.07	0.00	0.00	0.00
			Data Totals:		483	966.00		0.00		
			Number of Species:		9					
			Number of Hybrids:		0					

River Code:	**19-013-000**	Stream:	**BOSTON RUN**			Sample Date:	**2018-07-18**
River Mile:	**0.2**	Location:	BOSTON RUN @ DUGWAY HILL RD.				
Time Fished:	1500 sec	Drainage:	2.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	1	2.00	0.12	0.00	0.00	0.00
White Sucker		O	S	T	45	90.00	5.43	0.00	0.00	0.00
Blacknose Dace		G	S	T	113	226.00	13.65	0.00	0.00	0.00
Creek Chub		G	N	T	209	418.00	25.24	0.00	0.00	0.00
Redside Dace		I	S	I	7	14.00	0.85	0.00	0.00	0.00
Common Shiner		I	S	N	52	104.00	6.28	0.00	0.00	0.00
Silverjaw Minnow		I	M	N	15	30.00	1.81	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	36	72.00	4.35	0.00	0.00	0.00
Central Stoneroller		H	N	N	216	432.00	26.09	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	4.00	0.24	0.00	0.00	0.00
Largemouth Bass		C	C	N	6	12.00	0.72	0.00	0.00	0.00
Green Sunfish		I	C	T	3	6.00	0.36	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.12	0.00	0.00	0.00
Johnny Darter		I	C	N	12	24.00	1.45	0.00	0.00	0.00
Rainbow Darter		I	S	M	15	30.00	1.81	0.00	0.00	0.00
Fantail Darter		I	C	N	95	190.00	11.47	0.00	0.00	0.00
			Data Totals:		828	1656.00		0.00		
			Number of Species:		16					
			Number of Hybrids:		1					

River Code:	**19-016-000**	Stream:	**SALT RUN**			Sample Date:	**2018-07-10**
River Mile:	**0.3**	Location:	SALT RUN @ AKRON-PENINSULA RD.				
Time Fished:	2700 sec	Drainage:	2.8 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
American Brook Lamprey		F	N	R	10	20.00	2.02	0.00	0.00	0.00
White Sucker		O	S	T	92	184.00	18.55	0.00	0.00	0.00
Golden Shiner		I	M	T	1	2.00	0.20	0.00	0.00	0.00
Blacknose Dace		G	S	T	11	22.00	2.22	0.00	0.00	0.00
Creek Chub		G	N	T	109	218.00	21.98	0.00	0.00	0.00
Common Shiner		I	S	N	61	122.00	12.30	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	9	18.00	1.81	0.00	0.00	0.00
Central Stoneroller		H	N	N	76	152.00	15.32	0.00	0.00	0.00
Yellow Bullhead		I	C	T	10	20.00	2.02	0.00	0.00	0.00
Largemouth Bass		C	C	N	13	26.00	2.62	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	1	2.00	0.20	0.00	0.00	0.00
Green Sunfish		I	C	T	17	34.00	3.43	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	29	58.00	5.85	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	13	26.00	2.62	0.00	0.00	0.00
Johnny Darter		I	C	N	2	4.00	0.40	0.00	0.00	0.00
Fantail Darter		I	C	N	42	84.00	8.47	0.00	0.00	0.00
			Data Totals:		496	992.00		0.00		
			Number of Species:		16					
			Number of Hybrids:		0					

River Code:	**19-017-000**	Stream:	**DICKERSON RUN**			Sample Date:	**2019-08-14**
River Mile:	**0.6**	Location:	DICKERSON RUN @ AKRON-PENINSULA RD.				
Time Fished:	2700 sec	Drainage:	2.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
American Brook Lamprey		F	N	R	2	4.00	0.27	0.00	0.00	0.00
Central Mudminnow		I	C	T	86	172.00	11.62	0.00	0.00	0.00
White Sucker		O	S	T	180	360.00	24.32	0.00	0.00	0.00
Golden Shiner		I	M	T	2	4.00	0.27	0.00	0.00	0.00
Blacknose Dace		G	S	T	1	2.00	0.14	0.00	0.00	0.00
Creek Chub		G	N	T	93	186.00	12.57	0.00	0.00	0.00
Redside Dace		I	S	I	12	24.00	1.62	0.00	0.00	0.00
Common Shiner		I	S	N	94	188.00	12.70	0.00	0.00	0.00
Fathead Minnow		O	C	T	19	38.00	2.57	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	1	2.00	0.14	0.00	0.00	0.00
Central Stoneroller		H	N	N	80	160.00	10.81	0.00	0.00	0.00
Yellow Bullhead		I	C	T	11	22.00	1.49	0.00	0.00	0.00
Largemouth Bass		C	C	N	3	6.00	0.41	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	1	2.00	0.14	0.00	0.00	0.00
Green Sunfish		I	C	T	41	82.00	5.54	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	93	186.00	12.57	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.14	0.00	0.00	0.00
Johnny Darter		I	C	N	17	34.00	2.30	0.00	0.00	0.00
Fantail Darter		I	C	N	3	6.00	0.41	0.00	0.00	0.00
			Data Totals:		740	1480.00		0.00		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-019-000**	Stream:	**ROBINSON RUN**			Sample Date:	**2019-07-23**
River Mile:	**0.1**	Location:	ROBINSON RUN @ AKRON-PENINSULA RD.				
Time Fished:	1800 sec	Drainage:	1.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	6	12.00	3.92	0.00	0.00	0.00
Blacknose Dace		G	S	T	108	216.00	70.59	0.00	0.00	0.00
Creek Chub		G	N	T	28	56.00	18.30	0.00	0.00	0.00
Sand Shiner		I	M	M	1	2.00	0.65	0.00	0.00	0.00
Central Stoneroller		H	N	N	1	2.00	0.65	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	4.00	1.31	0.00	0.00	0.00
Fantail Darter		I	C	N	7	14.00	4.58	0.00	0.00	0.00
			Data Totals:		153	306.00		0.00		
			Number of Species:		7					
			Number of Hybrids:		0					

River Code:	**19-020-000**	Stream:	**FURNACE RUN**			Sample Date:	**2018-09-05**
River Mile:	**7.3**	Location:	FURNACE RUN DST. CONFLUENCE WITH ROCK CREEK				
Time Fished:	2700 sec	Drainage:	5.6 sq mi	Depth:		Data Source:	
Dist Fished:	0.16 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	1	1.82	0.16	0.00	0.00	0.00
White Sucker		O	S	T	47	85.45	7.31	0.00	0.00	0.00
Blacknose Dace		G	S	T	118	214.55	18.35	0.00	0.00	0.00
Creek Chub		G	N	T	152	276.36	23.64	0.00	0.00	0.00
Silverjaw Minnow		I	M	N	3	5.45	0.47	0.00	0.00	0.00
Fathead Minnow		O	C	T	1	1.82	0.16	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	1	1.82	0.16	0.00	0.00	0.00
Central Stoneroller		H	N	N	155	281.82	24.11	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	1.82	0.16	0.00	0.00	0.00
Green Sunfish		I	C	T	6	10.91	0.93	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	5	9.09	0.78	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	1	1.82	0.16	0.00	0.00	0.00
Johnny Darter		I	C	N	1	1.82	0.16	0.00	0.00	0.00
Rainbow Darter		I	S	M	130	236.36	20.22	0.00	0.00	0.00
Fantail Darter		I	C	N	21	38.18	3.27	0.00	0.00	0.00
			Data Totals:		643	1169.09		0.00		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-020-000**	Stream:	**FURNACE RUN**	Sample Date:	**2018-09-05**
River Mile:	**0.3**	Location:	FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.		
Time Fished:	2700 sec	Drainage:	20.3 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Rainbow Trout			N	N	1	1.50	0.07	0.15	1.45	100.00
Northern Hog Sucker		I	S	M	19	28.50	1.38	0.85	8.21	29.89
White Sucker		O	S	T	38	57.00	2.75	0.96	9.25	16.83
Blacknose Dace		G	S	T	76	114.00	5.50	0.24	2.32	2.11
Creek Chub		G	N	T	55	82.50	3.98	1.02	9.81	12.33
Common Shiner		I	S	N	333	499.50	24.11	2.55	24.55	5.10
Spotfin Shiner		I	M	N	18	27.00	1.30	0.13	1.24	4.75
Sand Shiner		I	M	M	47	70.50	3.40	0.15	1.42	2.09
Silverjaw Minnow		I	M	N	28	42.00	2.03	0.12	1.14	2.82
Bluntnose Minnow		O	C	T	69	103.50	5.00	0.25	2.37	2.38
Central Stoneroller		H	N	N	389	583.50	28.17	2.41	23.20	4.12
Yellow Bullhead		I	C	T	35	52.50	2.53	0.69	6.63	13.09
Largemouth Bass		C	C	N	6	9.00	0.43	0.20	1.91	22.00
Green Sunfish		I	C	T	3	4.50	0.22	0.03	0.32	7.33
Bluegill Sunfish		I	C	P	3	4.50	0.22	0.15	1.42	32.67
Pumpkinseed Sunfish		I	C	P	5	7.50	0.36	0.06	0.54	7.50
Johnny Darter		I	C	N	33	49.50	2.39	0.05	0.46	0.97
Greenside Darter		I	S	M	6	9.00	0.43	0.02	0.23	2.67
Rainbow Darter		I	S	M	124	186.00	8.98	0.27	2.59	1.45
Fantail Darter		I	C	N	93	139.50	6.73	0.10	0.95	0.70
			Data Totals:		1381	2071.50		10.37		
			Number of Species:		20					
			Number of Hybrids:		0					

River Code:	**19-020-001**	Stream:	**TRIB. TO FURNACE RUN (RM 7.90)**			Sample Date:	**2018-07-19**
River Mile:	**0.2**	Location:	TRIB. TO FURNACE RUN (7.90) N OF RICHFIELD, NEAR MOUTH				
Time Fished:	1800 sec	Drainage:	0.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Golden Shiner		I	M	T	6	12.00	1.25	0.00	0.00	0.00
Blacknose Dace		G	S	T	159	318.00	33.19	0.00	0.00	0.00
Creek Chub		G	N	T	233	466.00	48.64	0.00	0.00	0.00
Central Stoneroller		H	N	N	55	110.00	11.48	0.00	0.00	0.00
Green Sunfish		I	C	T	6	12.00	1.25	0.00	0.00	0.00
Johnny Darter		I	C	N	2	4.00	0.42	0.00	0.00	0.00
Rainbow Darter		I	S	M	10	20.00	2.09	0.00	0.00	0.00
Fantail Darter		I	C	N	8	16.00	1.67	0.00	0.00	0.00
			Data Totals:		479	958.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		0					

River Code:	**19-020-002**	Stream:	**ROCK CREEK**	Sample Date:	**2018-07-19**
River Mile:	**0.2**	Location:	ROCK CREEK UPST. ELM GROVE BRIDGE		
Time Fished:	2700 sec	Drainage:	1.4 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	32	64.00	4.57	0.00	0.00	0.00
Blacknose Dace		G	S	T	163	326.00	23.29	0.00	0.00	0.00
Creek Chub		G	N	T	274	548.00	39.14	0.00	0.00	0.00
Central Stoneroller		H	N	N	160	320.00	22.86	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	2.00	0.14	0.00	0.00	0.00
Green Sunfish		I	C	T	12	24.00	1.71	0.00	0.00	0.00
Rainbow Darter		I	S	M	37	74.00	5.29	0.00	0.00	0.00
Fantail Darter		I	C	N	21	42.00	3.00	0.00	0.00	0.00
			Data Totals:		700	1400.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		0					

River Code:	**19-020-003**	Stream:	**RIDING RUN @WHEATLEY RD**			Sample Date:	**2019-07-23**
River Mile:	**0.1**	Location:	RIDING RUN @WHEATLEY RD.				
Time Fished:	2700 sec	Drainage:	1.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	148	296.00	49.33	0.00	0.00	0.00
Creek Chub		G	N	T	106	212.00	35.33	0.00	0.00	0.00
Central Stoneroller		H	N	N	18	36.00	6.00	0.00	0.00	0.00
Green Sunfish		I	C	T	3	6.00	1.00	0.00	0.00	0.00
Fantail Darter		I	C	N	25	50.00	8.33	0.00	0.00	0.00
			Data Totals:		300	600.00		0.00		
			Number of Species:		5					
			Number of Hybrids:		0					

River Code:	**19-020-003**	Stream:	**RIDING RUN @WHEATLEY RD**			Sample Date:	**2018-07-19**
River Mile:	**0.1**	Location:	RIDING RUN @WHEATLEY RD.				
Time Fished:	1500 sec	Drainage:	1.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.14 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	141	291.72	42.34	0.00	0.00	0.00
Creek Chub		G	N	T	152	314.48	45.65	0.00	0.00	0.00
Central Stoneroller		H	N	N	22	45.52	6.61	0.00	0.00	0.00
Fantail Darter		I	C	N	18	37.24	5.41	0.00	0.00	0.00
			Data Totals:		333	688.97		0.00		
			Number of Species:		4					
			Number of Hybrids:		0					

River Code:	**19-020-004**	Stream:	**TRIB TO FURNACE RUN (1.20)**			Sample Date:	**2019-08-21**
River Mile:	**0.1**	Location:	TRIB. TO FURNACE RUN (1.20) @ EVERETT RD.				
Time Fished:	3300 sec	Drainage:	1.9 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	F

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Blacknose Dace		G	S	T	263	526.00	77.35	0.00	0.00	0.00
Creek Chub		G	N	T	39	78.00	11.47	0.00	0.00	0.00
Central Stoneroller		H	N	N	38	76.00	11.18	0.00	0.00	0.00
			Data Totals:		340	680.00		0.00		
			Number of Species:		3					
			Number of Hybrids:		0					

River Code:	**19-021-000**	Stream:	**YELLOW CREEK**			Sample Date:	**2018-08-01**
River Mile:	**5.3**	Location:	YELLOW CREEK @ GRANGER RD. (FIRST CROSSING UPST. NORTH FORK)				
Time Fished:	1800 sec	Drainage:	10.6 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	166	332.00	11.53	0.00	0.00	0.00
White Sucker		O	S	T	106	212.00	7.36	0.00	0.00	0.00
Common Carp		O	M	T	1	2.00	0.07	0.00	0.00	0.00
River Chub		I	N	I	66	132.00	4.58	0.00	0.00	0.00
Blacknose Dace		G	S	T	102	204.00	7.08	0.00	0.00	0.00
Creek Chub		G	N	T	70	140.00	4.86	0.00	0.00	0.00
Common Shiner		I	S	N	377	754.00	26.18	2.58	100.00	3.42
Fathead Minnow		O	C	T	4	8.00	0.28	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	64	128.00	4.44	0.00	0.00	0.00
Central Stoneroller		H	N	N	275	550.00	19.10	0.00	0.00	0.00
Yellow Bullhead		I	C	T	12	24.00	0.83	0.00	0.00	0.00
Largemouth Bass		C	C	N	11	22.00	0.76	0.00	0.00	0.00
Green Sunfish		I	C	T	7	14.00	0.49	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	4.00	0.14	0.00	0.00	0.00
Johnny Darter		I	C	N	10	20.00	0.69	0.00	0.00	0.00
Rainbow Darter		I	S	M	49	98.00	3.40	0.00	0.00	0.00
Fantail Darter		I	C	N	118	236.00	8.19	0.00	0.00	0.00
			Data Totals:		1440	2880.00		2.58		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-021-000**	Stream:	**YELLOW CREEK**	Sample Date:	**2018-08-01**
River Mile:	**4.1**	Location:	YELLOW CREEK DST. GHENT @ YELLOW CREEK RD.		
Time Fished:	2700 sec	Drainage:	22.9 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	212	424.00	12.78	6.28	17.28	14.81
White Sucker		O	S	T	76	152.00	4.58	4.69	12.90	30.83
River Chub		I	N	I	41	82.00	2.47	1.00	2.75	12.20
Blacknose Dace		G	S	T	84	168.00	5.06	0.55	1.50	3.25
Creek Chub		G	N	T	25	50.00	1.51	1.00	2.75	20.00
Common Shiner		I	S	N	172	344.00	10.37	3.18	8.75	9.24
Silverjaw Minnow		I	M	N	17	34.00	1.02	0.12	0.33	3.53
Fathead Minnow		O	C	T	6	12.00	0.36	0.02	0.06	1.67
Bluntnose Minnow		O	C	T	23	46.00	1.39	0.20	0.55	4.35
Central Stoneroller		H	N	N	816	1632.00	49.19	17.70	48.71	10.85
Yellow Bullhead		I	C	T	3	6.00	0.18	0.88	2.42	146.67
Largemouth Bass		C	C	N	2	4.00	0.12	0.02	0.06	5.00
Green Sunfish		I	C	T	7	14.00	0.42	0.20	0.55	14.29
Bluegill Sunfish		I	C	P	4	8.00	0.24	0.04	0.11	5.00
Johnny Darter		I	C	N	9	18.00	0.54	0.02	0.07	1.33
Rainbow Darter		I	S	M	90	180.00	5.42	0.30	0.83	1.69
Fantail Darter		I	C	N	72	144.00	4.34	0.14	0.38	0.97
			Data Totals:		1659	3318.00		36.34		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-021-000**	Stream:	**YELLOW CREEK**	Sample Date:	**2018-09-20**
River Mile:	**0.1**	Location:	YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.		
Time Fished:	1800 sec	Drainage:	31.0 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	21	42.00	2.36	0.29	4.06	6.94
White Sucker		O	S	T	21	42.00	2.36	0.75	10.43	17.86
Blacknose Dace		G	S	T	120	240.00	13.48	0.35	4.87	1.46
Creek Chub		G	N	T	34	68.00	3.82	0.41	5.73	6.06
Common Shiner		I	S	N	61	122.00	6.85	0.80	11.12	6.56
Spotfin Shiner		I	M	N	20	40.00	2.25	0.11	1.53	2.75
Silverjaw Minnow		I	M	N	9	18.00	1.01	0.05	0.70	2.78
Fathead Minnow		O	C	T	1	2.00	0.11	0.01	0.08	3.00
Bluntnose Minnow		O	C	T	10	20.00	1.12	0.04	0.56	2.00
Central Stoneroller		H	N	N	500	1000.00	56.18	3.08	42.83	3.08
Yellow Bullhead		I	C	T	9	18.00	1.01	0.70	9.73	38.89
Stonecat Madtom		I	C	I	2	4.00	0.22	0.01	0.11	2.00
Largemouth Bass		C	C	N	2	4.00	0.22	0.10	1.39	25.00
Green Sunfish		I	C	T	5	10.00	0.56	0.15	2.09	15.00
Johnny Darter		I	C	N	4	8.00	0.45	0.02	0.28	2.50
Rainbow Darter		I	S	M	18	36.00	2.02	0.08	1.17	2.33
Fantail Darter		I	C	N	53	106.00	5.96	0.24	3.34	2.26
			Data Totals:		890	1780.00		7.19		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-021-000**	Stream:	**YELLOW CREEK**	Sample Date:	**2018-07-31**
River Mile:	**0.1**	Location:	YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.		
Time Fished:	2700 sec	Drainage:	31.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	16	24.00	2.60	0.67	17.33	27.81
White Sucker		O	S	T	35	52.50	5.69	0.27	6.90	5.06
River Chub		I	N	I	1	1.50	0.16	0.00	0.12	3.00
Blacknose Dace		G	S	T	95	142.50	15.45	0.38	9.76	2.64
Creek Chub		G	N	T	21	31.50	3.41	0.09	2.28	2.79
Common Shiner		I	S	N	52	78.00	8.46	0.27	6.89	3.40
Spotfin Shiner		I	M	N	9	13.50	1.46	0.09	2.28	6.50
Silverjaw Minnow		I	M	N	6	9.00	0.98	0.03	0.66	2.83
Bluntnose Minnow		O	C	T	2	3.00	0.33	0.01	0.16	2.00
Central Stoneroller		H	N	N	250	375.00	40.65	1.67	43.28	4.44
Yellow Bullhead		I	C	T	3	4.50	0.49	0.01	0.31	2.67
Largemouth Bass		C	C	N	1	1.50	0.16	0.03	0.86	22.00
Green Sunfish		I	C	T	5	7.50	0.81	0.08	2.10	10.80
Johnny Darter		I	C	N	2	3.00	0.33	0.00	0.08	1.00
Greenside Darter		I	S	M	3	4.50	0.49	0.01	0.31	2.67
Rainbow Darter		I	S	M	33	49.50	5.37	0.09	2.34	1.82
Fantail Darter		I	C	N	81	121.50	13.17	0.17	4.34	1.38
			Data Totals:		615	922.50		3.85		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-022-000**	Stream:	**NORTH FORK YELLOW CREEK**			Sample Date:	**2018-08-01**
River Mile:	**0.1**	Location:	N. FK. YELLOW CREEK AT GHENT, UPST. YELLOW CREEK RD.				
Time Fished:	2100 sec	Drainage:	9.8 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	2.00	0.12	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	20	40.00	2.46	0.00	0.00	0.00
White Sucker		O	S	T	76	152.00	9.35	0.00	0.00	0.00
River Chub		I	N	I	1	2.00	0.12	0.00	0.00	0.00
Blacknose Dace		G	S	T	151	302.00	18.57	0.00	0.00	0.00
Creek Chub		G	N	T	114	228.00	14.02	0.00	0.00	0.00
Redside Dace		I	S	I	1	2.00	0.12	0.00	0.00	0.00
Common Shiner		I	S	N	1	2.00	0.12	0.00	0.00	0.00
Fathead Minnow		O	C	T	19	38.00	2.34	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	1	2.00	0.12	0.00	0.00	0.00
Central Stoneroller		H	N	N	199	398.00	24.48	0.00	0.00	0.00
Largemouth Bass		C	C	N	6	12.00	0.74	0.00	0.00	0.00
Green Sunfish		I	C	T	21	42.00	2.58	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	7	14.00	0.86	0.00	0.00	0.00
Johnny Darter		I	C	N	3	6.00	0.37	0.00	0.00	0.00
Rainbow Darter		I	S	M	64	128.00	7.87	0.00	0.00	0.00
Fantail Darter		I	C	N	128	256.00	15.74	0.00	0.00	0.00
			Data Totals:		813	1626.00		0.00		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-023-000**	Stream:	**WOODWARD CREEK**	Sample Date:	**2019-07-23**
River Mile:	**0.6**	Location:	WOODWARD CREEK @ AKRON-PENINSULA RD.		
Time Fished:	1800 sec	Drainage:	2.9 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	40	80.00	8.70	0.00	0.00	0.00
Common Carp		O	M	T	1	2.00	0.22	0.00	0.00	0.00
Golden Shiner		I	M	T	6	12.00	1.30	0.00	0.00	0.00
Blacknose Dace		G	S	T	124	248.00	26.96	0.00	0.00	0.00
Creek Chub		G	N	T	177	354.00	38.48	0.00	0.00	0.00
Fathead Minnow		O	C	T	2	4.00	0.43	0.00	0.00	0.00
Central Stoneroller		H	N	N	19	38.00	4.13	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	2.00	0.22	0.00	0.00	0.00
Green Sunfish		I	C	T	50	100.00	10.87	0.00	0.00	0.00
Fantail Darter		I	C	N	40	80.00	8.70	0.00	0.00	0.00
			Data Totals:		460	920.00		0.00		
			Number of Species:		10					
			Number of Hybrids:		0					

River Code:	**19-023-000**	Stream:	**WOODWARD CREEK**	Sample Date:	**2018-07-31**
River Mile:	**0.6**	Location:	WOODWARD CREEK @ AKRON-PENINSULA RD.		
Time Fished:	1800 sec	Drainage:	2.9 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	20	40.00	11.63	0.00	0.00	0.00
Blacknose Dace		G	S	T	89	178.00	51.74	0.00	0.00	0.00
Creek Chub		G	N	T	41	82.00	23.84	0.00	0.00	0.00
Yellow Bullhead		I	C	T	1	2.00	0.58	0.00	0.00	0.00
Green Sunfish		I	C	T	13	26.00	7.56	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	4.00	1.16	0.00	0.00	0.00
Fantail Darter		I	C	N	6	12.00	3.49	0.00	0.00	0.00
			Data Totals:		172	344.00		0.00		
			Number of Species:		7					
			Number of Hybrids:		0					

River Code:	**19-024-000**	Stream:	**MUD BROOK**	Sample Date:	**2018-07-30**
River Mile:	**8.3**	Location:	MUD BROOK AT STOW @ SEASONS RD.		
Time Fished:	1800 sec	Drainage:	14.9 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	2	4.00	1.85	0.00	0.00	0.00
Redfin Pickerel		P	M	P	1	2.00	0.93	0.00	0.00	0.00
White Sucker		O	S	T	28	56.00	25.93	0.00	0.00	0.00
Creek Chub		G	N	T	25	50.00	23.15	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	3	6.00	2.78	0.00	0.00	0.00
Yellow Bullhead		I	C	T	6	12.00	5.56	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	4.00	1.85	0.00	0.00	0.00
Green Sunfish		I	C	T	11	22.00	10.19	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	14	28.00	12.96	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	7	14.00	6.48	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.93	0.00	0.00	0.00
Yellow Perch			M	N	5	10.00	4.63	0.00	0.00	0.00
Johnny Darter		I	C	N	3	6.00	2.78	0.00	0.00	0.00
			Data Totals:		108	216.00		0.00		
			Number of Species:		13					
			Number of Hybrids:		1					

River Code:	**19-024-000**	Stream:	**MUD BROOK**			Sample Date:	**2018-09-20**
River Mile:	**0.2**	Location:	MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.				
Time Fished:	1800 sec	Drainage:	29.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	30	45.00	4.07	1.01	15.88	22.50
White Sucker		O	S	T	9	13.50	1.22	0.14	2.12	10.00
River Chub		I	N	I	10	15.00	1.36	0.15	2.35	10.00
Blacknose Dace		G	S	T	145	217.50	19.65	0.36	5.68	1.67
Creek Chub		G	N	T	49	73.50	6.64	0.98	15.29	13.27
Common Shiner		I	S	N	142	213.00	19.24	1.49	23.33	6.99
Spotfin Shiner		I	M	N	4	6.00	0.54	0.02	0.28	3.00
Silverjaw Minnow		I	M	N	12	18.00	1.63	0.04	0.56	2.00
Bluntnose Minnow		O	C	T	8	12.00	1.08	0.05	0.71	3.75
Central Stoneroller		H	N	N	235	352.50	31.84	1.28	19.99	3.62
Yellow Bullhead		I	C	T	5	7.50	0.68	0.45	7.06	60.00
Smallmouth Bass		C	C	M	1	1.50	0.14	0.08	1.18	50.00
Green Sunfish		I	C	T	3	4.50	0.41	0.05	0.82	11.67
Bluegill Sunfish		I	C	P	4	6.00	0.54	0.11	1.65	17.50
Greenside Darter		I	S	M	37	55.50	5.01	0.11	1.76	2.03
Rainbow Darter		I	S	M	5	7.50	0.68	0.02	0.24	2.00
Fantail Darter		I	C	N	39	58.50	5.28	0.07	1.10	1.20
			Data Totals:		738	1107.00		6.38		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-024-000**	Stream:	**MUD BROOK**			Sample Date:	**2018-07-30**
River Mile:	**0.2**	Location:	MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.				
Time Fished:	1800 sec	Drainage:	29.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.18 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	6	10.29	2.25	0.29	7.11	28.60
White Sucker		O	S	T	15	25.71	5.62	0.09	2.07	3.33
River Chub		I	N	I	4	6.86	1.50	0.07	1.66	10.00
Blacknose Dace		G	S	T	65	111.43	24.34	0.16	3.98	1.48
Creek Chub		G	N	T	24	41.14	8.99	0.27	6.63	6.67
Common Shiner		I	S	N	6	10.29	2.25	0.33	7.91	31.83
Spotfin Shiner		I	M	N	1	1.71	0.37	0.02	0.41	10.00
Silverjaw Minnow		I	M	N	9	15.43	3.37	0.05	1.24	3.33
Central Stoneroller		H	N	N	109	186.86	40.82	1.17	28.28	6.26
Yellow Bullhead		I	C	T	6	10.29	2.25	0.81	19.48	78.33
Smallmouth Bass		C	C	M	2	3.43	0.75	0.69	16.58	200.00
Green Sunfish		I	C	T	3	5.14	1.12	0.10	2.40	19.33
Bluegill Sunfish		I	C	P	1	1.71	0.37	0.03	0.83	20.00
Greenside Darter		I	S	M	3	5.14	1.12	0.02	0.41	3.33
Rainbow Darter		I	S	M	4	6.86	1.50	0.02	0.50	3.00
Fantail Darter		I	C	N	9	15.43	3.37	0.02	0.50	1.33
			Data Totals:		267	457.71		4.14		
			Number of Species:		16					
			Number of Hybrids:		0					

River Code:	**19-025-000**	Stream:	**POWERS BROOK**			Sample Date:	**2018-09-04**
River Mile:	**0.3**	Location:	POWERS BROOK DST. HUDSON #6 WWTP @ SOD FARM RD.				
Time Fished:	2700 sec	Drainage:	7.1 sq mi	Depth:		Data Source:	
Dist Fished:	0.18 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	27	46.29	4.63	0.00	0.00	0.00
Golden Shiner		I	M	T	2	3.43	0.34	0.00	0.00	0.00
Creek Chub		G	N	T	96	164.57	16.47	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	260	445.71	44.60	0.00	0.00	0.00
Central Stoneroller		H	N	N	39	66.86	6.69	0.00	0.00	0.00
Yellow Bullhead		I	C	T	19	32.57	3.26	0.00	0.00	0.00
Black Crappie		I	C	N	3	5.14	0.51	0.00	0.00	0.00
Largemouth Bass		C	C	N	10	17.14	1.72	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	1	1.71	0.17	0.00	0.00	0.00
Green Sunfish		I	C	T	48	82.29	8.23	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	36	61.71	6.17	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	9	15.43	1.54	0.00	0.00	0.00
Hybrid x Sunfish				N	1	1.71	0.17	0.00	0.00	0.00
Johnny Darter		I	C	N	32	54.86	5.49	0.00	0.00	0.00
			Data Totals:		583	999.43		0.00		
			Number of Species:		14					
			Number of Hybrids:		1					

River Code:	**19-026-000**	Stream:	**FISH CREEK**			Sample Date:	**2018-07-30**
River Mile:	**0.4**	Location:	FISH CREEK AT KENT @ N. RIVER RD.				
Time Fished:	2100 sec	Drainage:	11.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.18 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	1.71	0.20	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	6	10.29	1.20	0.00	0.00	0.00
White Sucker		O	S	T	25	42.86	4.98	0.00	0.00	0.00
Blacknose Dace		G	S	T	28	48.00	5.58	0.00	0.00	0.00
Creek Chub		G	N	T	109	186.86	21.71	0.00	0.00	0.00
Common Shiner		I	S	N	13	22.29	2.59	0.00	0.00	0.00
Spotfin Shiner		I	M	N	2	3.43	0.40	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	91	156.00	18.13	0.00	0.00	0.00
Central Stoneroller		H	N	N	94	161.14	18.73	0.00	0.00	0.00
Yellow Bullhead		I	C	T	4	6.86	0.80	0.00	0.00	0.00
Largemouth Bass		C	C	N	13	22.29	2.59	0.00	0.00	0.00
Green Sunfish		I	C	T	29	49.71	5.78	0.00	0.00	0.00
Johnny Darter		I	C	N	65	111.43	12.95	0.00	0.00	0.00
Greenside Darter		I	S	M	22	37.71	4.38	0.00	0.00	0.00
			Data Totals:		502	860.57		0.00		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-027-000**	Stream:	**PLUM CREEK**			Sample Date:	**2018-09-19**
River Mile:	**3.7**	Location:	PLUM CREEK @ TALLMADGE RD.				
Time Fished:	2100 sec	Drainage:	4.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.12 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	3	7.20	1.35	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	3	7.20	1.35	0.00	0.00	0.00
White Sucker		O	S	T	2	4.80	0.90	0.00	0.00	0.00
Blacknose Dace		G	S	T	13	31.20	5.86	0.00	0.00	0.00
Creek Chub		G	N	T	89	213.60	40.09	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	42	100.80	18.92	0.00	0.00	0.00
Central Stoneroller		H	N	N	1	2.40	0.45	0.00	0.00	0.00
Largemouth Bass		C	C	N	3	7.20	1.35	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	1	2.40	0.45	0.00	0.00	0.00
Green Sunfish		I	C	T	50	120.00	22.52	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	1	2.40	0.45	0.00	0.00	0.00
Johnny Darter		I	C	N	11	26.40	4.95	0.00	0.00	0.00
Greenside Darter		I	S	M	2	4.80	0.90	0.00	0.00	0.00
Fantail Darter		I	C	N	1	2.40	0.45	0.00	0.00	0.00
			Data Totals:		222	532.80		0.00		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-027-000**	Stream:	**PLUM CREEK**			Sample Date:	**2018-09-19**
River Mile:	**0.2**	Location:	PLUM CREEK DST. KENT WTP @ CHERRY ST.				
Time Fished:	1800 sec	Drainage:	13.1 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Gizzard Shad		O	M	N	3	6.00	0.46	0.00	0.00	0.00
Redfin Pickerel		P	M	P	1	2.00	0.15	0.00	0.00	0.00
Northern Pike		P	M	N	1	2.00	0.15	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	19	38.00	2.93	0.00	0.00	0.00
White Sucker		O	S	T	42	84.00	6.47	0.00	0.00	0.00
Creek Chub		G	N	T	76	152.00	11.71	0.00	0.00	0.00
Common Shiner		I	S	N	89	178.00	13.71	0.00	0.00	0.00
Spotfin Shiner		I	M	N	7	14.00	1.08	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	179	358.00	27.58	0.00	0.00	0.00
Central Stoneroller		H	N	N	2	4.00	0.31	0.00	0.00	0.00
Yellow Bullhead		I	C	T	11	22.00	1.69	0.00	0.00	0.00
Rock Bass		C	C	N	9	18.00	1.39	0.00	0.00	0.00
Smallmouth Bass		C	C	M	1	2.00	0.15	0.00	0.00	0.00
Largemouth Bass		C	C	N	17	34.00	2.62	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	1	2.00	0.15	0.00	0.00	0.00
Green Sunfish		I	C	T	24	48.00	3.70	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	5	10.00	0.77	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.15	0.00	0.00	0.00
Yellow Perch			M	N	1	2.00	0.15	0.00	0.00	0.00
Johnny Darter		I	C	N	83	166.00	12.79	0.00	0.00	0.00
Greenside Darter		I	S	M	67	134.00	10.32	0.00	0.00	0.00
Fantail Darter		I	C	N	10	20.00	1.54	0.00	0.00	0.00
			Data Totals:		649	1298.00		0.00		
			Number of Species:		22					
			Number of Hybrids:		1					

River Code:	**19-027-001**	Stream:	**TRIB. TO PLUM CK.(2.77)@ SUNNYBROOK RD**	Sample Date:	**2018-08-16**
River Mile:	**0.4**	Location:	TRIB. TO PLUM CK.(2.77) @ SUNNYBROOK RD.		
Time Fished:	3600 sec	Drainage:	4.2 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	7	14.00	1.10	0.00	0.00	0.00
White Sucker		O	S	T	31	62.00	4.86	0.00	0.00	0.00
Blacknose Dace		G	S	T	226	452.00	35.42	0.00	0.00	0.00
Creek Chub		G	N	T	344	688.00	53.92	0.00	0.00	0.00
Central Stoneroller		H	N	N	2	4.00	0.31	0.00	0.00	0.00
Green Sunfish		I	C	T	4	8.00	0.63	0.00	0.00	0.00
Johnny Darter		I	C	N	24	48.00	3.76	0.00	0.00	0.00
			Data Totals:		638	1276.00		0.00		
			Number of Species:		7					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**	Sample Date:	**2018-09-06**
River Mile:	**18.7**	Location:	BREAKNECK CREEK @ JOHNNYCAKE RD.		
Time Fished:	1800 sec	Drainage:	4.2 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	2	4.00	1.28	0.00	0.00	0.00
Redfin Pickerel		P	M	P	15	30.00	9.62	0.00	0.00	0.00
Spotted Sucker		I	S	N	1	2.00	0.64	0.00	0.00	0.00
Blacknose Dace		G	S	T	1	2.00	0.64	0.00	0.00	0.00
Creek Chub		G	N	T	3	6.00	1.92	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	29	58.00	18.59	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	2.00	0.64	0.00	0.00	0.00
Green Sunfish		I	C	T	7	14.00	4.49	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	6	12.00	3.85	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	3	6.00	1.92	0.00	0.00	0.00
Blackside Darter		I	S	N	1	2.00	0.64	0.00	0.00	0.00
Johnny Darter		I	C	N	38	76.00	24.36	0.00	0.00	0.00
Greenside Darter		I	S	M	42	84.00	26.92	0.00	0.00	0.00
Fantail Darter		I	C	N	7	14.00	4.49	0.00	0.00	0.00
			Data Totals:		156	312.00		0.00		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**	Sample Date:	**2018-08-30**
River Mile:	**14.6**	Location:	BREAKNECK CREEK UPST. PORTAGE LANDFILL		
Time Fished:	3600 sec	Drainage:	42.3 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	1.50	0.14	0.01	0.13	6.00
Redfin Pickerel		P	M	P	21	31.50	2.97	0.64	9.43	20.32
Northern Hog Sucker		I	S	M	4	6.00	0.57	1.03	15.16	171.50
White Sucker		O	S	T	31	46.50	4.38	0.26	3.78	5.52
Spotted Sucker		I	S	N	7	10.50	0.99	0.03	0.44	2.86
Creek Chub		G	N	T	12	18.00	1.70	0.85	12.55	47.33
Bluntnose Minnow		O	C	T	338	507.00	47.81	1.18	17.45	2.34
Yellow Bullhead		I	C	T	7	10.50	0.99	0.60	8.80	56.86
Black Crappie		I	C	N	1	1.50	0.14	0.01	0.13	6.00
Rock Bass		C	C	N	8	12.00	1.13	0.43	6.37	36.00
Largemouth Bass		C	C	N	2	3.00	0.28	0.12	1.81	41.00
Green Sunfish		I	C	T	14	21.00	1.98	0.39	5.79	18.71
Bluegill Sunfish		I	C	P	4	6.00	0.57	0.14	2.12	24.00
Pumpkinseed Sunfish		I	C	P	4	6.00	0.57	0.21	3.09	35.00
Hybrid x Sunfish				N	1	1.50	0.14	0.04	0.53	24.00
Blackside Darter		I	S	N	12	18.00	1.70	0.10	1.41	5.33
Logperch		I	S	M	2	3.00	0.28	0.06	0.84	19.00
Johnny Darter		I	C	N	85	127.50	12.02	0.17	2.44	1.30
Greenside Darter		I	S	M	121	181.50	17.11	0.39	5.71	2.14
Fantail Darter		I	C	N	32	48.00	4.53	0.14	1.99	2.81
			Data Totals:		707	1060.50		6.79		
			Number of Species:		20					
			Number of Hybrids:		1					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**			Sample Date:	**2018-07-24**
River Mile:	**14.6**	Location:	BREAKNECK CREEK UPST. PORTAGE LANDFILL				
Time Fished:	3600 sec	Drainage:	42.3 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	20	30.00	2.45	0.34	6.27	11.37
White Sucker		O	S	T	37	55.50	4.53	0.10	1.92	1.89
Golden Shiner		I	M	T	1	1.50	0.12	0.01	0.11	4.00
Creek Chub		G	N	T	35	52.50	4.29	1.46	26.82	27.79
Bluntnose Minnow		O	C	T	415	622.50	50.86	1.12	20.55	1.80
Yellow Bullhead		I	C	T	8	12.00	0.98	0.69	12.74	57.75
Rock Bass		C	C	N	12	18.00	1.47	0.56	10.31	31.17
Green Sunfish		I	C	T	15	22.50	1.84	0.31	5.68	13.73
Bluegill Sunfish		I	C	P	3	4.50	0.37	0.05	0.94	11.33
Hybrid x Sunfish				N	1	1.50	0.12	0.01	0.22	8.00
Blackside Darter		I	S	N	19	28.50	2.33	0.13	2.44	4.67
Johnny Darter		I	C	N	138	207.00	16.91	0.29	5.41	1.42
Greenside Darter		I	S	M	96	144.00	11.76	0.30	5.58	2.11
Fantail Darter		I	C	N	16	24.00	1.96	0.05	0.99	2.25
			Data Totals:		816	1224.00		5.44		
			Number of Species:		14					
			Number of Hybrids:		1					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**	Sample Date:	**2018-08-29**
River Mile:	**7.0**	Location:	BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.		
Time Fished:	2700 sec	Drainage:	56.2 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	17	25.50	2.28	0.82	11.35	32.00
Northern Hog Sucker		I	S	M	2	3.00	0.27	0.39	5.43	130.00
White Sucker		O	S	T	6	9.00	0.81	1.67	23.29	186.00
Spotted Sucker		I	S	N	14	21.00	1.88	0.11	1.48	5.08
Creek Chub		G	N	T	8	12.00	1.07	0.04	0.54	3.25
Common Shiner		I	S	N	1	1.50	0.13	0.02	0.21	10.00
Bluntnose Minnow		O	C	T	281	421.50	37.72	0.91	12.71	2.17
Yellow Bullhead		I	C	T	4	6.00	0.54	0.55	7.60	91.00
Rock Bass		C	C	N	14	21.00	1.88	0.75	10.43	35.69
Smallmouth Bass		C	C	M	2	3.00	0.27	0.40	5.59	134.00
Green Sunfish		I	C	T	3	4.50	0.40	0.15	2.09	33.33
Bluegill Sunfish		I	C	P	4	6.00	0.54	0.26	3.55	42.50
Pumpkinseed Sunfish		I	C	P	2	3.00	0.27	0.03	0.42	10.00
Blackside Darter		I	S	N	3	4.50	0.40	0.01	0.17	2.67
Logperch		I	S	M	1	1.50	0.13	0.03	0.46	22.00
Johnny Darter		I	C	N	84	126.00	11.28	0.19	2.59	1.48
Greenside Darter		I	S	M	166	249.00	22.28	0.54	7.46	2.15
Fantail Darter		I	C	N	133	199.50	17.85	0.33	4.65	1.67
			Data Totals:		745	1117.50		7.19		
			Number of Species:		18					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**	Sample Date:	**2018-07-26**
River Mile:	**7.0**	Location:	BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.		
Time Fished:	3600 sec	Drainage:	56.2 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	21	31.50	3.00	1.39	15.56	44.11
Northern Hog Sucker		I	S	M	5	7.50	0.72	0.76	8.47	100.80
White Sucker		O	S	T	8	12.00	1.14	0.24	2.69	20.00
Creek Chub		G	N	T	6	9.00	0.86	0.15	1.71	17.00
Common Shiner		I	S	N	1	1.50	0.14	0.01	0.10	6.00
Bluntnose Minnow		O	C	T	315	472.50	45.06	0.84	9.43	1.78
Yellow Bullhead		I	C	T	15	22.50	2.15	1.75	19.59	77.73
Rock Bass		C	C	N	26	39.00	3.72	2.03	22.68	51.92
Smallmouth Bass		C	C	M	1	1.50	0.14	0.34	3.76	224.00
Largemouth Bass		C	C	N	3	4.50	0.43	0.04	0.44	8.67
Green Sunfish		I	C	T	5	7.50	0.72	0.13	1.48	17.60
Bluegill Sunfish		I	C	P	6	9.00	0.86	0.17	1.92	19.00
Pumpkinseed Sunfish		I	C	P	2	3.00	0.29	0.10	1.11	33.00
Blackside Darter		I	S	N	6	9.00	0.86	0.05	0.60	6.00
Johnny Darter		I	C	N	65	97.50	9.30	0.13	1.44	1.32
Greenside Darter		I	S	M	100	150.00	14.31	0.53	5.91	3.52
Fantail Darter		I	C	N	114	171.00	16.31	0.28	3.10	1.62
			Data Totals:		699	1048.50		8.93		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**			Sample Date:	**2018-08-29**
River Mile:	**3.1**	Location:	BREAKNECK CREEK @ POWDER MILL RD.				
Time Fished:	3600 sec	Drainage:	60.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	1.50	0.21	0.00	0.02	2.00
Redfin Pickerel		P	M	P	16	24.00	3.33	0.53	4.28	22.00
Northern Pike		P	M	N	1	1.50	0.21	0.21	1.70	140.00
Northern Hog Sucker		I	S	M	14	21.00	2.91	2.98	24.20	142.00
White Sucker		O	S	T	40	60.00	8.32	4.25	34.45	70.75
Spotted Sucker		I	S	N	5	7.50	1.04	0.03	0.22	3.60
Creek Chub		G	N	T	7	10.50	1.46	0.02	0.19	2.29
Common Shiner		I	S	N	1	1.50	0.21	0.01	0.07	6.00
Spotfin Shiner		I	M	N	1	1.50	0.21	0.01	0.05	4.00
Bluntnose Minnow		O	C	T	71	106.50	14.76	0.23	1.83	2.11
Yellow Bullhead		I	C	T	14	21.00	2.91	1.55	12.54	73.57
Brook Silverside		I	M	M	1	1.50	0.21	0.00	0.02	2.00
Black Crappie		I	C	N	1	1.50	0.21	0.11	0.93	76.00
Rock Bass		C	C	N	7	10.50	1.46	0.73	5.91	69.33
Smallmouth Bass		C	C	M	14	21.00	2.91	0.75	6.11	35.86
Green Sunfish		I	C	T	3	4.50	0.62	0.15	1.21	33.00
Yellow Perch			M	N	1	1.50	0.21	0.03	0.24	20.00
Blackside Darter		I	S	N	2	3.00	0.42	0.02	0.15	6.00
Logperch		I	S	M	2	3.00	0.42	0.08	0.61	25.00
Johnny Darter		I	C	N	29	43.50	6.03	0.05	0.42	1.20
Greenside Darter		I	S	M	249	373.50	51.77	0.59	4.82	1.59
Fantail Darter		I	C	N	1	1.50	0.21	0.00	0.02	2.00
			Data Totals:		481	721.50		12.32		
			Number of Species:		22					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**			Sample Date:	**2018-08-06**
River Mile:	**3.1**	Location:	BREAKNECK CREEK @ POWDER MILL RD.				
Time Fished:	2700 sec	Drainage:	60.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	2	3.00	0.26	0.01	0.10	4.00
Redfin Pickerel		P	M	P	29	43.50	3.82	0.54	4.62	12.42
Northern Pike		P	M	N	1	1.50	0.13	0.10	0.85	66.00
Northern Hog Sucker		I	S	M	14	21.00	1.84	2.60	22.21	123.79
White Sucker		O	S	T	21	31.50	2.76	3.27	27.94	103.80
Spotted Sucker		I	S	N	2	3.00	0.26	0.01	0.10	4.00
Golden Shiner		I	M	T	1	1.50	0.13	0.00	0.03	2.00
Creek Chub		G	N	T	15	22.50	1.97	0.03	0.28	1.47
Common Shiner		I	S	N	52	78.00	6.84	0.84	7.15	10.73
Bluntnose Minnow		O	C	T	225	337.50	29.61	1.06	9.06	3.14
Yellow Bullhead		I	C	T	18	27.00	2.37	1.21	10.33	44.78
Black Crappie		I	C	N	2	3.00	0.26	0.02	0.13	5.00
Rock Bass		C	C	N	14	21.00	1.84	0.55	4.68	26.07
Smallmouth Bass		C	C	M	4	6.00	0.53	0.03	0.28	5.50
Largemouth Bass		C	C	N	1	1.50	0.13	0.02	0.13	10.00
Green Sunfish		I	C	T	5	7.50	0.66	0.12	1.00	15.60
Bluegill Sunfish		I	C	P	6	9.00	0.79	0.33	2.85	37.00
Yellow Perch			M	N	1	1.50	0.13	0.02	0.13	10.00
Blackside Darter		I	S	N	4	6.00	0.53	0.01	0.10	2.00
Logperch		I	S	M	4	6.00	0.53	0.13	1.08	21.00
Johnny Darter		I	C	N	30	45.00	3.95	0.05	0.45	1.17
Greenside Darter		I	S	M	297	445.50	39.08	0.72	6.17	1.62
Fantail Darter		I	C	N	12	18.00	1.58	0.04	0.34	2.22
			Data Totals:		760	1140.00		11.70		
			Number of Species:		23					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**			Sample Date:	**2018-08-29**
River Mile:	**0.1**	Location:	BREAKNECK CREEK NEAR MOUTH				
Time Fished:	2700 sec	Drainage:	78.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	16	24.00	4.41	0.63	3.77	26.13
Northern Pike		P	M	N	1	1.50	0.28	0.30	1.80	200.00
Northern Hog Sucker		I	S	M	34	51.00	9.37	8.36	50.26	163.91
White Sucker		O	S	T	4	6.00	1.10	0.35	2.07	57.50
River Chub		I	N	I	119	178.50	32.78	2.27	13.64	12.71
Creek Chub		G	N	T	4	6.00	1.10	0.02	0.11	3.00
Common Shiner		I	S	N	13	19.50	3.58	0.14	0.83	7.08
Bluntnose Minnow		O	C	T	7	10.50	1.93	0.06	0.34	5.43
Yellow Bullhead		I	C	T	13	19.50	3.58	1.28	7.67	65.45
Rock Bass		C	C	N	11	16.50	3.03	0.76	4.55	45.82
Smallmouth Bass		C	C	M	30	45.00	8.26	1.41	8.46	31.27
Largemouth Bass		C	C	N	3	4.50	0.83	0.04	0.22	8.00
Green Sunfish		I	C	T	5	7.50	1.38	0.15	0.92	20.40
Bluegill Sunfish		I	C	P	4	6.00	1.10	0.26	1.57	43.50
Pumpkinseed Sunfish		I	C	P	1	1.50	0.28	0.04	0.22	24.00
Blackside Darter		I	S	N	1	1.50	0.28	0.01	0.04	4.00
Logperch		I	S	M	6	9.00	1.65	0.20	1.22	22.50
Johnny Darter		I	C	N	5	7.50	1.38	0.02	0.09	2.00
Greenside Darter		I	S	M	79	118.50	21.76	0.35	2.08	2.92
Fantail Darter		I	C	N	7	10.50	1.93	0.03	0.15	2.40
			Data Totals:		363	544.50		16.63		
			Number of Species:		20					
			Number of Hybrids:		0					

River Code:	**19-028-000**	Stream:	**BREAKNECK CREEK**			Sample Date:	**2018-08-06**
River Mile:	**0.1**	Location:	BREAKNECK CREEK NEAR MOUTH				
Time Fished:	2700 sec	Drainage:	78.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	4	6.00	0.48	0.01	0.05	2.00
Redfin Pickerel		P	M	P	33	49.50	3.99	0.54	2.16	10.84
Northern Pike		P	M	N	1	1.50	0.12	0.15	0.59	98.00
Northern Hog Sucker		I	S	M	75	112.50	9.06	10.56	42.58	93.87
White Sucker		O	S	T	7	10.50	0.85	0.17	0.70	16.57
Golden Shiner		I	M	T	1	1.50	0.12	0.04	0.15	24.00
River Chub		I	N	I	302	453.00	36.47	5.73	23.12	12.66
Creek Chub		G	N	T	2	3.00	0.24	0.01	0.02	2.00
Common Shiner		I	S	N	29	43.50	3.50	0.59	2.39	13.63
Bluntnose Minnow		O	C	T	80	120.00	9.66	0.31	1.27	2.62
Central Stoneroller		H	N	N	1	1.50	0.12	0.00	0.01	2.00
Yellow Bullhead		I	C	T	29	43.50	3.50	2.63	10.61	60.48
Rock Bass		C	C	N	11	16.50	1.33	0.98	3.97	59.64
Smallmouth Bass		C	C	M	29	43.50	3.50	1.62	6.54	37.29
Largemouth Bass		C	C	N	7	10.50	0.85	0.05	0.18	4.29
Green Sunfish		I	C	T	6	9.00	0.72	0.22	0.87	24.00
Bluegill Sunfish		I	C	P	2	3.00	0.24	0.15	0.60	50.00
Pumpkinseed Sunfish		I	C	P	2	3.00	0.24	0.01	0.04	3.00
Hybrid x Sunfish				N	1	1.50	0.12	0.08	0.31	52.00
Yellow Perch			M	N	1	1.50	0.12	0.02	0.07	12.00
Blackside Darter		I	S	N	1	1.50	0.12	0.01	0.02	4.00
Logperch		I	S	M	8	12.00	0.97	0.24	0.96	19.75
Johnny Darter		I	C	N	20	30.00	2.42	0.03	0.11	0.90
Greenside Darter		I	S	M	172	258.00	20.77	0.65	2.60	2.50
Fantail Darter		I	C	N	4	6.00	0.48	0.02	0.06	2.50
			Data Totals:		828	1242.00		24.80		
			Number of Species:		25					
			Number of Hybrids:		1					

River Code:	**19-028-001**	Stream:	**BRIMFIELD DITCH**	Sample Date:	**2018-07-25**
River Mile:	**0.1**	Location:	BRIMFIELD DITCH NEAR KENT, NEAR MOUTH		
Time Fished:	3600 sec	Drainage:	5.0 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	4	8.00	2.86	0.00	0.00	0.00
Redfin Pickerel		P	M	P	16	32.00	11.43	0.00	0.00	0.00
White Sucker		O	S	T	1	2.00	0.71	0.00	0.00	0.00
Creek Chub		G	N	T	8	16.00	5.71	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	22	44.00	15.71	0.00	0.00	0.00
Yellow Bullhead		I	C	T	13	26.00	9.29	0.00	0.00	0.00
Black Crappie		I	C	N	2	4.00	1.43	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	2.00	0.71	0.00	0.00	0.00
Green Sunfish		I	C	T	2	4.00	1.43	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	17	34.00	12.14	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	8	16.00	5.71	0.00	0.00	0.00
Johnny Darter		I	C	N	44	88.00	31.43	0.00	0.00	0.00
Greenside Darter		I	S	M	2	4.00	1.43	0.00	0.00	0.00
			Data Totals:		140	280.00		0.00		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-028-002**	Stream:	**WAHOO DITCH**	Sample Date:	**2018-07-25**
River Mile:	**1.2**	Location:	WAHOO DITCH AT RAVENNA @ MAIN ST.		
Time Fished:	1800 sec	Drainage:	3.9 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	6	12.00	0.69	0.00	0.00	0.00
White Sucker		O	S	T	203	406.00	23.33	0.00	0.00	0.00
Blacknose Dace		G	S	T	149	298.00	17.13	0.00	0.00	0.00
Creek Chub		G	N	T	171	342.00	19.66	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	74	148.00	8.51	0.00	0.00	0.00
Green Sunfish		I	C	T	8	16.00	0.92	0.00	0.00	0.00
Johnny Darter		I	C	N	136	272.00	15.63	0.00	0.00	0.00
Brook Stickleback		I	C	N	123	246.00	14.14	0.00	0.00	0.00
			Data Totals:		870	1740.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		0					

River Code:	**19-028-002**	Stream:	**WAHOO DITCH**	Sample Date:	**2018-07-25**
River Mile:	**0.4**	Location:	WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.		
Time Fished:	1500 sec	Drainage:	5.5 sq mi	Depth:	Data Source:
Dist Fished:	0.18 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	15	25.71	5.30	0.00	0.00	0.00
Redfin Pickerel		P	M	P	16	27.43	5.65	0.00	0.00	0.00
White Sucker		O	S	T	5	8.57	1.77	0.00	0.00	0.00
Creek Chub		G	N	T	18	30.86	6.36	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	193	330.86	68.20	0.00	0.00	0.00
Yellow Bullhead		I	C	T	3	5.14	1.06	0.00	0.00	0.00
Green Sunfish		I	C	T	6	10.29	2.12	0.00	0.00	0.00
Johnny Darter		I	C	N	25	42.86	8.83	0.00	0.00	0.00
Greenside Darter		I	S	M	2	3.43	0.71	0.00	0.00	0.00
			Data Totals:		283	485.14		0.00		
			Number of Species:		9					
			Number of Hybrids:		0					

River Code:	**19-028-004**	Stream:	**CONGRESS LAKE OUTLET (FEEDER CANAL)**			Sample Date:	**2018-08-30**
River Mile:	**11.7**	Location:	FEEDER CANAL (CONGRESS LAKE OUTLET) UPST. OUTFALL				
Time Fished:	2700 sec	Drainage:	25.6 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	17	25.50	2.73	0.14	0.45	5.53
Redfin Pickerel		P	M	P	6	9.00	0.96	0.21	0.65	22.80
Northern Hog Sucker		I	S	M	3	4.50	0.48	1.28	4.06	284.33
White Sucker		O	S	T	122	183.00	19.58	23.44	74.42	128.11
Blacknose Dace		G	S	T	23	34.50	3.69	0.05	0.14	1.30
Creek Chub		G	N	T	89	133.50	14.29	3.89	12.34	29.13
Bluntnose Minnow		O	C	T	43	64.50	6.90	0.30	0.95	4.62
Yellow Bullhead		I	C	T	1	1.50	0.16	0.27	0.85	178.00
Rock Bass		C	C	N	1	1.50	0.16	0.12	0.38	80.00
Largemouth Bass		C	C	N	3	4.50	0.48	0.02	0.07	4.67
Green Sunfish		I	C	T	23	34.50	3.69	0.67	2.12	19.39
Bluegill Sunfish		I	C	P	4	6.00	0.64	0.08	0.24	12.50
Pumpkinseed Sunfish		I	C	P	5	7.50	0.80	0.08	0.27	11.20
Hybrid x Sunfish				N	1	1.50	0.16	0.05	0.14	30.00
Blackside Darter		I	S	N	4	6.00	0.64	0.02	0.08	4.00
Logperch		I	S	M	3	4.50	0.48	0.11	0.35	24.67
Johnny Darter		I	C	N	135	202.50	21.67	0.24	0.75	1.16
Greenside Darter		I	S	M	62	93.00	9.95	0.35	1.10	3.73
Fantail Darter		I	C	N	78	117.00	12.52	0.20	0.64	1.71
			Data Totals:		623	934.50		31.50		
			Number of Species:		19					
			Number of Hybrids:		1					

River Code:	**19-028-004**	Stream:	**CONGRESS LAKE OUTLET (FEEDER CANAL)**			Sample Date:	**2018-07-12**
River Mile:	**11.7**	Location:	FEEDER CANAL (CONGRESS LAKE OUTLET) UPST. OUTFALL				
Time Fished:	2700 sec	Drainage:	25.6 sq mi	Depth:		Data Source:	
Dist Fished:	0.16 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	22	41.25	4.41	0.25	0.65	6.09
Redfin Pickerel		P	M	P	14	26.25	2.81	0.62	1.60	23.57
Northern Hog Sucker		I	S	M	6	11.25	1.20	1.30	3.36	115.67
White Sucker		O	S	T	84	157.50	16.83	29.48	76.08	187.20
Blacknose Dace		G	S	T	1	1.88	0.20	0.00	0.01	2.00
Creek Chub		G	N	T	84	157.50	16.83	4.45	11.49	28.27
Bluntnose Minnow		O	C	T	4	7.50	0.80	0.05	0.14	7.00
Yellow Bullhead		I	C	T	1	1.88	0.20	0.14	0.37	76.00
Green Sunfish		I	C	T	32	60.00	6.41	0.98	2.54	16.38
Bluegill Sunfish		I	C	P	7	13.13	1.40	0.22	0.57	16.86
Redear Sunfish		I	C	N	1	1.88	0.20	0.02	0.04	8.00
Pumpkinseed Sunfish		I	C	P	6	11.25	1.20	0.09	0.22	7.67
Blackside Darter		I	S	N	4	7.50	0.80	0.05	0.13	6.50
Logperch		I	S	M	1	1.88	0.20	0.05	0.14	28.00
Johnny Darter		I	C	N	94	176.25	18.84	0.28	0.73	1.60
Greenside Darter		I	S	M	87	163.13	17.43	0.61	1.57	3.72
Fantail Darter		I	C	N	51	95.63	10.22	0.15	0.39	1.60
			Data Totals:		499	935.63		38.75		
			Number of Species:		17					
			Number of Hybrids:		0					

River Code:	**19-028-004**	Stream:	**CONGRESS LAKE OUTLET (FEEDER CANAL)**			Sample Date:	**2018-07-11**
River Mile:	**5.6**	Location:	FEEDER CANAL (CONGRESS LAKE OUTLET) @ TALMADGE RD.				
Time Fished:	2700 sec	Drainage:	43.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	2	4.00	1.92	0.06	1.89	16.00
Creek Chub		G	N	T	1	2.00	0.96	0.01	0.36	6.00
Yellow Bullhead		I	C	T	3	6.00	2.88	0.37	11.01	62.00
Brown Bullhead		I	C	T	2	4.00	1.92	0.64	18.94	160.00
Black Crappie		I	C	N	2	4.00	1.92	0.18	5.45	46.00
Largemouth Bass		C	C	N	8	16.00	7.69	0.03	0.95	2.00
Green Sunfish		I	C	T	63	126.00	60.58	1.33	39.33	10.55
Bluegill Sunfish		I	C	P	4	8.00	3.85	0.36	10.77	45.50
Pumpkinseed Sunfish		I	C	P	7	14.00	6.73	0.12	3.65	8.80
Hybrid x Sunfish				N	6	12.00	5.77	0.16	4.69	13.20
Yellow Perch			M	N	6	12.00	5.77	0.10	2.96	8.33
			Data Totals:		104	208.00		3.38		
			Number of Species:		11					
			Number of Hybrids:		1					

River Code:	**19-028-005**	Stream:	**POTTER CREEK**			Sample Date:	**2018-07-24**
River Mile:	**1.5**	Location:	POTTER CREEK @ TRARES RD.				
Time Fished:	2700 sec	Drainage:	3.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	13	19.50	2.75	0.00	0.00	0.00
Redfin Pickerel		P	M	P	11	16.50	2.33	0.00	0.00	0.00
White Sucker		O	S	T	48	72.00	10.15	0.00	0.00	0.00
Creek Chub		G	N	T	74	111.00	15.64	0.00	0.00	0.00
Yellow Bullhead		I	C	T	1	1.50	0.21	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	3.00	0.42	0.00	0.00	0.00
Green Sunfish		I	C	T	33	49.50	6.98	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	6	9.00	1.27	0.00	0.00	0.00
Johnny Darter		I	C	N	285	427.50	60.25	0.00	0.00	0.00
			Data Totals:		473	709.50		0.00		
			Number of Species:		9					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-08-14**
River Mile:	**11.2**	Location:	L CUYAHOGA R UPST WINGFOOT LAKE OUTLET, DST UNIVERSAL MATRLS				
Time Fished:	2700 sec	Drainage:	17.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	1	2.00	0.33	0.01	0.11	6.00
White Sucker		O	S	T	11	22.00	3.65	1.69	15.86	76.73
Blacknose Dace		G	S	T	3	6.00	1.00	0.01	0.11	2.00
Creek Chub		G	N	T	92	184.00	30.56	0.27	2.55	1.47
Fathead Minnow		O	C	T	1	2.00	0.33	0.00	0.04	2.00
Bluntnose Minnow		O	C	T	59	118.00	19.60	0.12	1.17	1.05
Central Stoneroller		H	N	N	3	6.00	1.00	0.04	0.38	6.67
Yellow Bullhead		I	C	T	53	106.00	17.61	5.13	48.19	48.38
Largemouth Bass		C	C	N	18	36.00	5.98	2.06	19.32	57.11
Warmouth Sunfish		C	C	N	1	2.00	0.33	0.08	0.75	40.00
Green Sunfish		I	C	T	12	24.00	3.99	0.70	6.58	29.17
Bluegill Sunfish		I	C	P	15	30.00	4.98	0.33	3.08	10.93
Pumpkinseed Sunfish		I	C	P	1	2.00	0.33	0.16	1.47	78.00
Johnny Darter		I	C	N	31	62.00	10.30	0.04	0.41	0.71
			Data Totals:		301	602.00		10.64		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-07-09**
River Mile:	**11.2**	Location:	L CUYAHOGA R UPST WINGFOOT LAKE OUTLET, DST UNIVERSAL MATRLS				
Time Fished:	2700 sec	Drainage:	17.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	52	104.00	9.37	4.84	29.06	46.57
Blacknose Dace		G	S	T	4	8.00	0.72	0.02	0.12	2.50
Creek Chub		G	N	T	226	452.00	40.72	0.92	5.50	2.03
Common Shiner		I	S	N	15	30.00	2.70	0.02	0.10	0.53
Bluntnose Minnow		O	C	T	124	248.00	22.34	0.54	3.25	2.18
Central Stoneroller		H	N	N	10	20.00	1.80	0.22	1.34	11.20
Yellow Bullhead		I	C	T	39	78.00	7.03	4.60	27.60	58.97
Largemouth Bass		C	C	N	16	32.00	2.88	3.09	18.55	96.63
Warmouth Sunfish		C	C	N	3	6.00	0.54	0.20	1.20	33.33
Green Sunfish		I	C	T	11	22.00	1.98	0.46	2.76	20.91
Bluegill Sunfish		I	C	P	38	76.00	6.85	1.23	7.37	16.16
Redear Sunfish		I	C	N	4	8.00	0.72	0.29	1.75	36.50
Pumpkinseed Sunfish		I	C	P	2	4.00	0.36	0.19	1.15	48.00
Johnny Darter		I	C	N	11	22.00	1.98	0.04	0.24	1.80
			Data Totals:		555	1110.00		16.66		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-08-14**
River Mile:	**8.4**	Location:	L. CUYAHOGA R. AT AKRON, 0.15 MI. DST. ST. RT. 91				
Time Fished:	2700 sec	Drainage:	30.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.22 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	5	6.67	0.57	0.17	1.08	26.00
White Sucker		O	S	T	87	116.00	9.86	8.47	52.60	73.01
Blacknose Dace		G	S	T	136	181.33	15.42	0.31	1.90	1.69
Creek Chub		G	N	T	176	234.67	19.95	3.26	20.22	13.87
Common Shiner		I	S	N	30	40.00	3.40	0.32	2.00	8.07
Bluntnose Minnow		O	C	T	83	110.67	9.41	0.22	1.34	1.95
Central Stoneroller		H	N	N	227	302.67	25.74	1.13	6.99	3.72
Yellow Bullhead		I	C	T	9	12.00	1.02	0.79	4.89	65.56
Black Crappie		I	C	N	2	2.67	0.23	0.13	0.78	47.00
Largemouth Bass		C	C	N	16	21.33	1.81	0.48	2.98	22.50
Green Sunfish		I	C	T	1	1.33	0.11	0.02	0.15	18.00
Bluegill Sunfish		I	C	P	4	5.33	0.45	0.09	0.56	17.00
Redear Sunfish		I	C	N	1	1.33	0.11	0.06	0.38	46.00
Pumpkinseed Sunfish		I	C	P	14	18.67	1.59	0.55	3.40	29.29
Johnny Darter		I	C	N	91	121.33	10.32	0.12	0.73	0.97
			Data Totals:		882	1176.00		16.10		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-07-11**
River Mile:	**8.4**	Location:	L. CUYAHOGA R. AT AKRON, 0.15 MI. DST. ST. RT. 91				
Time Fished:	3600 sec	Drainage:	30.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	3	4.50	0.39	0.03	0.13	6.00
White Sucker		O	S	T	52	78.00	6.84	4.06	19.10	52.04
Blacknose Dace		G	S	T	43	64.50	5.66	0.26	1.22	4.02
Creek Chub		G	N	T	146	219.00	19.21	8.08	38.02	36.89
Common Shiner		I	S	N	28	42.00	3.68	1.18	5.57	28.19
Bluntnose Minnow		O	C	T	105	157.50	13.82	0.48	2.25	3.04
Central Stoneroller		H	N	N	301	451.50	39.61	5.18	24.39	11.48
Yellow Bullhead		I	C	T	9	13.50	1.18	0.81	3.83	60.22
Largemouth Bass		C	C	N	10	15.00	1.32	0.74	3.50	49.60
Green Sunfish		I	C	T	1	1.50	0.13	0.02	0.08	12.00
Bluegill Sunfish		I	C	P	1	1.50	0.13	0.03	0.14	20.00
Pumpkinseed Sunfish		I	C	P	6	9.00	0.79	0.28	1.30	30.67
Johnny Darter		I	C	N	55	82.50	7.24	0.10	0.47	1.20
			Data Totals:		760	1140.00		21.25		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-08-14**
River Mile:	**7.2**	Location:	L. CUYAHOGA R. AT AKRON @ MASSILLON RD.				
Time Fished:	2700 sec	Drainage:	31.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.19 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	101	159.47	9.33	2.69	16.77	16.84
Blacknose Dace		G	S	T	304	480.00	28.10	1.12	6.98	2.33
Creek Chub		G	N	T	256	404.21	23.66	7.62	47.57	18.84
Common Shiner		I	S	N	11	17.37	1.02	0.03	0.22	2.00
Bluntnose Minnow		O	C	T	129	203.68	11.92	0.60	3.73	2.93
Central Stoneroller		H	N	N	210	331.58	19.41	2.95	18.40	8.88
Yellow Bullhead		I	C	T	5	7.89	0.46	0.51	3.18	64.40
Largemouth Bass		C	C	N	1	1.58	0.09	0.19	1.20	122.00
Green Sunfish		I	C	T	11	17.37	1.02	0.02	0.11	1.00
Bluegill Sunfish		I	C	P	2	3.16	0.18	0.16	1.03	52.00
Pumpkinseed Sunfish		I	C	P	1	1.58	0.09	0.08	0.49	50.00
Johnny Darter		I	C	N	51	80.53	4.71	0.05	0.32	0.64
			Data Totals:		1082	1708.42		16.01		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-07-10**
River Mile:	**7.2**	Location:	L. CUYAHOGA R. AT AKRON @ MASSILLON RD.				
Time Fished:	2700 sec	Drainage:	31.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.19 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	71	112.11	9.89	4.72	28.07	42.14
Blacknose Dace		G	S	T	144	227.37	20.06	0.98	5.83	4.31
Creek Chub		G	N	T	146	230.53	20.33	6.33	37.62	27.46
Bluntnose Minnow		O	C	T	109	172.11	15.18	0.45	2.67	2.61
Central Stoneroller		H	N	N	186	293.68	25.91	3.25	19.31	11.06
Yellow Bullhead		I	C	T	7	11.05	0.97	0.69	4.13	62.86
Largemouth Bass		C	C	N	1	1.58	0.14	0.00	0.02	2.00
Green Sunfish		I	C	T	2	3.16	0.28	0.05	0.32	17.00
Bluegill Sunfish		I	C	P	3	4.74	0.42	0.13	0.80	28.33
Pumpkinseed Sunfish		I	C	P	2	3.16	0.28	0.06	0.36	19.00
Johnny Darter		I	C	N	41	64.74	5.71	0.10	0.59	1.53
Fantail Darter		I	C	N	6	9.47	0.84	0.05	0.30	5.33
			Data Totals:		718	1133.68		16.83		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-08-15**
River Mile:	**5.1**	Location:	L. CUYAHOGA R. AT AKRON @ BANK ST.				
Time Fished:	2700 sec	Drainage:	47.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	21	31.50	1.90	1.09	4.63	34.62
White Sucker		O	S	T	95	142.50	8.61	1.80	7.63	12.61
Common Carp		O	M	T	5	7.50	0.45	10.50	44.61	1400.00
Blacknose Dace		G	S	T	313	469.50	28.38	1.16	4.93	2.47
Creek Chub		G	N	T	286	429.00	25.93	4.12	17.51	9.61
Common Shiner		I	S	N	3	4.50	0.27	0.01	0.04	2.00
Bluntnose Minnow		O	C	T	198	297.00	17.95	0.83	3.54	2.80
Central Stoneroller		H	N	N	91	136.50	8.25	1.41	5.98	10.31
Yellow Bullhead		I	C	T	5	7.50	0.45	0.54	2.29	72.00
Green Sunfish		I	C	T	53	79.50	4.81	1.72	7.30	21.62
Bluegill Sunfish		I	C	P	1	1.50	0.09	0.12	0.51	80.00
Pumpkinseed Sunfish		I	C	P	5	7.50	0.45	0.19	0.82	25.60
Johnny Darter		I	C	N	19	28.50	1.72	0.03	0.12	1.00
Fantail Darter		I	C	N	8	12.00	0.73	0.02	0.09	1.71
			Data Totals:		1103	1654.50		23.54		
			Number of Species:		14					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-07-10**
River Mile:	**5.1**	Location:	L. CUYAHOGA R. AT AKRON @ BANK ST.				
Time Fished:	2700 sec	Drainage:	47.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	27	40.50	2.47	1.77	7.37	43.67
White Sucker		O	S	T	89	133.50	8.14	2.28	9.48	17.05
Common Carp		O	M	T	3	4.50	0.27	6.34	26.40	1408.33
Blacknose Dace		G	S	T	386	579.00	35.28	2.18	9.09	3.77
Creek Chub		G	N	T	229	343.50	20.93	6.81	28.35	19.81
Bluntnose Minnow		O	C	T	167	250.50	15.27	0.91	3.79	3.64
Central Stoneroller		H	N	N	62	93.00	5.67	0.85	3.55	9.15
Yellow Bullhead		I	C	T	4	6.00	0.37	0.29	1.21	48.50
Green Sunfish		I	C	T	78	117.00	7.13	2.23	9.30	19.08
Bluegill Sunfish		I	C	P	3	4.50	0.27	0.15	0.61	32.50
Pumpkinseed Sunfish		I	C	P	4	6.00	0.37	0.14	0.60	24.00
Johnny Darter		I	C	N	32	48.00	2.93	0.04	0.17	0.85
Fantail Darter		I	C	N	10	15.00	0.91	0.02	0.07	1.20
			Data Totals:		1094	1641.00		24.00		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-08-14**
River Mile:	**2.1**	Location:	L. CUYAHOGA R. AT AKRON @ CUYAHOGA ST.				
Time Fished:	2700 sec	Drainage:	54.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	86	129.00	3.91	1.64	8.38	12.72
White Sucker		O	S	T	70	105.00	3.18	3.36	17.14	31.97
Golden Shiner		I	M	T	1	1.50	0.05	0.01	0.06	8.00
Blacknose Dace		G	S	T	1182	1773.00	53.78	4.57	23.32	2.58
Creek Chub		G	N	T	49	73.50	2.23	0.87	4.44	11.83
Common Shiner		I	S	N	102	153.00	4.64	1.71	8.75	11.20
Silverjaw Minnow		I	M	N	13	19.50	0.59	0.09	0.44	4.44
Bluntnose Minnow		O	C	T	85	127.50	3.87	0.48	2.45	3.77
Central Stoneroller		H	N	N	534	801.00	24.29	5.28	26.98	6.59
Yellow Bullhead		I	C	T	4	6.00	0.18	0.06	0.29	9.33
Largemouth Bass		C	C	N	12	18.00	0.55	0.21	1.06	11.50
Warmouth Sunfish		C	C	N	1	1.50	0.05	0.11	0.57	74.00
Green Sunfish		I	C	T	10	15.00	0.45	0.40	2.03	26.50
Bluegill Sunfish		I	C	P	3	4.50	0.14	0.23	1.15	50.00
Redear Sunfish		I	C	N	1	1.50	0.05	0.20	1.01	132.00
Pumpkinseed Sunfish		I	C	P	2	3.00	0.09	0.12	0.61	40.00
Hybrid x Sunfish				N	1	1.50	0.05	0.05	0.23	30.00
Johnny Darter		I	C	N	11	16.50	0.50	0.04	0.22	2.63
Greenside Darter		I	S	M	16	24.00	0.73	0.09	0.47	3.87
Rainbow Darter		I	S	M	11	16.50	0.50	0.05	0.23	2.73
Fantail Darter		I	C	N	4	6.00	0.18	0.03	0.15	5.00
			Data Totals:		2198	3297.00		19.58		
			Number of Species:		21					
			Number of Hybrids:		1					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**	Sample Date:	**2018-07-10**
River Mile:	**2.1**	Location:	L. CUYAHOGA R. AT AKRON @ CUYAHOGA ST.		
Time Fished:	3600 sec	Drainage:	54.0 sq mi	Depth:	Data Source:
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	14	21.00	1.03	0.91	2.88	43.21
White Sucker		O	S	T	45	67.50	3.30	1.81	5.75	26.80
Common Carp		O	M	T	5	7.50	0.37	14.67	46.64	1956.25
Golden Shiner		I	M	T	1	1.50	0.07	0.00	0.01	3.00
Blacknose Dace		G	S	T	790	1185.00	57.88	3.42	10.87	2.88
Creek Chub		G	N	T	20	30.00	1.47	0.38	1.21	12.74
Common Shiner		I	S	N	55	82.50	4.03	1.35	4.29	16.37
Silverjaw Minnow		I	M	N	12	18.00	0.88	0.05	0.15	2.67
Bluntnose Minnow		O	C	T	52	78.00	3.81	0.23	0.72	2.90
Central Stoneroller		H	N	N	315	472.50	23.08	6.19	19.67	13.10
Channel Catfish			C	N	1	1.50	0.07	0.40	1.28	268.00
Yellow Bullhead		I	C	T	12	18.00	0.88	0.97	3.07	53.64
Largemouth Bass		C	C	N	5	7.50	0.37	0.03	0.10	4.40
Green Sunfish		I	C	T	20	30.00	1.47	0.55	1.76	18.42
Bluegill Sunfish		I	C	P	7	10.50	0.51	0.29	0.93	28.00
Pumpkinseed Sunfish		I	C	P	1	1.50	0.07	0.04	0.12	26.00
Hybrid x Sunfish				N	1	1.50	0.07	0.12	0.38	80.00
Johnny Darter		I	C	N	1	1.50	0.07	0.00	0.00	1.00
Rainbow Darter		I	S	M	7	10.50	0.51	0.05	0.15	4.43
Fantail Darter		I	C	N	1	1.50	0.07	0.00	0.00	1.00
			Data Totals:		1365	2047.50		31.46		
			Number of Species:		20					
			Number of Hybrids:		1					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-08-13**
River Mile:	**0.3**	Location:	L. CUYAHOGA R. AT AKRON, NEAR MOUTH				
Time Fished:	2100 sec	Drainage:	61.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	25	37.50	3.01	0.58	2.97	15.44
White Sucker		O	S	T	133	199.50	16.00	8.07	41.45	40.46
River Chub		I	N	I	38	57.00	4.57	0.66	3.37	11.53
Blacknose Dace		G	S	T	135	202.50	16.25	0.52	2.68	2.58
Creek Chub		G	N	T	9	13.50	1.08	0.27	1.40	20.25
Common Shiner		I	S	N	53	79.50	6.38	0.44	2.28	5.58
Spotfin Shiner		I	M	N	2	3.00	0.24	0.01	0.05	3.00
Silverjaw Minnow		I	M	N	2	3.00	0.24	0.01	0.05	3.00
Bluntnose Minnow		O	C	T	48	72.00	5.78	0.31	1.60	4.34
Central Stoneroller		H	N	N	85	127.50	10.23	0.67	3.44	5.25
Yellow Bullhead		I	C	T	146	219.00	17.57	5.43	27.91	24.81
Smallmouth Bass		C	C	M	6	9.00	0.72	0.28	1.45	31.33
Largemouth Bass		C	C	N	10	15.00	1.20	0.11	0.55	7.20
Green Sunfish		I	C	T	15	22.50	1.81	0.65	3.31	28.67
Bluegill Sunfish		I	C	P	5	7.50	0.60	0.28	1.43	37.20
Pumpkinseed Sunfish		I	C	P	4	6.00	0.48	0.26	1.31	42.50
Hybrid x Sunfish				N	4	6.00	0.48	0.45	2.30	74.50
Johnny Darter		I	C	N	9	13.50	1.08	0.02	0.08	1.11
Greenside Darter		I	S	M	60	90.00	7.22	0.37	1.90	4.10
Rainbow Darter		I	S	M	27	40.50	3.25	0.05	0.28	1.33
Fantail Darter		I	C	N	15	22.50	1.81	0.04	0.18	1.60
			Data Totals:		831	1246.50		19.47		
			Number of Species:		21					
			Number of Hybrids:		1					

River Code:	**19-030-000**	Stream:	**LITTLE CUYAHOGA RIVER**			Sample Date:	**2018-07-11**
River Mile:	**0.3**	Location:	L. CUYAHOGA R. AT AKRON, NEAR MOUTH				
Time Fished:	4500 sec	Drainage:	61.7 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Northern Hog Sucker		I	S	M	44	66.00	3.67	2.87	8.83	43.51
White Sucker		O	S	T	248	372.00	20.68	15.48	47.61	41.61
River Chub		I	N	I	57	85.50	4.75	1.15	3.55	13.50
Blacknose Dace		G	S	T	214	321.00	17.85	0.73	2.25	2.28
Creek Chub		G	N	T	16	24.00	1.33	0.11	0.33	4.46
Common Shiner		I	S	N	218	327.00	18.18	4.15	12.77	12.69
Spotfin Shiner		I	M	N	15	22.50	1.25	0.13	0.40	5.85
Silverjaw Minnow		I	M	N	31	46.50	2.59	0.13	0.40	2.80
Bluntnose Minnow		O	C	T	125	187.50	10.43	0.60	1.84	3.19
Central Stoneroller		H	N	N	71	106.50	5.92	0.51	1.58	4.81
Channel Catfish			C	N	1	1.50	0.08	0.17	0.52	112.00
Yellow Bullhead		I	C	T	49	73.50	4.09	2.55	7.85	34.71
Smallmouth Bass		C	C	M	11	16.50	0.92	2.71	8.35	164.45
Largemouth Bass		C	C	N	7	10.50	0.58	0.04	0.11	3.43
Green Sunfish		I	C	T	17	25.50	1.42	0.70	2.15	27.43
Bluegill Sunfish		I	C	P	1	1.50	0.08	0.02	0.05	10.00
Pumpkinseed Sunfish		I	C	P	6	9.00	0.50	0.15	0.45	16.33
Johnny Darter		I	C	N	1	1.50	0.08	0.00	0.01	2.00
Greenside Darter		I	S	M	33	49.50	2.75	0.22	0.68	4.44
Rainbow Darter		I	S	M	20	30.00	1.67	0.06	0.20	2.13
Fantail Darter		I	C	N	14	21.00	1.17	0.03	0.08	1.29
			Data Totals:		1199	1798.50		32.51		
			Number of Species:		21					
			Number of Hybrids:		0					

River Code:	**19-031-000**	Stream:	**SPRINGFIELD LAKE OUTLET**	Sample Date:	**2018-07-10**
River Mile:	**0.0**	Location:	SPRINGFIELD LAKE OUTLET @ MOUTH		
Time Fished:	1500 sec	Drainage:	12.5 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	61	122.00	14.12	0.00	0.00	0.00
Blacknose Dace		G	S	T	53	106.00	12.27	0.00	0.00	0.00
Creek Chub		G	N	T	139	278.00	32.18	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	10	20.00	2.31	0.00	0.00	0.00
Central Stoneroller		H	N	N	110	220.00	25.46	0.00	0.00	0.00
Yellow Bullhead		I	C	T	1	2.00	0.23	0.00	0.00	0.00
Green Sunfish		I	C	T	2	4.00	0.46	0.00	0.00	0.00
Johnny Darter		I	C	N	56	112.00	12.96	0.00	0.00	0.00
			Data Totals:		432	864.00		0.00		
			Number of Species:		8					
			Number of Hybrids:		0					

River Code:	**19-032-000**	Stream:	**WINGFOOT LAKE OUTLET**	Sample Date:	**2018-07-09**
River Mile:	**0.1**	Location:	WINGFOOT LAKE OUTLET @ UNNAMED ROAD AT MOUTH		
Time Fished:	1800 sec	Drainage:	7.2 sq mi	Depth:	
Dist Fished:	0.12 km	Basin:	Cuyahoga River	Flow:	N
				Data Source:	
				Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	32	80.00	8.02	0.00	0.00	0.00
Blacknose Dace		G	S	T	43	107.50	10.78	0.00	0.00	0.00
Creek Chub		G	N	T	185	462.50	46.37	0.00	0.00	0.00
Common Shiner		I	S	N	3	7.50	0.75	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	44	110.00	11.03	0.00	0.00	0.00
Central Stoneroller		H	N	N	20	50.00	5.01	0.00	0.00	0.00
Yellow Bullhead		I	C	T	7	17.50	1.75	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	5.00	0.50	0.00	0.00	0.00
Green Sunfish		I	C	T	1	2.50	0.25	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	2	5.00	0.50	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	2	5.00	0.50	0.00	0.00	0.00
Johnny Darter		I	C	N	58	145.00	14.54	0.00	0.00	0.00
			Data Totals:		399	997.50		0.00		
			Number of Species:		12					
			Number of Hybrids:		0					

River Code:	**19-033-000**	Stream:	**BLACK BROOK**	Sample Date:	**2018-08-08**
River Mile:	**1.8**	Location:	BLACK BROOK @ FOX RD.		
Time Fished:	1800 sec	Drainage:	11.7 sq mi	Depth:	Data Source:
Dist Fished:	0.18 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	3	5.14	0.98	0.00	0.00	0.00
Redfin Pickerel		P	M	P	5	8.57	1.63	0.00	0.00	0.00
White Sucker		O	S	T	11	18.86	3.58	0.00	0.00	0.00
Creek Chub		G	N	T	62	106.29	20.20	0.00	0.00	0.00
Common Shiner		I	S	N	4	6.86	1.30	0.00	0.00	0.00
Spotfin Shiner		I	M	N	1	1.71	0.33	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	40	68.57	13.03	0.00	0.00	0.00
Central Stoneroller		H	N	N	58	99.43	18.89	0.00	0.00	0.00
Channel Catfish			C	N	1	1.71	0.33	0.00	0.00	0.00
Yellow Bullhead		I	C	T	10	17.14	3.26	0.00	0.00	0.00
Largemouth Bass		C	C	N	2	3.43	0.65	0.00	0.00	0.00
Green Sunfish		I	C	T	1	1.71	0.33	0.00	0.00	0.00
Blackside Darter		I	S	N	9	15.43	2.93	0.00	0.00	0.00
Logperch		I	S	M	2	3.43	0.65	0.00	0.00	0.00
Johnny Darter		I	C	N	23	39.43	7.49	0.00	0.00	0.00
Greenside Darter		I	S	M	14	24.00	4.56	0.00	0.00	0.00
Rainbow Darter		I	S	M	49	84.00	15.96	0.00	0.00	0.00
Fantail Darter		I	C	N	12	20.57	3.91	0.00	0.00	0.00
			Data Totals:		307	526.29		0.00		
			Number of Species:		18					
			Number of Hybrids:		0					

River Code:	**19-034-000**	Stream:	**SAWYER BROOK**	Sample Date:	**2018-08-15**
River Mile:	**0.3**	Location:	SAWYER BROOK @ TILDEN RD.		
Time Fished:	2700 sec	Drainage:	2.5 sq mi	Depth:	Data Source:
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	12	24.00	6.52	0.00	0.00	0.00
Redfin Pickerel		P	M	P	18	36.00	9.78	0.00	0.00	0.00
Northern Pike		P	M	N	1	2.00	0.54	0.00	0.00	0.00
White Sucker		O	S	T	17	34.00	9.24	0.00	0.00	0.00
Creek Chub		G	N	T	48	96.00	26.09	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	1	2.00	0.54	0.00	0.00	0.00
Yellow Bullhead		I	C	T	17	34.00	9.24	0.00	0.00	0.00
Largemouth Bass		C	C	N	5	10.00	2.72	0.00	0.00	0.00
Green Sunfish		I	C	T	7	14.00	3.80	0.00	0.00	0.00
Blackside Darter		I	S	N	2	4.00	1.09	0.00	0.00	0.00
Johnny Darter		I	C	N	52	104.00	28.26	0.00	0.00	0.00
Rainbow Darter		I	S	M	3	6.00	1.63	0.00	0.00	0.00
Fantail Darter		I	C	N	1	2.00	0.54	0.00	0.00	0.00
			Data Totals:		184	368.00		0.00		
			Number of Species:		13					
			Number of Hybrids:		0					

River Code:	**19-035-000**	Stream:	**BRIDGE CREEK**			Sample Date:	**2018-08-09**
River Mile:	**8.5**	Location:	BRIDGE CREEK @ TAYLOR MAY RD.				
Time Fished:	2700 sec	Drainage:	14.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	9	18.00	2.31	0.00	0.00	0.00
Northern Hog Sucker		I	S	M	11	22.00	2.82	0.00	0.00	0.00
White Sucker		O	S	T	3	6.00	0.77	0.00	0.00	0.00
Blacknose Dace		G	S	T	21	42.00	5.38	0.00	0.00	0.00
Creek Chub		G	N	T	91	182.00	23.33	0.00	0.00	0.00
Central Stoneroller		H	N	N	14	28.00	3.59	0.00	0.00	0.00
Yellow Bullhead		I	C	T	6	12.00	1.54	0.00	0.00	0.00
Largemouth Bass		C	C	N	10	20.00	2.56	0.00	0.00	0.00
Green Sunfish		I	C	T	13	26.00	3.33	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	7	14.00	1.79	0.00	0.00	0.00
Hybrid x Sunfish				N	1	2.00	0.26	0.00	0.00	0.00
Yellow Perch			M	N	1	2.00	0.26	0.00	0.00	0.00
Logperch		I	S	M	5	10.00	1.28	0.00	0.00	0.00
Johnny Darter		I	C	N	42	84.00	10.77	0.00	0.00	0.00
Greenside Darter		I	S	M	5	10.00	1.28	0.00	0.00	0.00
Rainbow Darter		I	S	M	13	26.00	3.33	0.00	0.00	0.00
Fantail Darter		I	C	N	138	276.00	35.38	0.00	0.00	0.00
			Data Totals:		390	780.00		0.00		
			Number of Species:		17					
			Number of Hybrids:		1					

River Code:	**19-035-000**	Stream:	**BRIDGE CREEK**			Sample Date:	**2018-08-07**
River Mile:	**1.3**	Location:	BRIDGE CREEK DST. LADUE RESERVOIR @ STAFFORD RD.				
Time Fished:	2700 sec	Drainage:	31.0 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	1.50	0.24	0.01	0.03	6.00
Redfin Pickerel		P	M	P	8	12.00	1.95	0.68	2.05	56.75
White Sucker		O	S	T	32	48.00	7.79	5.31	15.98	110.58
Spotted Sucker		I	S	N	61	91.50	14.84	15.99	48.15	174.80
Common Carp		O	M	T	2	3.00	0.49	0.03	0.10	11.00
Golden Shiner		I	M	T	11	16.50	2.68	0.22	0.65	13.09
Common Shiner		I	S	N	61	91.50	14.84	1.61	4.85	17.62
Bluntnose Minnow		O	C	T	9	13.50	2.19	0.03	0.10	2.44
Yellow Bullhead		I	C	T	49	73.50	11.92	4.13	12.45	56.25
Brook Silverside		I	M	M	10	15.00	2.43	0.02	0.05	1.00
Rock Bass		C	C	N	2	3.00	0.49	0.26	0.79	88.00
Largemouth Bass		C	C	N	48	72.00	11.68	0.74	2.24	10.34
Warmouth Sunfish		C	C	N	6	9.00	1.46	0.41	1.24	45.67
Bluegill Sunfish		I	C	P	35	52.50	8.52	1.30	3.91	24.73
Pumpkinseed Sunfish		I	C	P	67	100.50	16.30	2.31	6.94	22.94
Hybrid x Sunfish				N	2	3.00	0.49	0.04	0.11	12.00
Yellow Perch			M	N	1	1.50	0.24	0.10	0.29	64.00
Logperch		I	S	M	4	6.00	0.97	0.02	0.06	3.50
Johnny Darter		I	C	N	1	1.50	0.24	0.00	0.01	2.00
Rainbow Darter		I	S	M	1	1.50	0.24	0.00	0.01	2.00
			Data Totals:		411	616.50		33.22		
			Number of Species:		20					
			Number of Hybrids:		1					

River Code:	**19-035-001**	Stream:	**TRIB. TO BRIDGE CREEK (RM 0.52)**			Sample Date:	**2018-08-15**
River Mile:	**0.0**	Location:	TRIB. TO BRIDGE CREEK (0.52) NEAR RAPIDS RD.				
Time Fished:	1800 sec	Drainage:	8.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	2.00	0.79	0.00	0.00	0.00
Redfin Pickerel		P	M	P	12	24.00	9.52	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	1	2.00	0.79	0.00	0.00	0.00
Yellow Bullhead		I	C	T	16	32.00	12.70	0.00	0.00	0.00
Smallmouth Bass		C	C	M	1	2.00	0.79	0.00	0.00	0.00
Largemouth Bass		C	C	N	30	60.00	23.81	0.00	0.00	0.00
Green Sunfish		I	C	T	1	2.00	0.79	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	1	2.00	0.79	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	8	16.00	6.35	0.00	0.00	0.00
Johnny Darter		I	C	N	50	100.00	39.68	0.00	0.00	0.00
Greenside Darter		I	S	M	5	10.00	3.97	0.00	0.00	0.00
			Data Totals:		126	252.00		0.00		
			Number of Species:		11					
			Number of Hybrids:		0					

River Code:	**19-035-003**	Stream:	**TRIB. TO BRIDGE CK. (8.85) @ AUBURN RD**			Sample Date:	**2018-08-08**
River Mile:	**1.4**	Location:	TRIB. TO BRIDGE CK. (8.85) @ AUBURN RD.				
Time Fished:	2700 sec	Drainage:	3.1 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	22	44.00	19.82	0.00	0.00	0.00
Redfin Pickerel		P	M	P	17	34.00	15.32	0.00	0.00	0.00
Creek Chub		G	N	T	19	38.00	17.12	0.00	0.00	0.00
Yellow Bullhead		I	C	T	13	26.00	11.71	0.00	0.00	0.00
Largemouth Bass		C	C	N	21	42.00	18.92	0.00	0.00	0.00
Green Sunfish		I	C	T	11	22.00	9.91	0.00	0.00	0.00
Johnny Darter		I	C	N	8	16.00	7.21	0.00	0.00	0.00
			Data Totals:		111	222.00		0.00		
			Number of Species:		7					
			Number of Hybrids:		0					

River Code:	**19-036-000**	Stream:	**WEST BRANCH CUYAHOGA RIVER**			Sample Date:	**2018-08-08**
River Mile:	**12.3**	Location:	W. BR. CUYAHOGA R. @ TAYLOR-WELLS RD.				
Time Fished:	1800 sec	Drainage:	7.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	5	10.00	0.81	0.00	0.00	0.00
Redfin Pickerel		P	M	P	19	38.00	3.08	0.00	0.00	0.00
White Sucker		O	S	T	37	74.00	6.00	0.00	0.00	0.00
Creek Chub		G	N	T	105	210.00	17.02	0.00	0.00	0.00
Common Shiner		I	S	N	168	336.00	27.23	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	77	154.00	12.48	0.00	0.00	0.00
Central Stoneroller		H	N	N	19	38.00	3.08	0.00	0.00	0.00
Largemouth Bass		C	C	N	11	22.00	1.78	0.00	0.00	0.00
Warmouth Sunfish		C	C	N	2	4.00	0.32	0.00	0.00	0.00
Green Sunfish		I	C	T	11	22.00	1.78	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	4	8.00	0.65	0.00	0.00	0.00
Blackside Darter		I	S	N	28	56.00	4.54	0.00	0.00	0.00
Logperch		I	S	M	1	2.00	0.16	0.00	0.00	0.00
Johnny Darter		I	C	N	44	88.00	7.13	0.00	0.00	0.00
Fantail Darter		I	C	N	86	172.00	13.94	0.00	0.00	0.00
			Data Totals:		617	1234.00		0.00		
			Number of Species:		15					
			Number of Hybrids:		0					

River Code:	**19-036-000**	Stream:	**WEST BRANCH CUYAHOGA RIVER**			Sample Date:	**2018-08-07**
River Mile:	**5.6**	Location:	W. BR. CUYAHOGA R. @ AQUILLA RD. NEAR FISHER RD.				
Time Fished:	2700 sec	Drainage:	25.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	7	10.50	0.86	0.05	0.29	4.86
Redfin Pickerel		P	M	P	8	12.00	0.99	0.45	2.59	37.75
Northern Hog Sucker		I	S	M	15	22.50	1.85	6.49	37.07	288.22
White Sucker		O	S	T	40	60.00	4.93	0.13	0.74	2.16
Spotted Sucker		I	S	N	18	27.00	2.22	1.01	5.76	37.33
Common Carp		O	M	T	2	3.00	0.25	0.03	0.15	9.00
Golden Shiner		I	M	T	11	16.50	1.36	0.09	0.50	5.27
Hornyhead Chub		I	N	I	19	28.50	2.34	0.52	2.95	18.11
Creek Chub		G	N	T	73	109.50	9.00	1.12	6.38	10.19
Common Shiner		I	S	N	119	178.50	14.67	1.74	9.94	9.75
Bluntnose Minnow		O	C	T	120	180.00	14.80	0.49	2.82	2.74
Central Stoneroller		H	N	N	2	3.00	0.25	0.01	0.03	2.00
Yellow Bullhead		I	C	T	30	45.00	3.70	0.73	4.17	16.20
Black Crappie		I	C	N	4	6.00	0.49	0.03	0.15	4.50
Rock Bass		C	C	N	1	1.50	0.12	0.14	0.81	94.00
Largemouth Bass		C	C	N	39	58.50	4.81	0.25	1.44	4.32
Warmouth Sunfish		C	C	N	2	3.00	0.25	0.11	0.63	37.00
Green Sunfish		I	C	T	1	1.50	0.12	0.01	0.07	8.00
Bluegill Sunfish		I	C	P	27	40.50	3.33	0.96	5.49	23.70
Pumpkinseed Sunfish		I	C	P	77	115.50	9.49	2.40	13.71	20.76
Hybrid x Sunfish				N	4	6.00	0.49	0.16	0.94	27.33
Yellow Perch			M	N	5	7.50	0.62	0.03	0.15	3.60
Logperch		I	S	M	25	37.50	3.08	0.31	1.75	8.16
Johnny Darter		I	C	N	68	102.00	8.38	0.04	0.23	0.40
Greenside Darter		I	S	M	81	121.50	9.99	0.18	1.05	1.51
Rainbow Darter		I	S	M	1	1.50	0.12	0.00	0.02	2.00
Fantail Darter		I	C	N	12	18.00	1.48	0.03	0.15	1.50
			Data Totals:		811	1216.50		17.49		
			Number of Species:		27					
			Number of Hybrids:		1					

River Code:	**19-036-000**	Stream:	**WEST BRANCH CUYAHOGA RIVER**			Sample Date:	**2018-08-07**
River Mile:	**0.9**	Location:	W. BR. CUYAHOGA R.@ RAPIDS RD.				
Time Fished:	2700 sec	Drainage:	35.4 sq mi	Depth:		Data Source:	
Dist Fished:	0.2 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	D

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	1	1.50	0.08	0.01	0.08	6.00
Redfin Pickerel		P	M	P	22	33.00	1.79	0.82	7.41	24.91
Northern Hog Sucker		I	S	M	33	49.50	2.69	1.11	10.01	22.44
White Sucker		O	S	T	19	28.50	1.55	0.05	0.41	1.58
Spotted Sucker		I	S	N	7	10.50	0.57	0.02	0.19	2.00
Hornyhead Chub		I	N	I	31	46.50	2.52	0.76	6.85	16.36
Creek Chub		G	N	T	21	31.50	1.71	0.04	0.35	1.24
Rosyface Shiner		I	S	I	49	73.50	3.99	0.15	1.36	2.05
Common Shiner		I	S	N	420	630.00	34.17	4.35	39.22	6.91
Spotfin Shiner		I	M	N	7	10.50	0.57	0.03	0.24	2.57
Bluntnose Minnow		O	C	T	219	328.50	17.82	1.06	9.57	3.23
Central Stoneroller		H	N	N	13	19.50	1.06	0.10	0.89	5.08
Yellow Bullhead		I	C	T	4	6.00	0.33	0.44	3.95	73.00
Brook Silverside		I	M	M	1	1.50	0.08	0.00	0.01	1.00
Rock Bass		C	C	N	8	12.00	0.65	0.58	5.22	48.25
Largemouth Bass		C	C	N	11	16.50	0.90	0.09	0.84	5.64
Hybrid x Sunfish				N	1	1.50	0.08	0.06	0.54	40.00
Blackside Darter		I	S	N	17	25.50	1.38	0.08	0.70	3.06
Logperch		I	S	M	23	34.50	1.87	0.35	3.16	10.17
Johnny Darter		I	C	N	30	45.00	2.44	0.04	0.32	0.80
Greenside Darter		I	S	M	217	325.50	17.66	0.79	7.14	2.43
Rainbow Darter		I	S	M	35	52.50	2.85	0.08	0.75	1.58
Fantail Darter		I	C	N	40	60.00	3.25	0.09	0.80	1.47
			Data Totals:		1229	1843.50		11.10		
			Number of Species:		23					
			Number of Hybrids:		1					

River Code:	**19-036-001**	Stream:	**DIEDRICH CREEK**	Sample Date:	**2018-08-07**
River Mile:	**0.6**	Location:	HOPSONS CREEK (DIEDRICH CREEK) @ ST. RT. 87		
Time Fished:	2700 sec	Drainage:	4.9 sq mi	Depth:	Data Source:
Dist Fished:	0.14 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
White Sucker		O	S	T	38	81.43	7.62	0.00	0.00	0.00
Creek Chub		G	N	T	94	201.43	18.84	0.00	0.00	0.00
Common Shiner		I	S	N	54	115.71	10.82	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	108	231.43	21.64	0.00	0.00	0.00
Central Stoneroller		H	N	N	66	141.43	13.23	0.00	0.00	0.00
Largemouth Bass		C	C	N	1	2.14	0.20	0.00	0.00	0.00
Johnny Darter		I	C	N	68	145.71	13.63	0.00	0.00	0.00
Greenside Darter		I	S	M	4	8.57	0.80	0.00	0.00	0.00
Rainbow Darter		I	S	M	46	98.57	9.22	0.00	0.00	0.00
Fantail Darter		I	C	N	20	42.86	4.01	0.00	0.00	0.00
			Data Totals:		499	1069.29		0.00		
			Number of Species:		10					
			Number of Hybrids:		0					

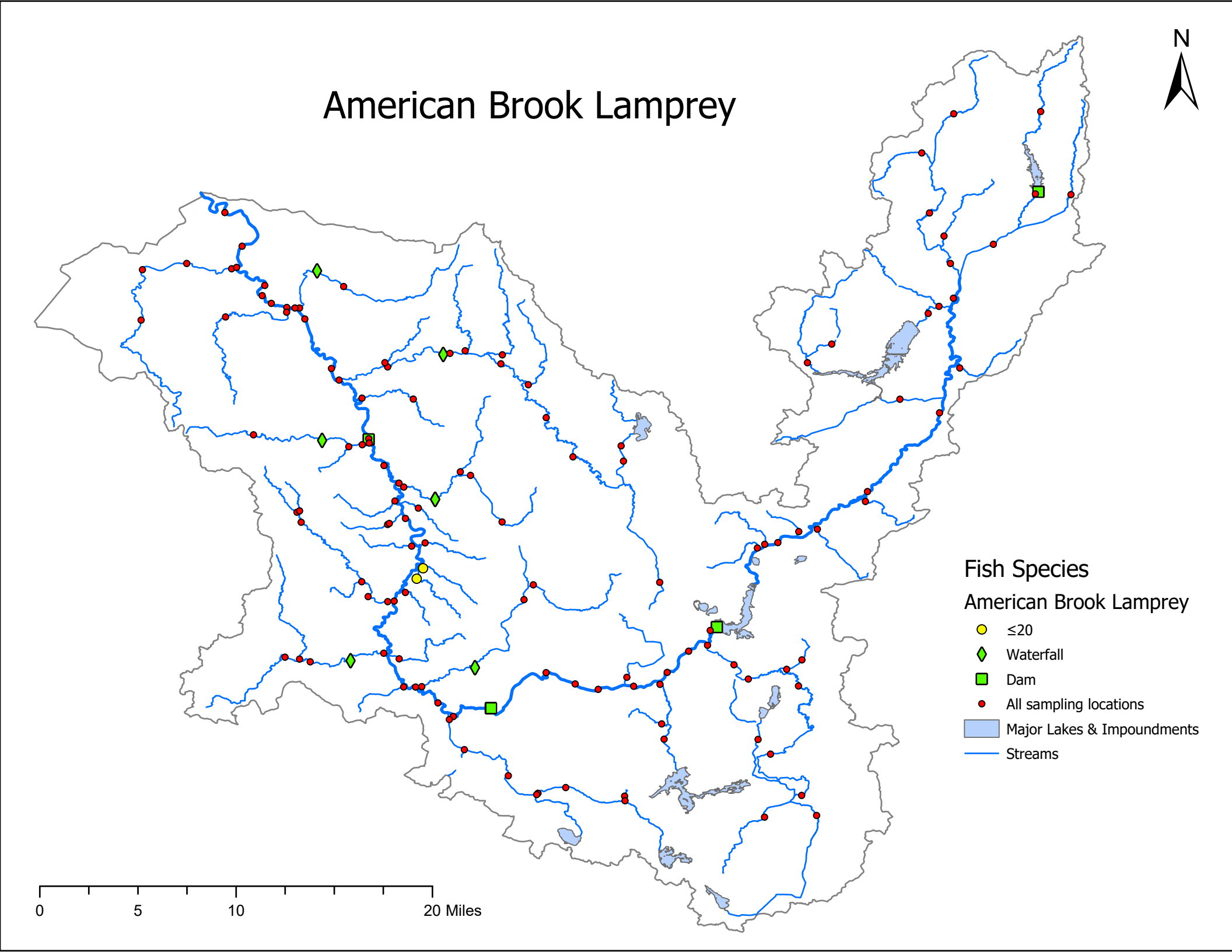
River Code:	**19-037-000**	Stream:	**BUTTERNUT CREEK**			Sample Date:	**2018-08-08**
River Mile:	**0.8**	Location:	BUTTERNUT CREEK @ AQUILLA RD.				
Time Fished:	2700 sec	Drainage:	4.2 sq mi	Depth:		Data Source:	
Dist Fished:	0.15 km	Basin:	Cuyahoga River	Flow:	N	Sampler Type:	E

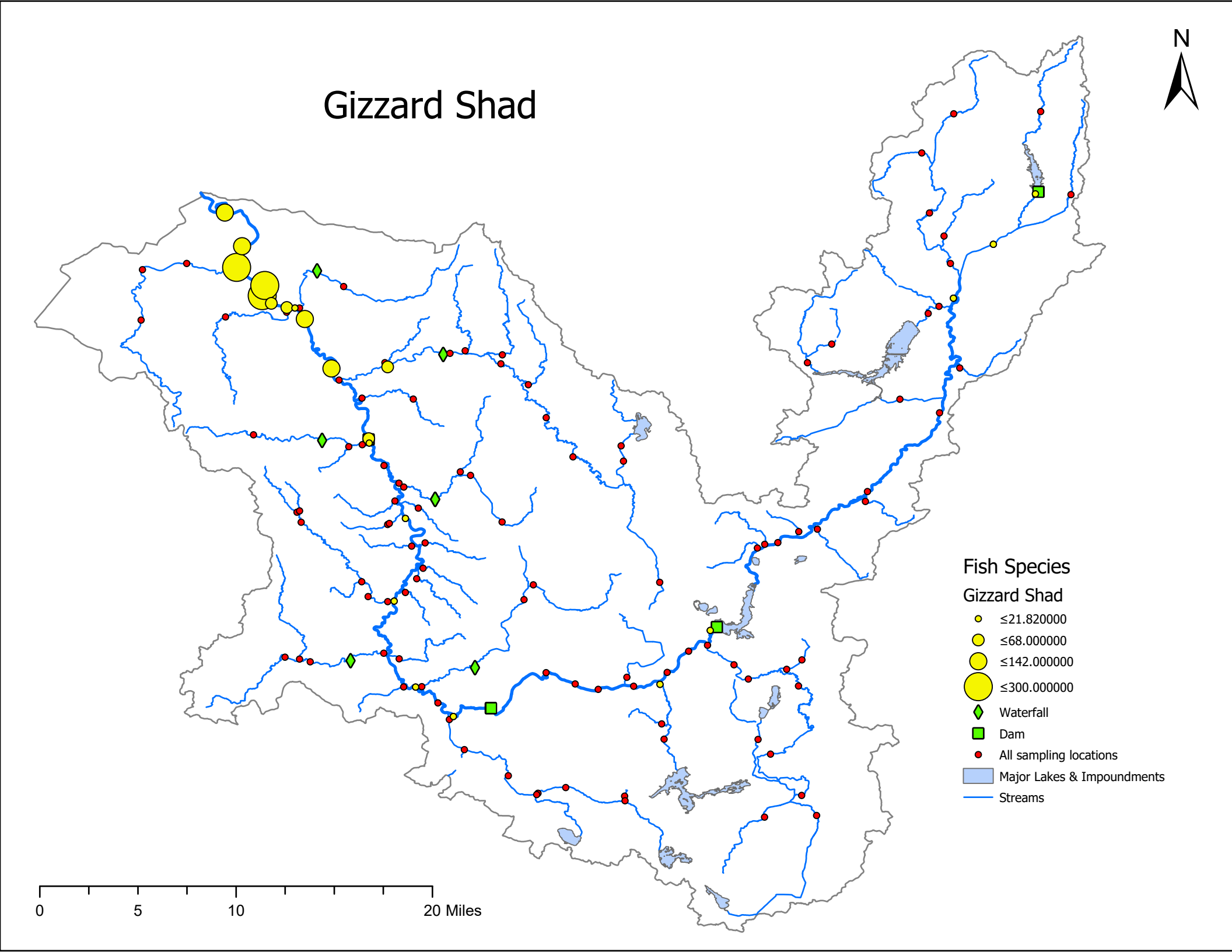
Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Central Mudminnow		I	C	T	5	10.00	2.12	0.00	0.00	0.00
Redfin Pickerel		P	M	P	40	80.00	16.95	0.00	0.00	0.00
White Sucker		O	S	T	6	12.00	2.54	0.00	0.00	0.00
Lake Chubsucker		I	M	N	3	6.00	1.27	0.00	0.00	0.00
Golden Shiner		I	M	T	63	126.00	26.69	0.00	0.00	0.00
Creek Chub		G	N	T	37	74.00	15.68	0.00	0.00	0.00
Common Shiner		I	S	N	1	2.00	0.42	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	4.00	0.85	0.00	0.00	0.00
Black Crappie		I	C	N	2	4.00	0.85	0.00	0.00	0.00
Largemouth Bass		C	C	N	9	18.00	3.81	0.00	0.00	0.00
Green Sunfish		I	C	T	3	6.00	1.27	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	4	8.00	1.69	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	8	16.00	3.39	0.00	0.00	0.00
Hybrid x Sunfish				N	2	4.00	0.85	0.00	0.00	0.00
Johnny Darter		I	C	N	24	48.00	10.17	0.00	0.00	0.00
Rainbow Darter		I	S	M	9	18.00	3.81	0.00	0.00	0.00
Fantail Darter		I	C	N	18	36.00	7.63	0.00	0.00	0.00
			Data Totals:		236	472.00		0.00		
			Number of Species:		17					
			Number of Hybrids:		1					

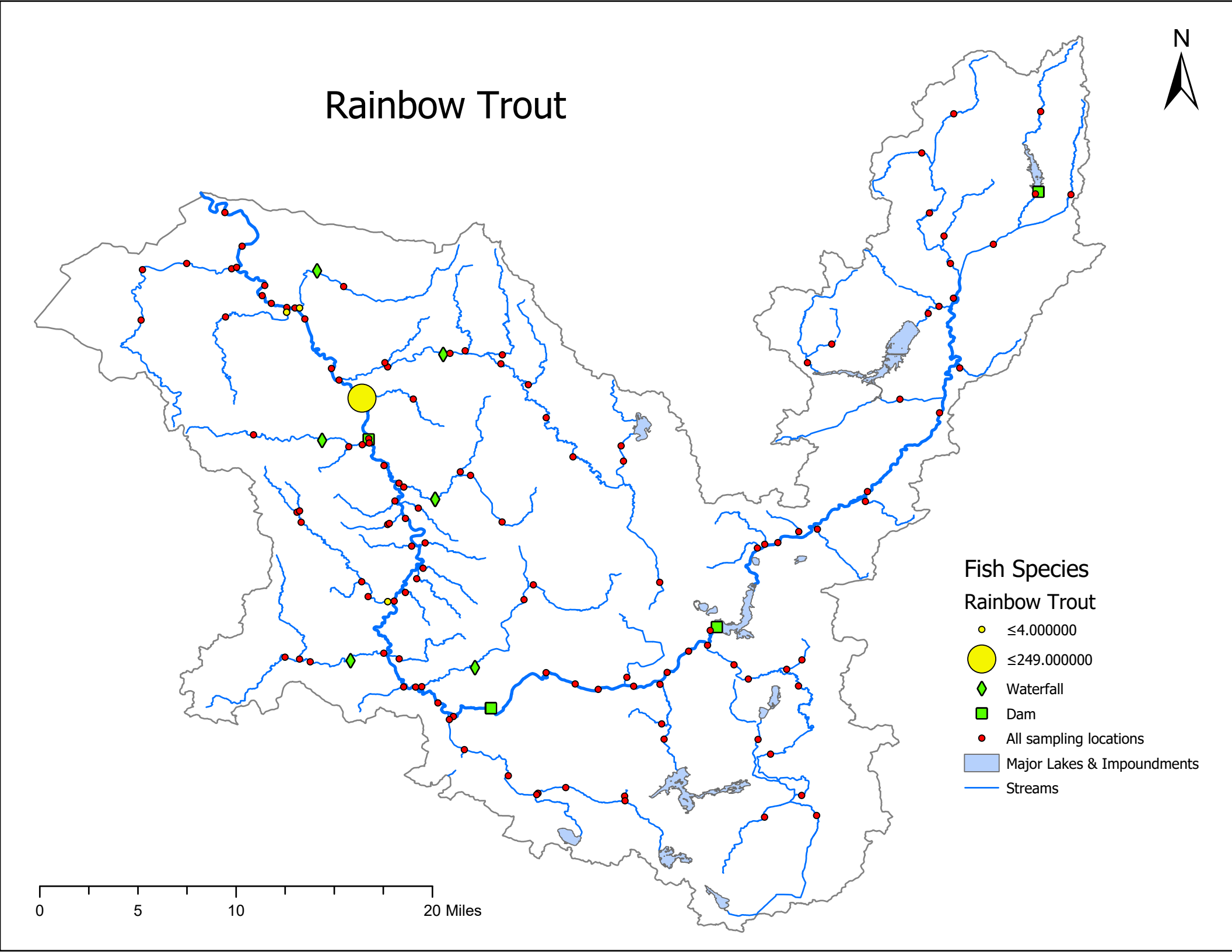
River Code:	**19-038-000**	Stream:	**TARE CREEK**	Sample Date:	**2018-08-08**
River Mile:	**3.1**	Location:	TARE CREEK @ BURTON-WINDSOR RD.		
Time Fished:	2700 sec	Drainage:	4.5 sq mi	Depth:	Data Source:
Dist Fished:	0.18 km	Basin:	Cuyahoga River	Flow: N	Sampler Type: E

Species Name	IBI GRP	Feed Guild	Breed Guild	Tol	# of Fish	Relative Number	% by Number	Relative Weight	% by Weight	Ave Weight (gm)
Redfin Pickerel		P	M	P	15	25.71	4.40	0.00	0.00	0.00
White Sucker		O	S	T	75	128.57	21.99	0.00	0.00	0.00
Golden Shiner		I	M	T	7	12.00	2.05	0.00	0.00	0.00
Creek Chub		G	N	T	23	39.43	6.74	0.00	0.00	0.00
Common Shiner		I	S	N	31	53.14	9.09	0.00	0.00	0.00
Bluntnose Minnow		O	C	T	32	54.86	9.38	0.00	0.00	0.00
Central Stoneroller		H	N	N	11	18.86	3.23	0.00	0.00	0.00
Yellow Bullhead		I	C	T	2	3.43	0.59	0.00	0.00	0.00
Largemouth Bass		C	C	N	40	68.57	11.73	0.00	0.00	0.00
Green Sunfish		I	C	T	27	46.29	7.92	0.00	0.00	0.00
Bluegill Sunfish		I	C	P	8	13.71	2.35	0.00	0.00	0.00
Pumpkinseed Sunfish		I	C	P	20	34.29	5.87	0.00	0.00	0.00
Johnny Darter		I	C	N	50	85.71	14.66	0.00	0.00	0.00
			Data Totals:		341	584.57		0.00		
			Number of Species:		13					
			Number of Hybrids:		0					

Appendix F – Fish Species Distribution and Abundance Maps


American Brook Lamprey
N
Fish Species
American Brook Lamprey
≤20
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Gizzard Shad
N
Fish Species
Gizzard Shad
≤21.820000
≤68.000000
≤142.000000
≤300.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Rainbow Trout
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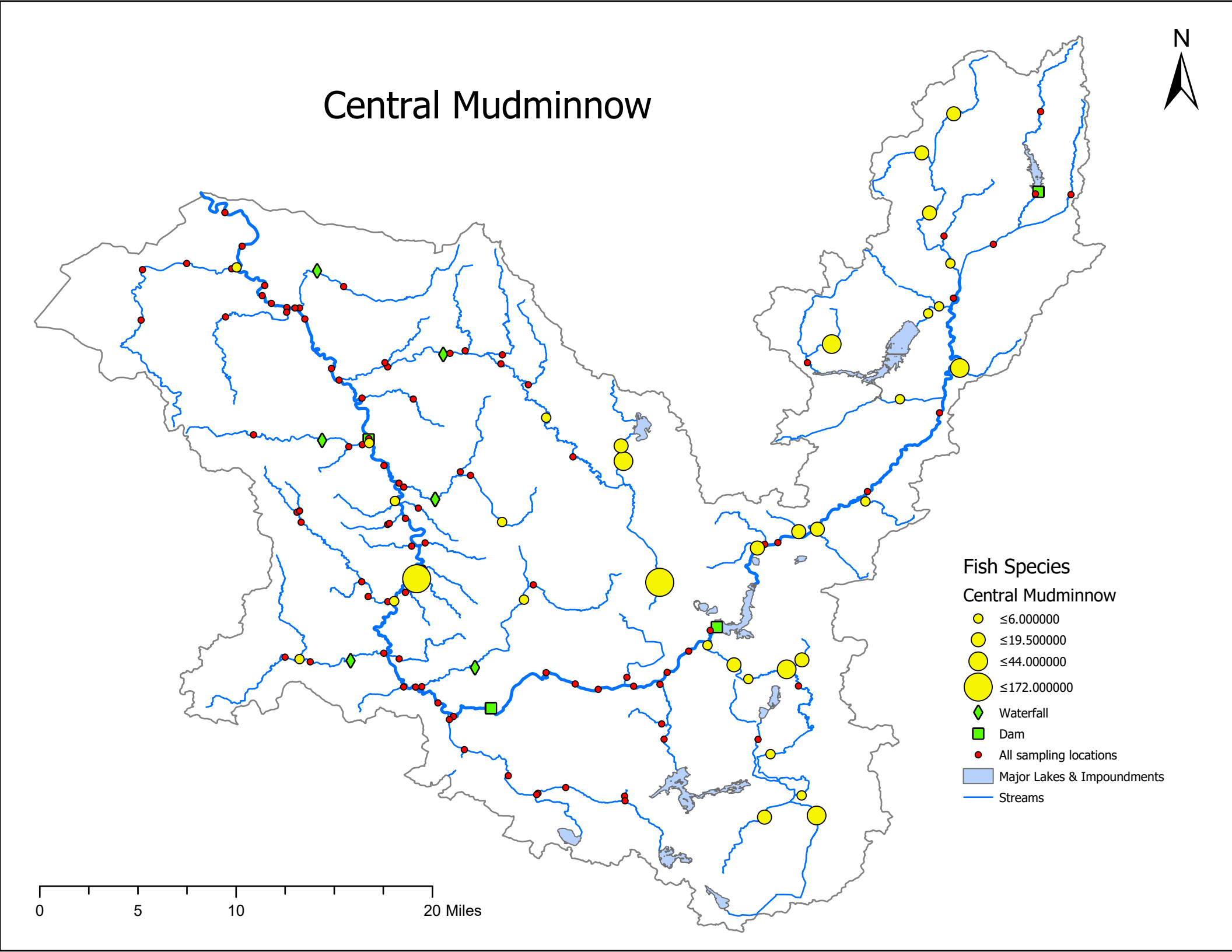
Fish Species
Rainbow Trout
≤4.000000
≤249.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Central Mudminnow
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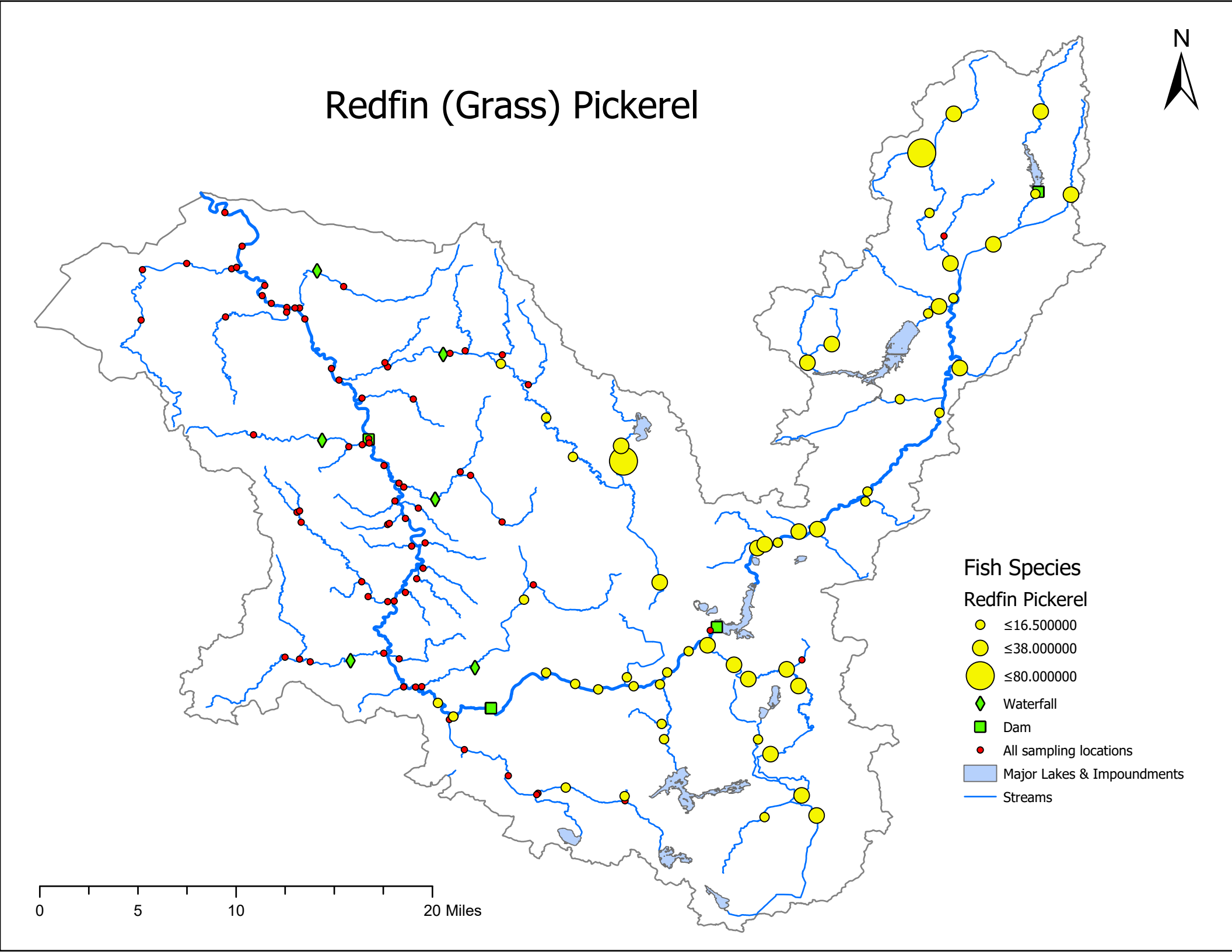
Fish Species
Central Mudminnow
≤6.000000
≤19.500000
≤44.000000
≤172.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Redfin (Grass) Pickerel
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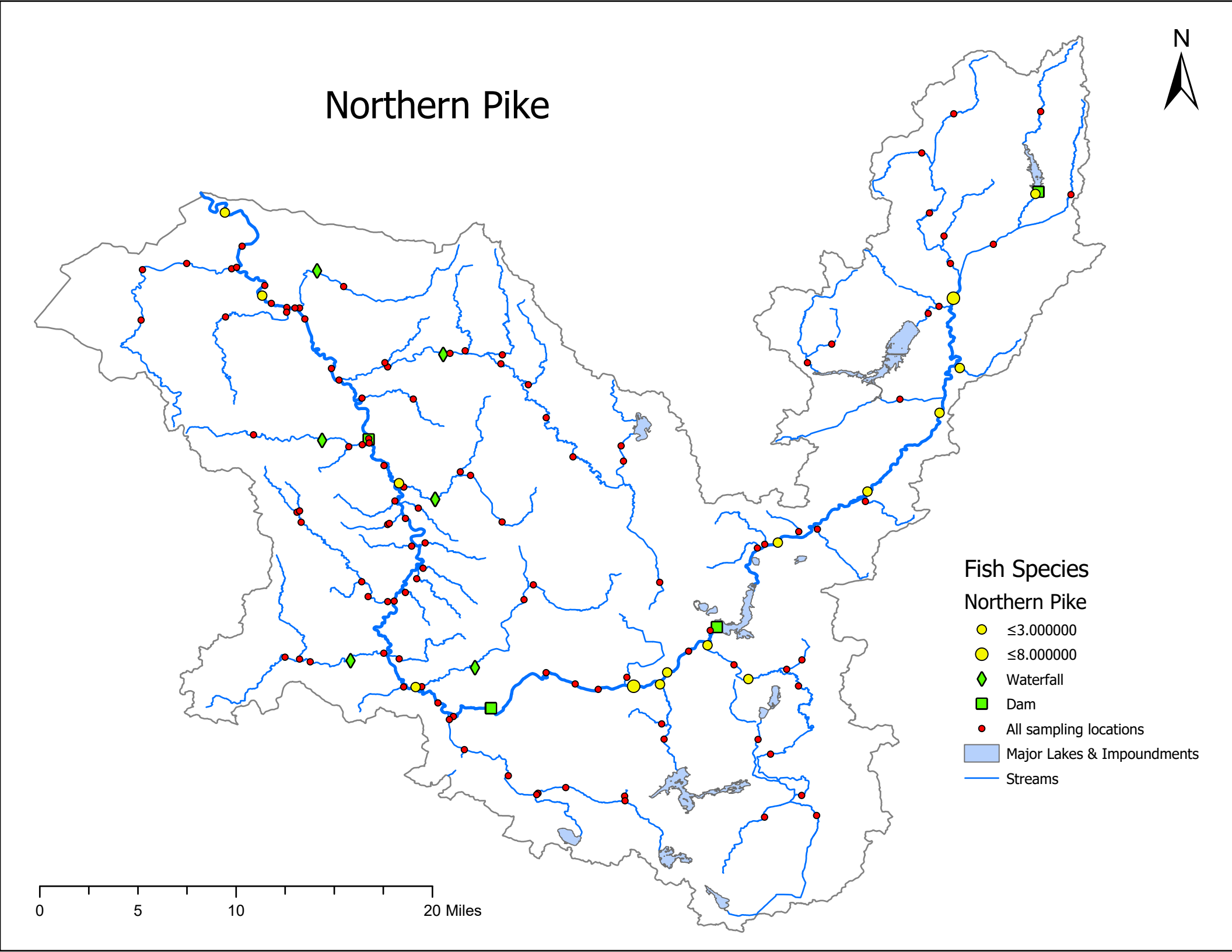
Fish Species
Redfin Pickerel
≤16.500000
≤38.000000
≤80.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Northern Pike
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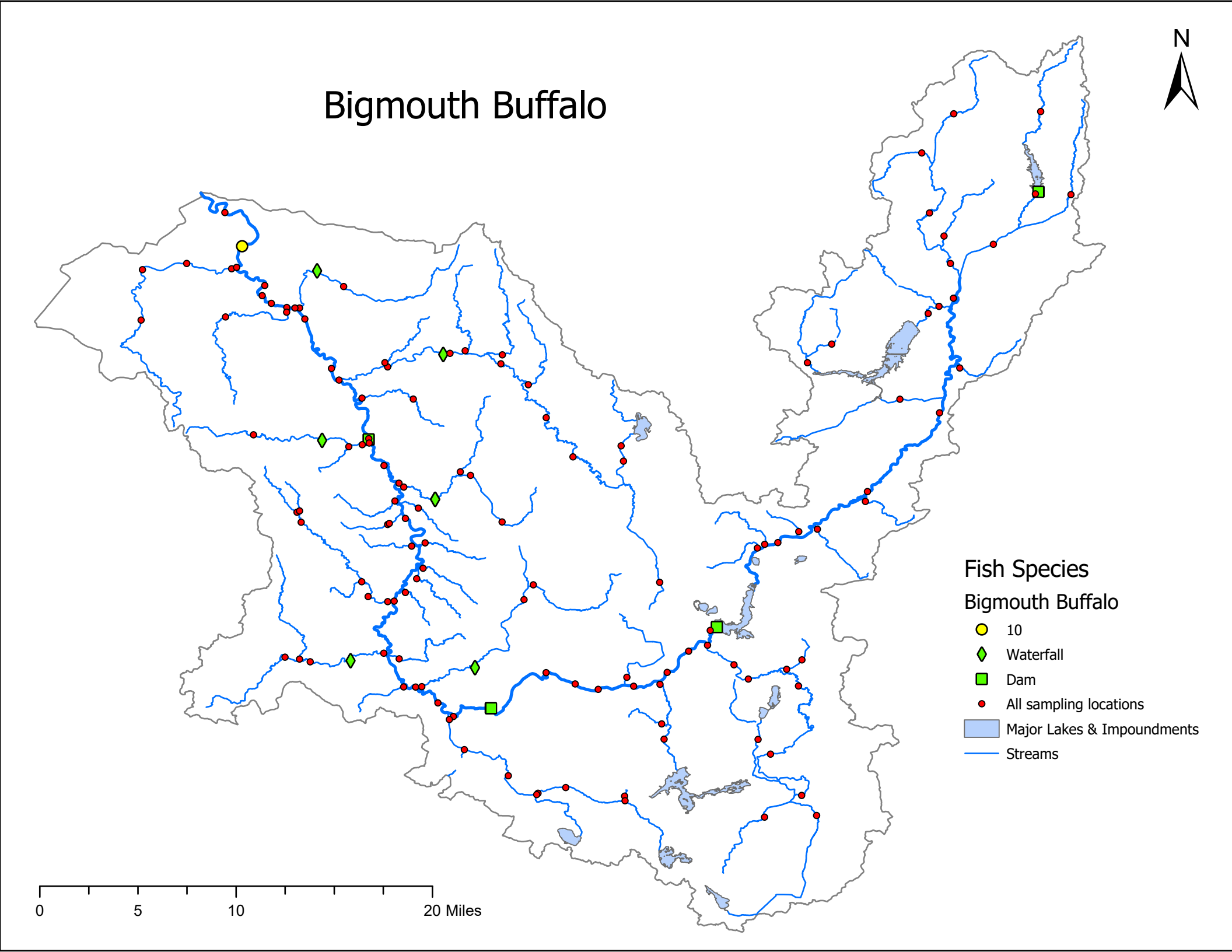
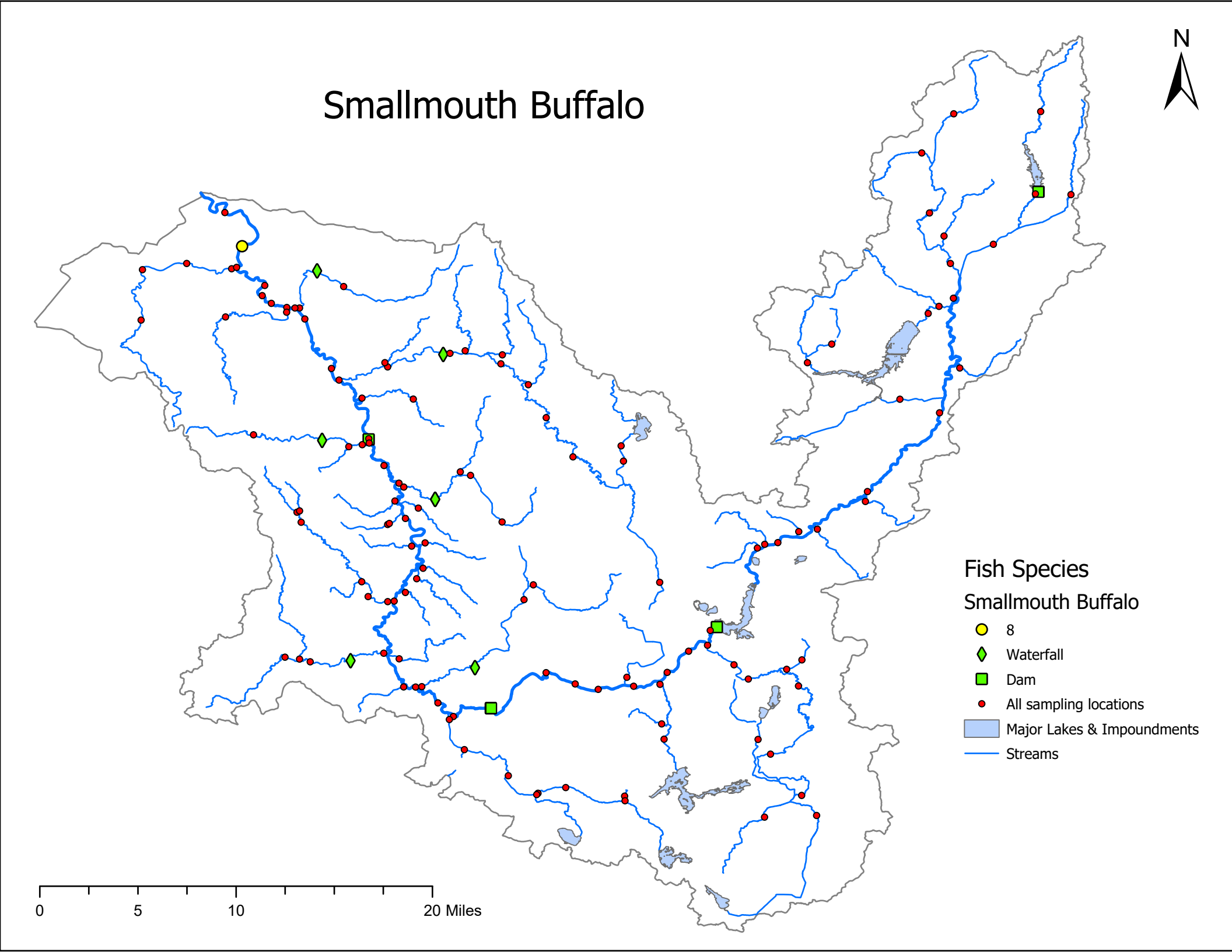
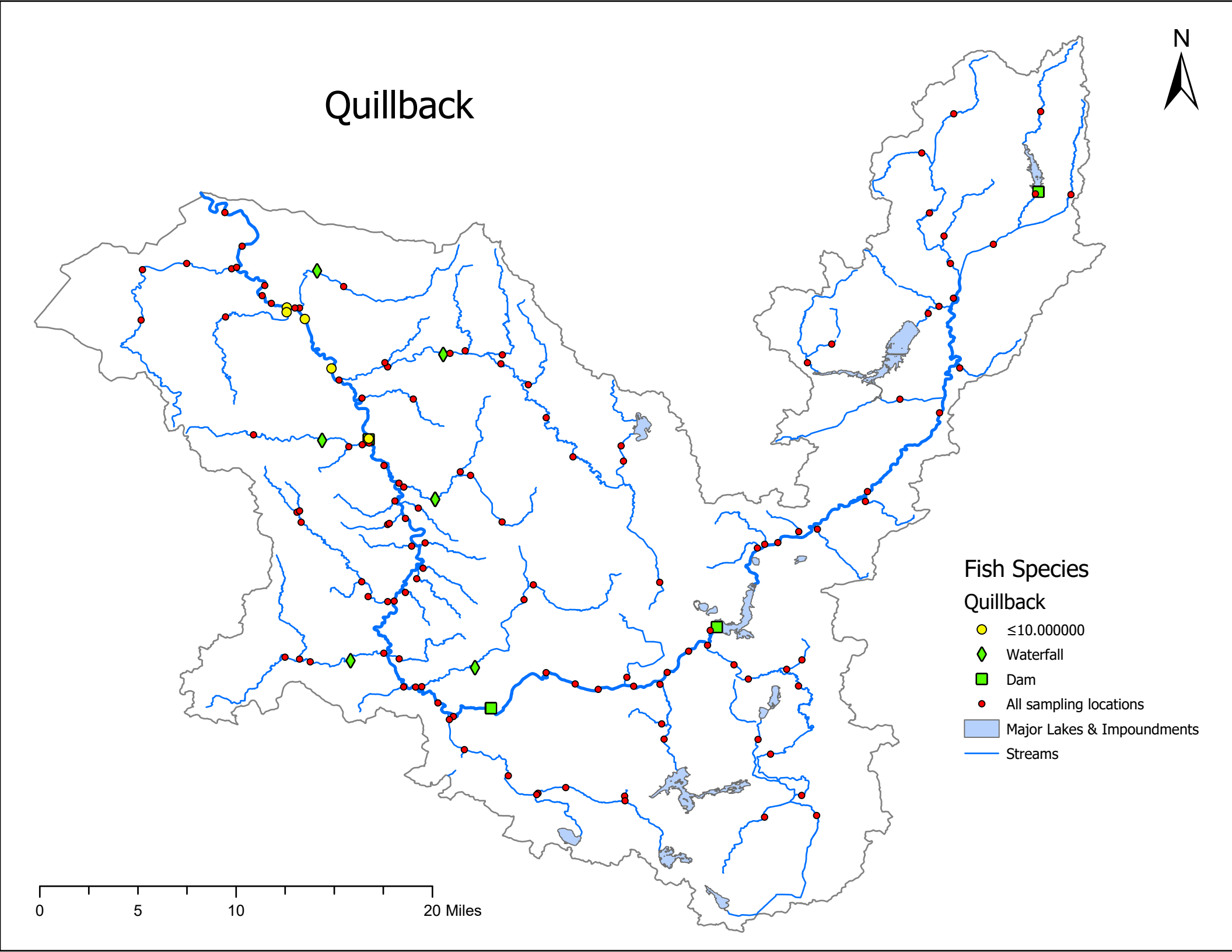
Fish Species
Northern Pike
≤3.000000
≤8.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Bigmouth Buffalo
N
Fish Species
Bigmouth Buffalo
10
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Smallmouth Buffalo
N
Fish Species
Smallmouth Buffalo
8
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Quillback
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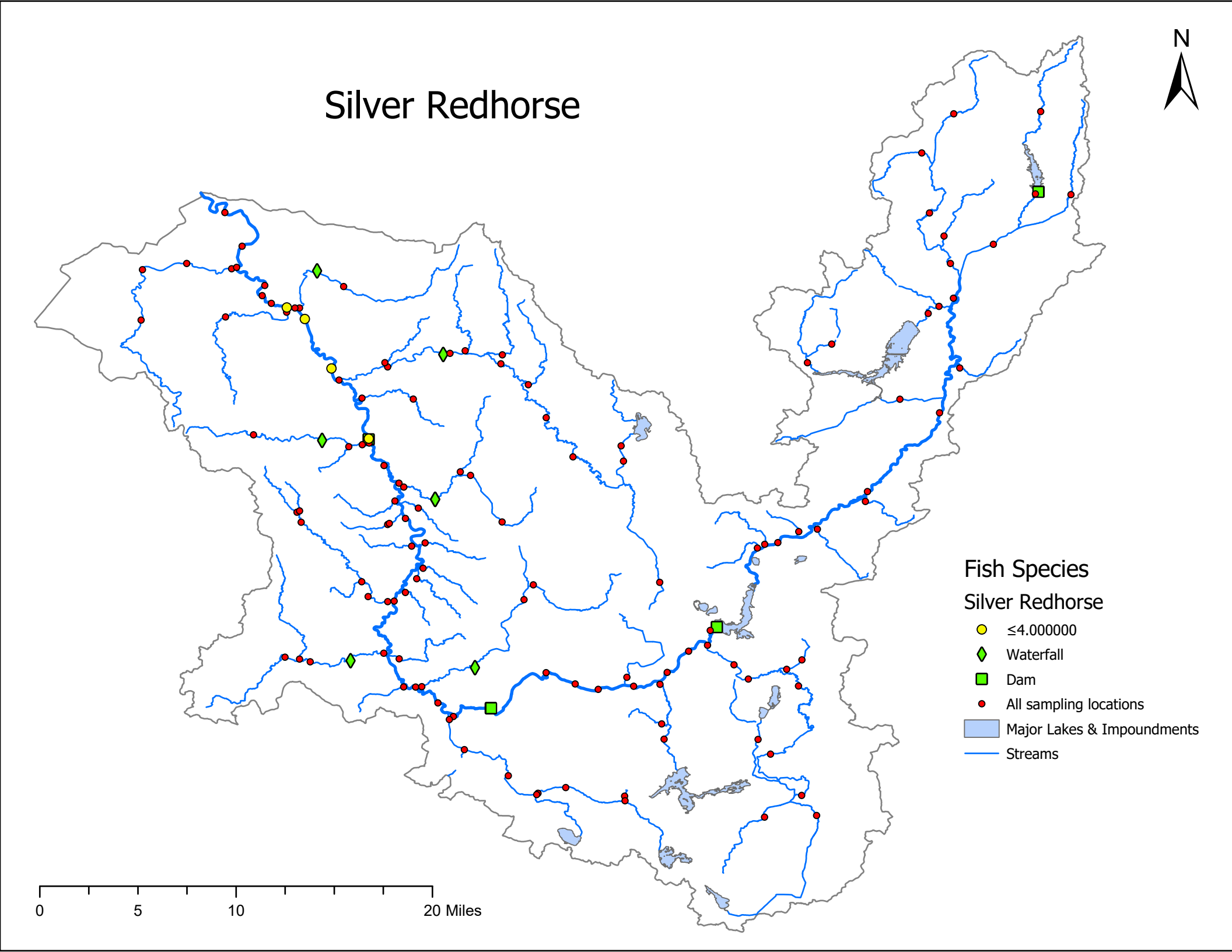
Fish Species
Quillback
≤10.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Silver Redhorse
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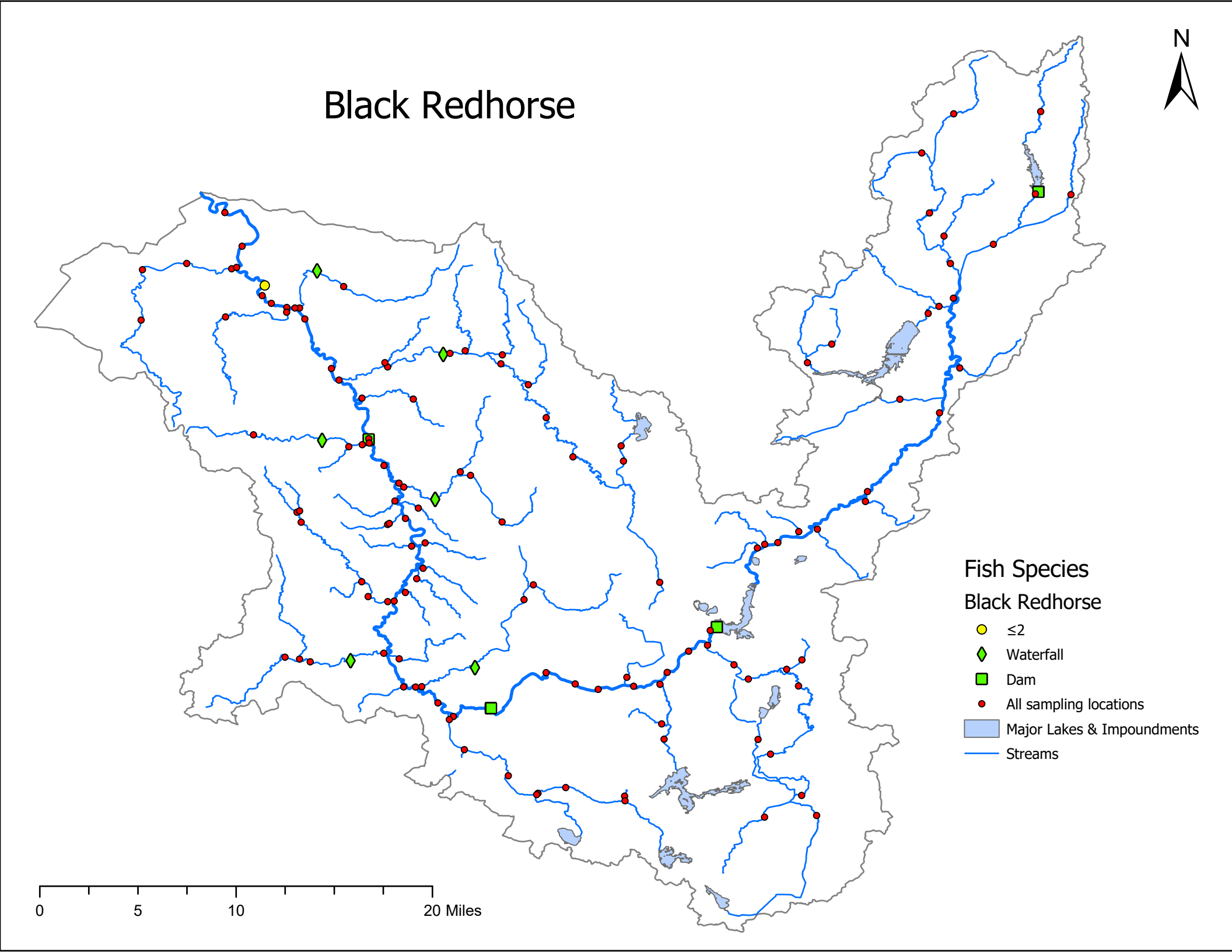
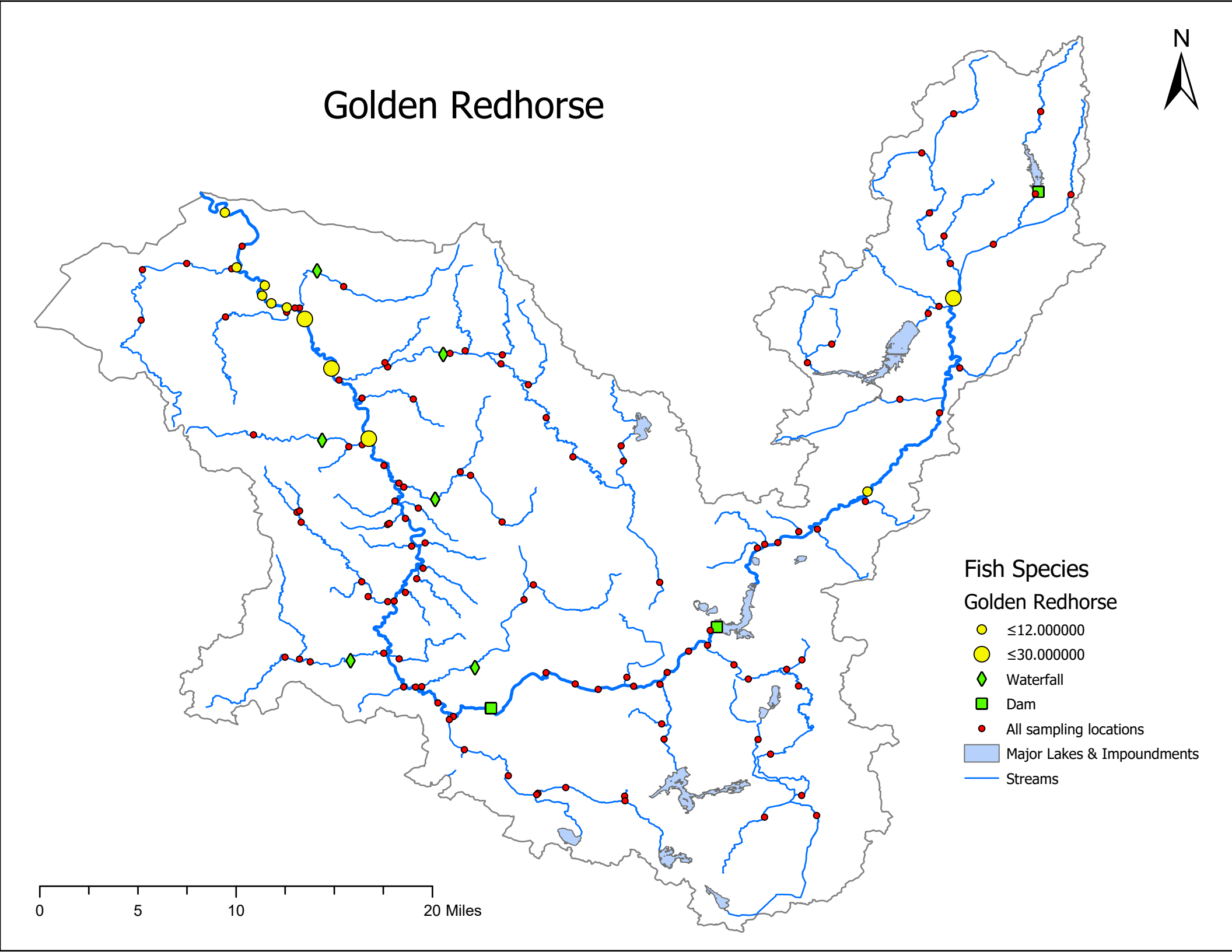
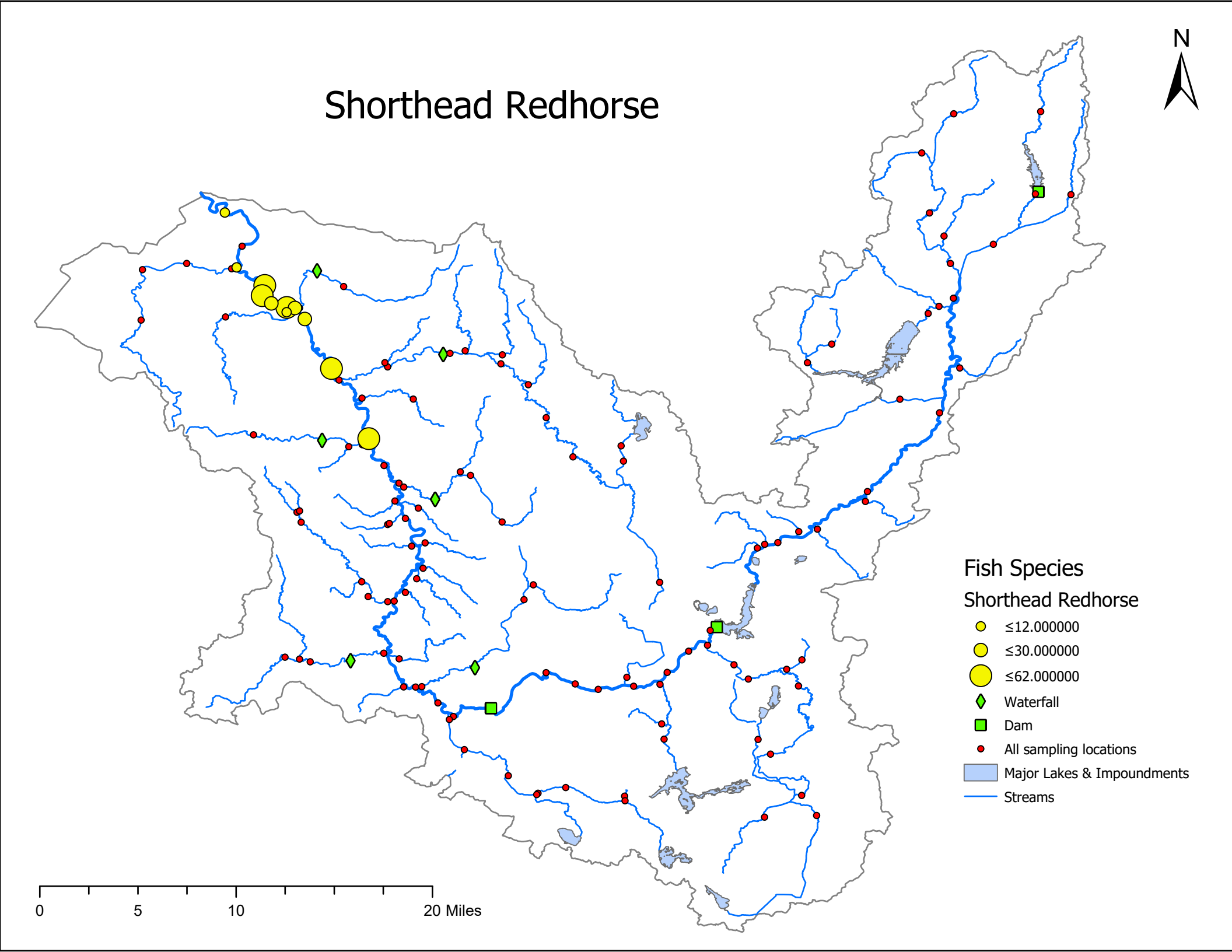
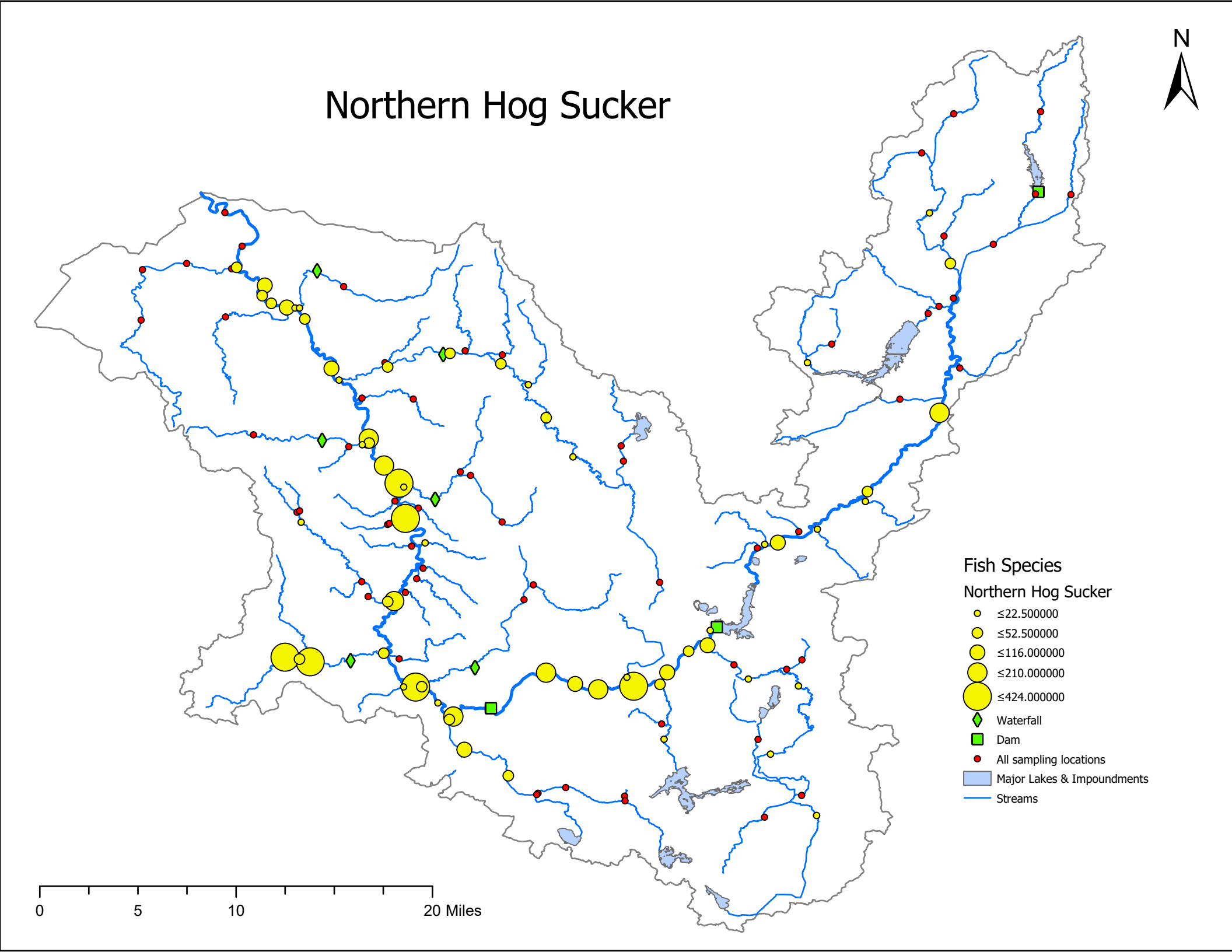
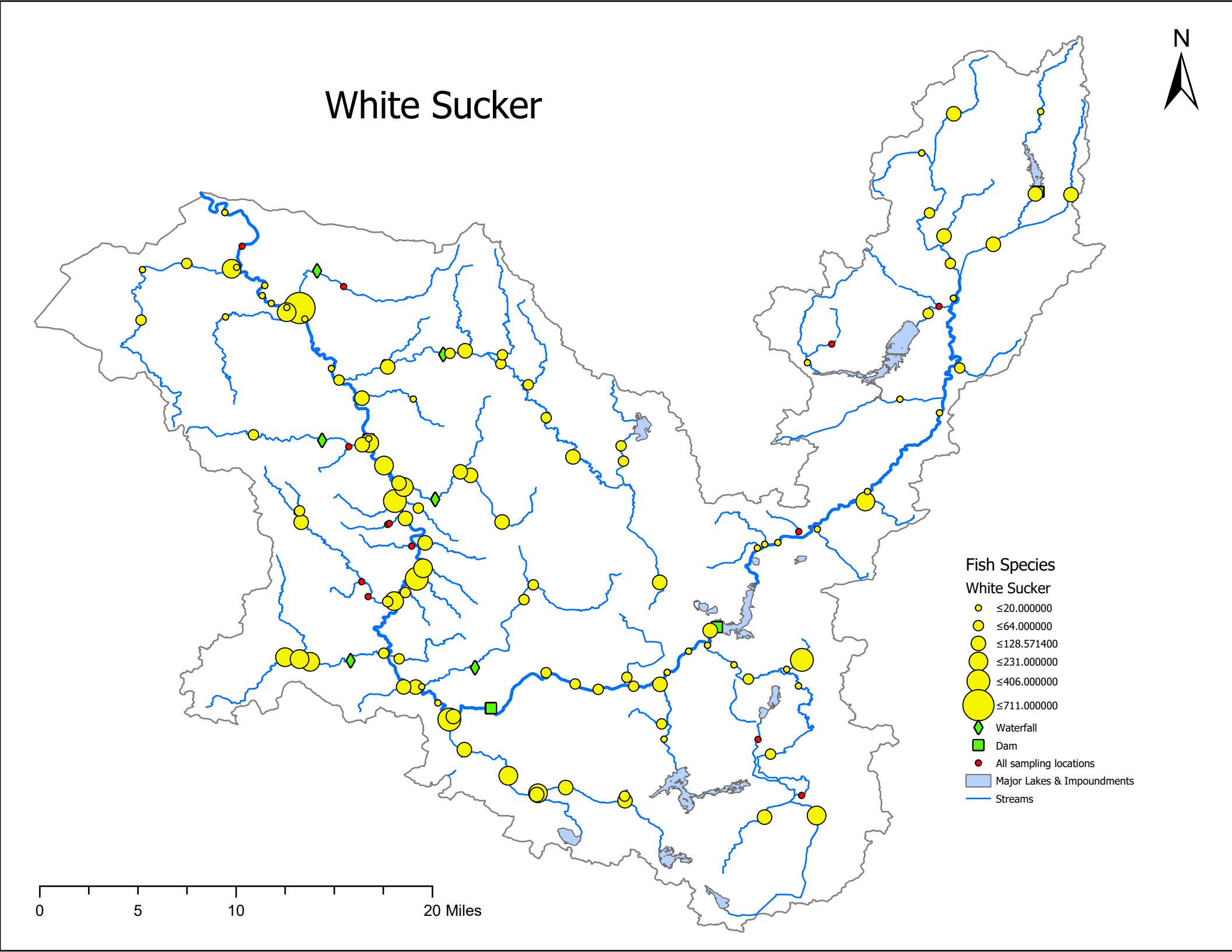
Fish Species
Silver Redhorse
≤4.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

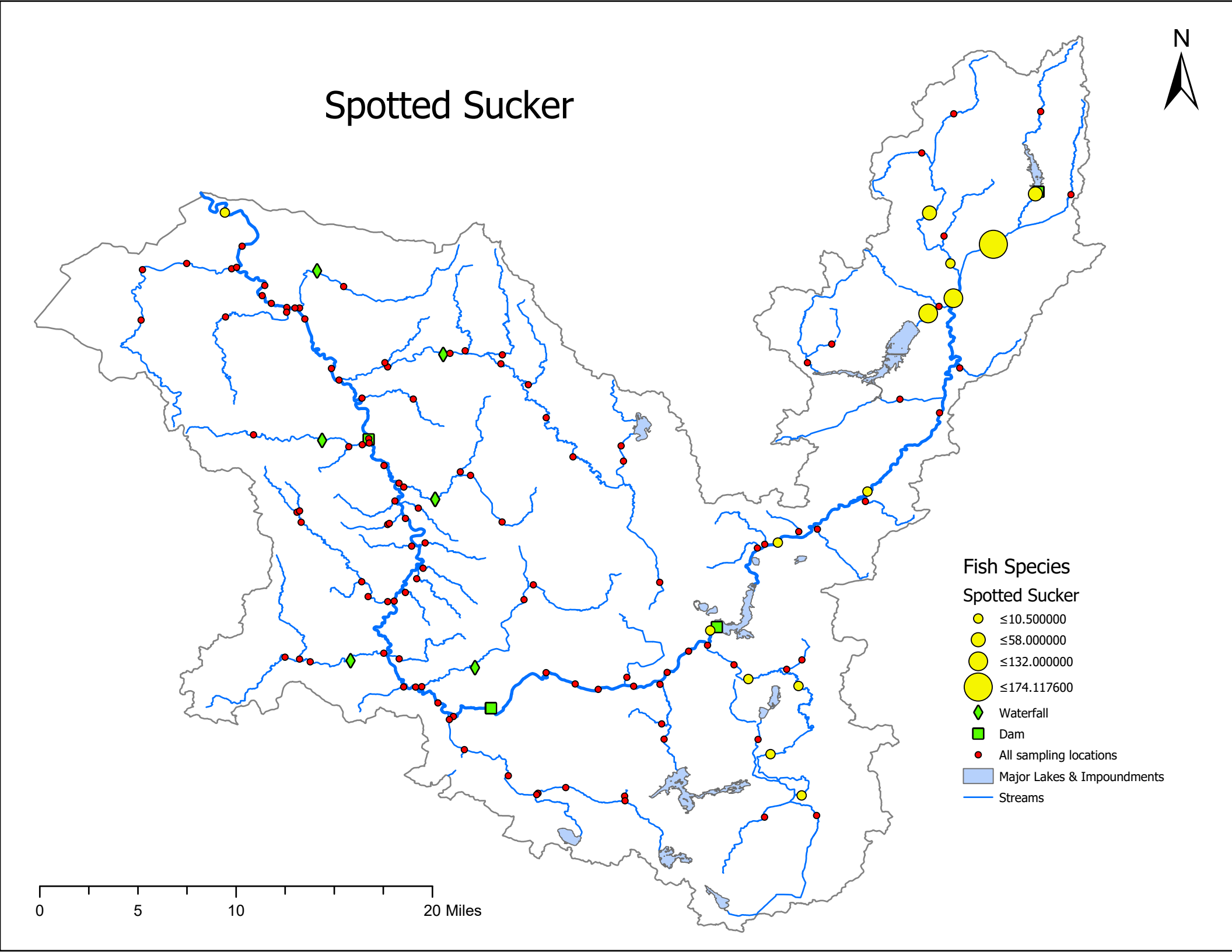

Black Redhorse
N
Fish Species
Black Redhorse
≤2
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

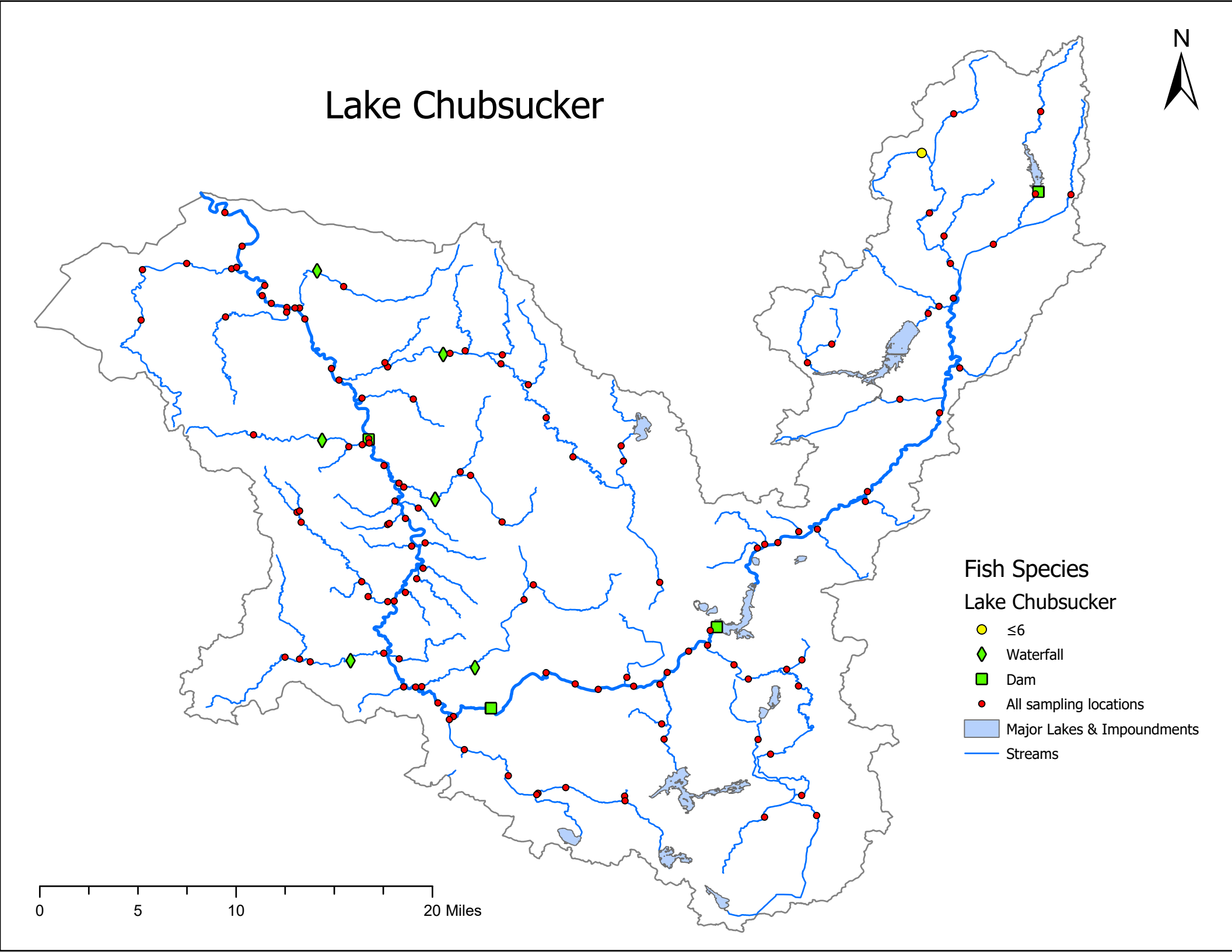

Golden Redhorse
N
Fish Species
Golden Redhorse
≤12.000000
≤30.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

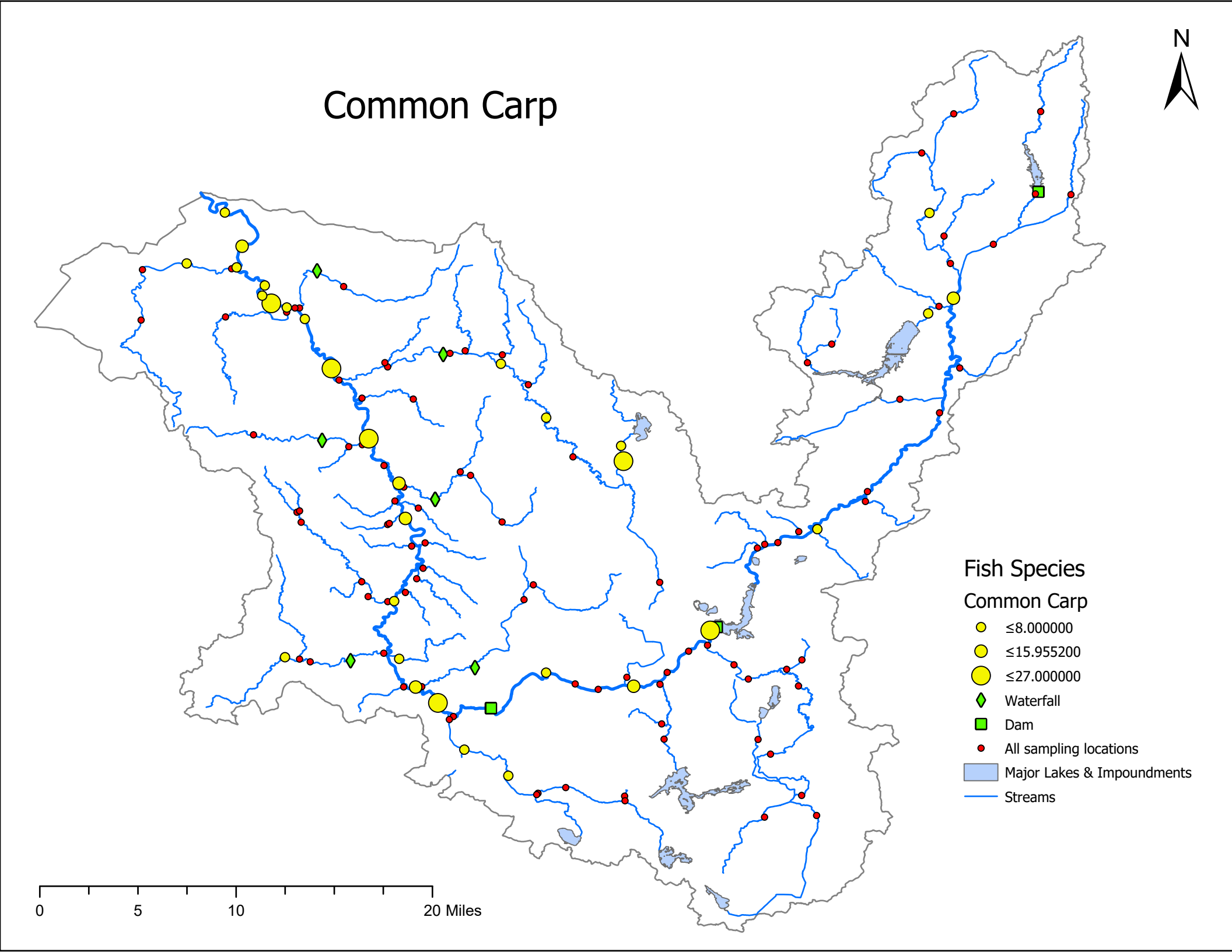

Shorthead Redhorse
N
Fish Species
Shorthead Redhorse
≤12.000000
≤30.000000
≤62.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

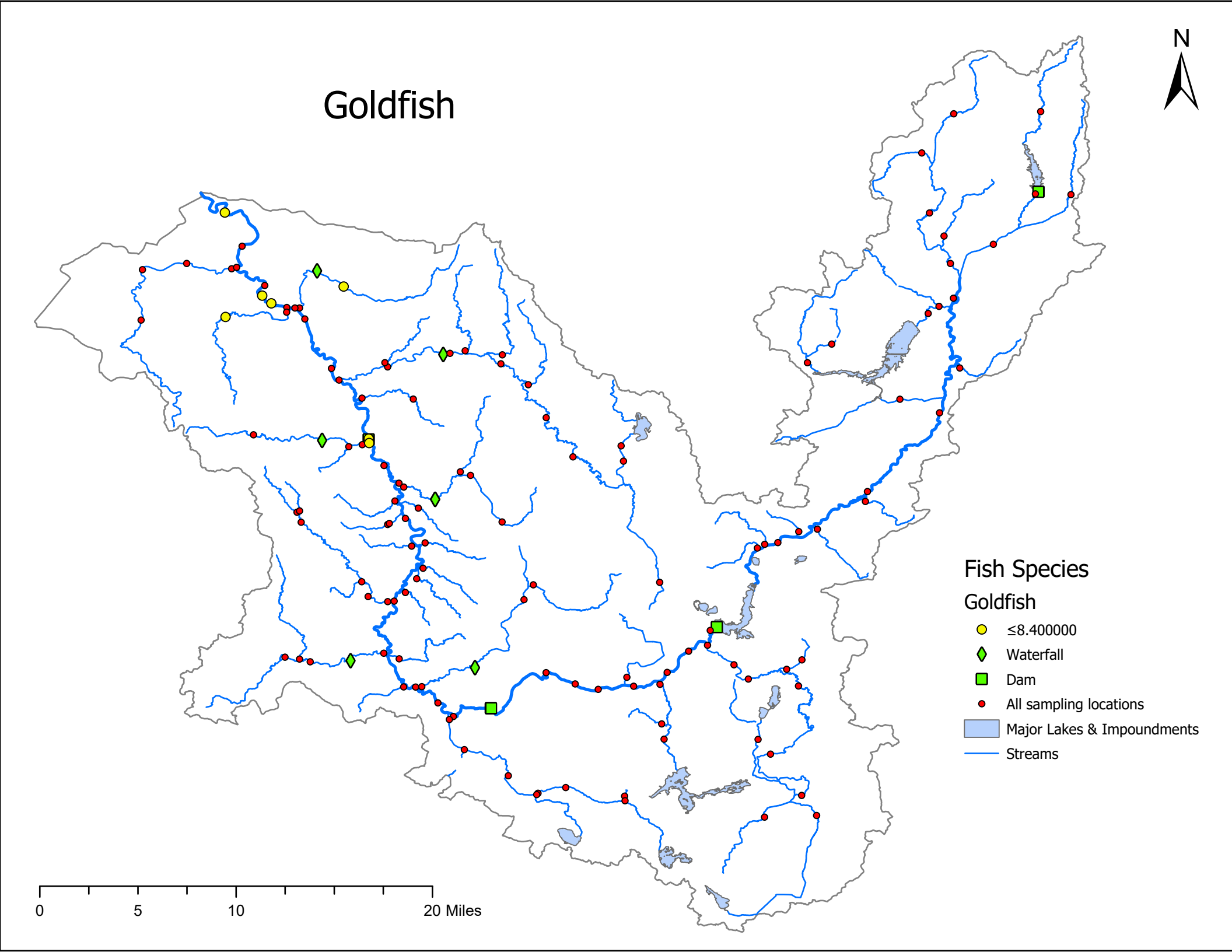

Northern Hog Sucker
N
Fish Species
Northern Hog Sucker
≤22.500000
≤52.500000
≤116.000000
≤210.000000
≤424.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

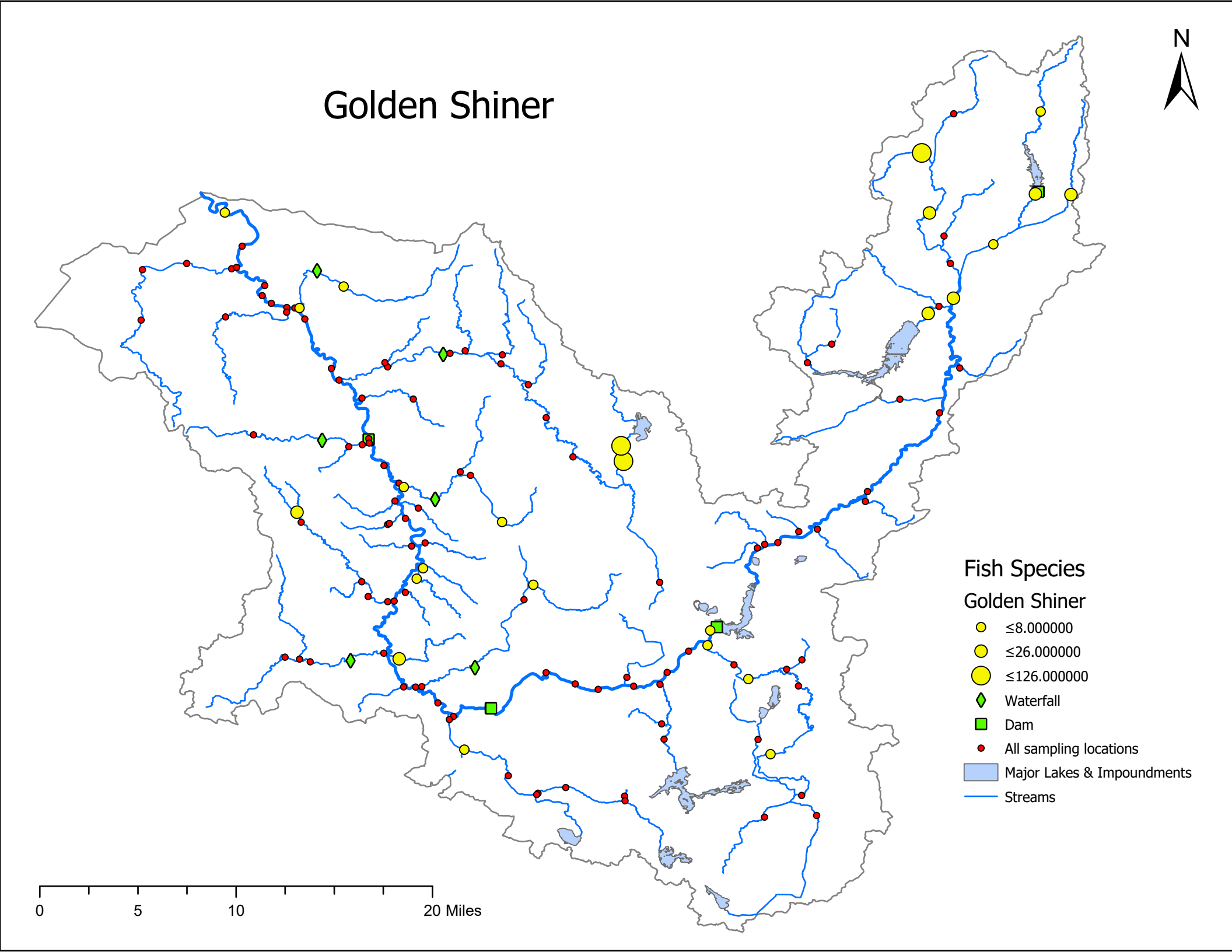

White Sucker
N
Fish Species
White Sucker
≤20.000000
≤64.000000
≤128.571400
≤231.000000
≤406.000000
≤711.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

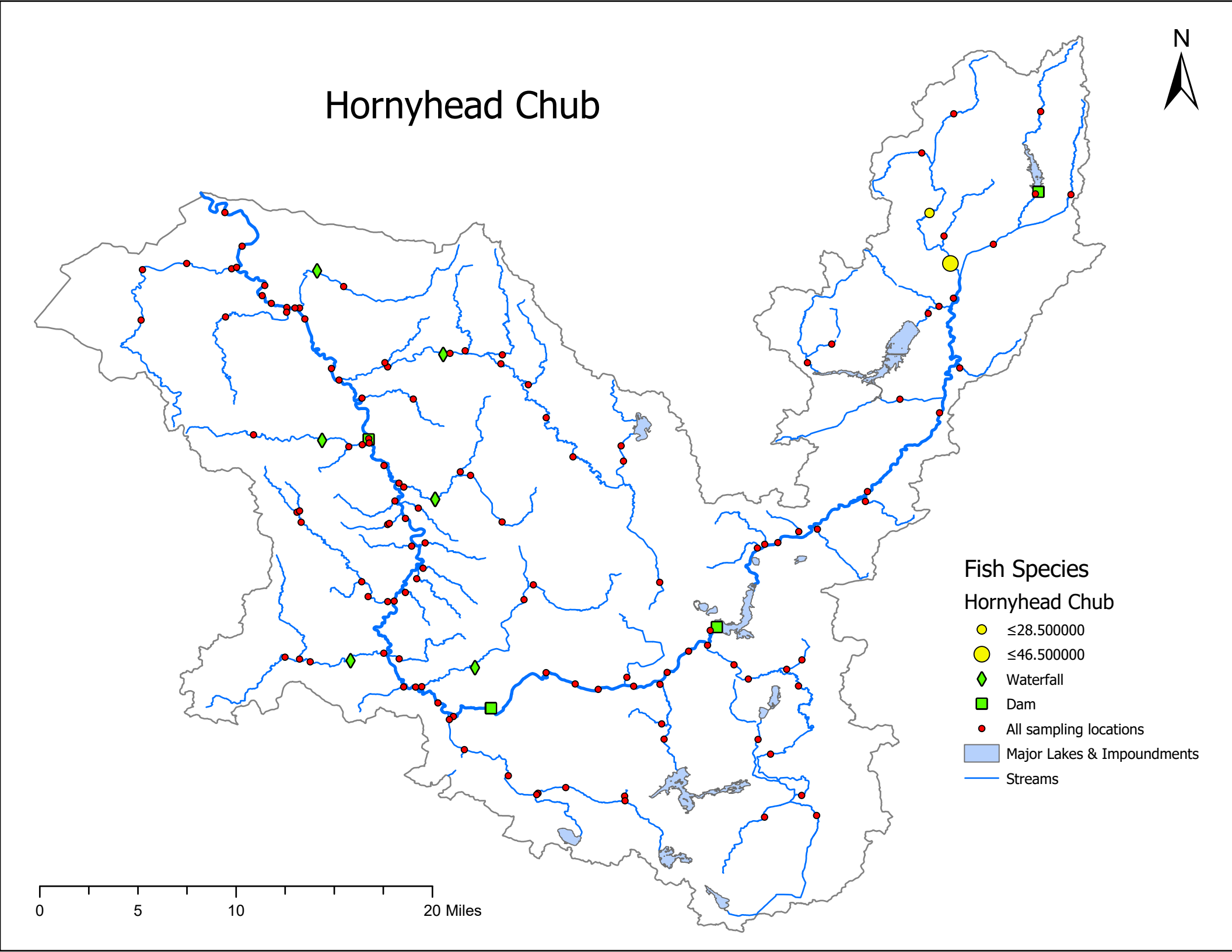

Spotted Sucker
N
Fish Species
Spotted Sucker
≤10.500000
≤58.000000
≤132.000000
≤174.117600
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

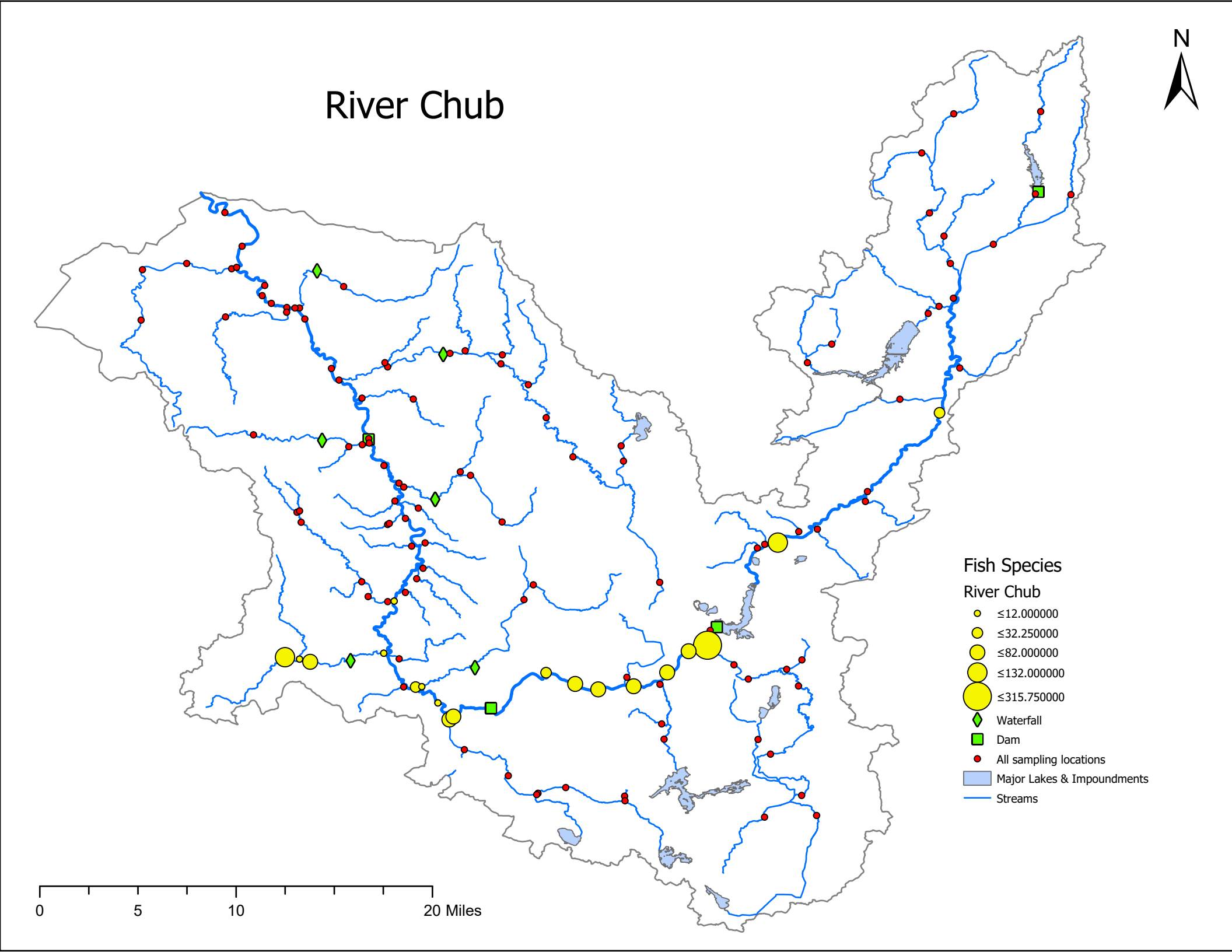

Lake Chubsucker
N
Fish Species
Lake Chubsucker
≤6
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

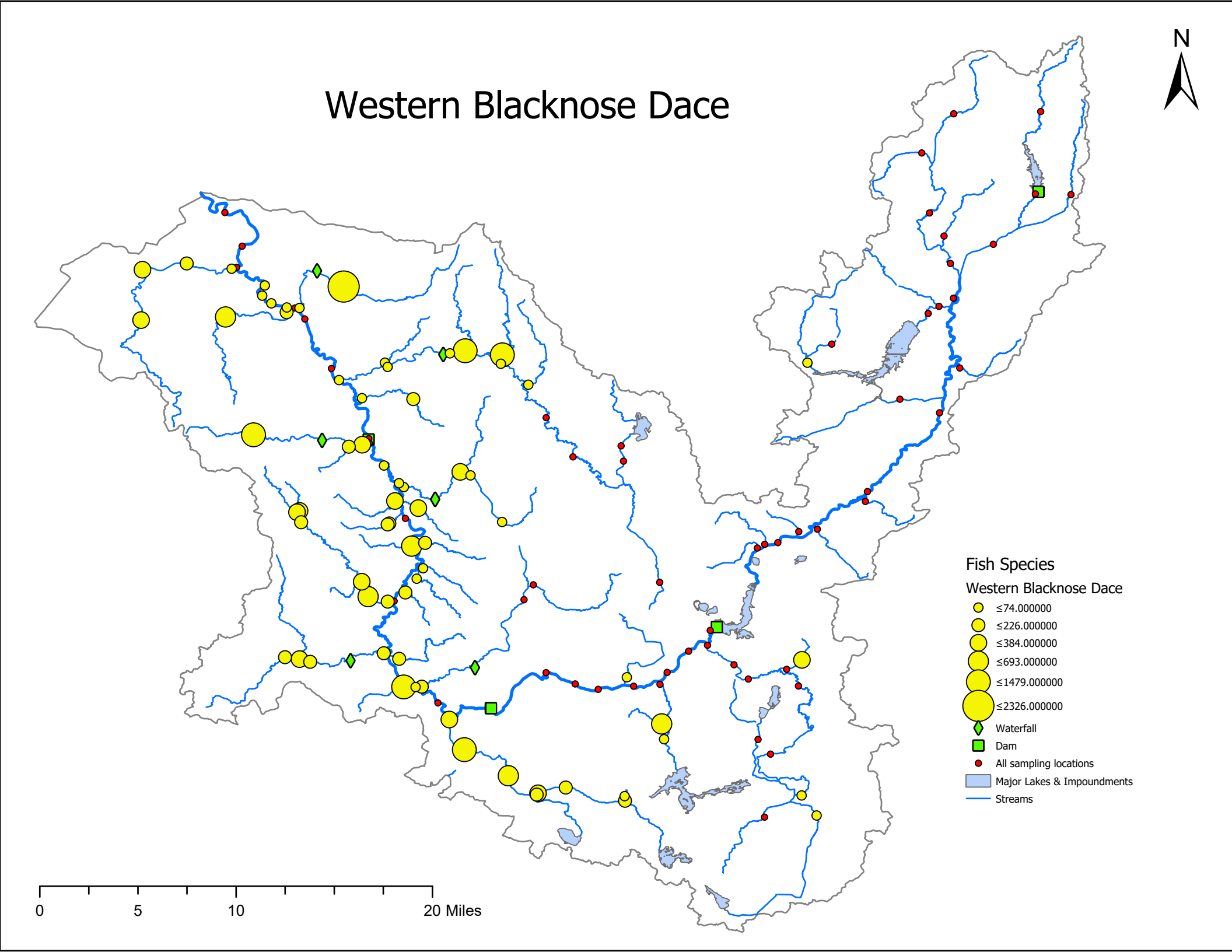

Common Carp
N
Fish Species
Common Carp
≤8.000000
≤15.955200
≤27.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

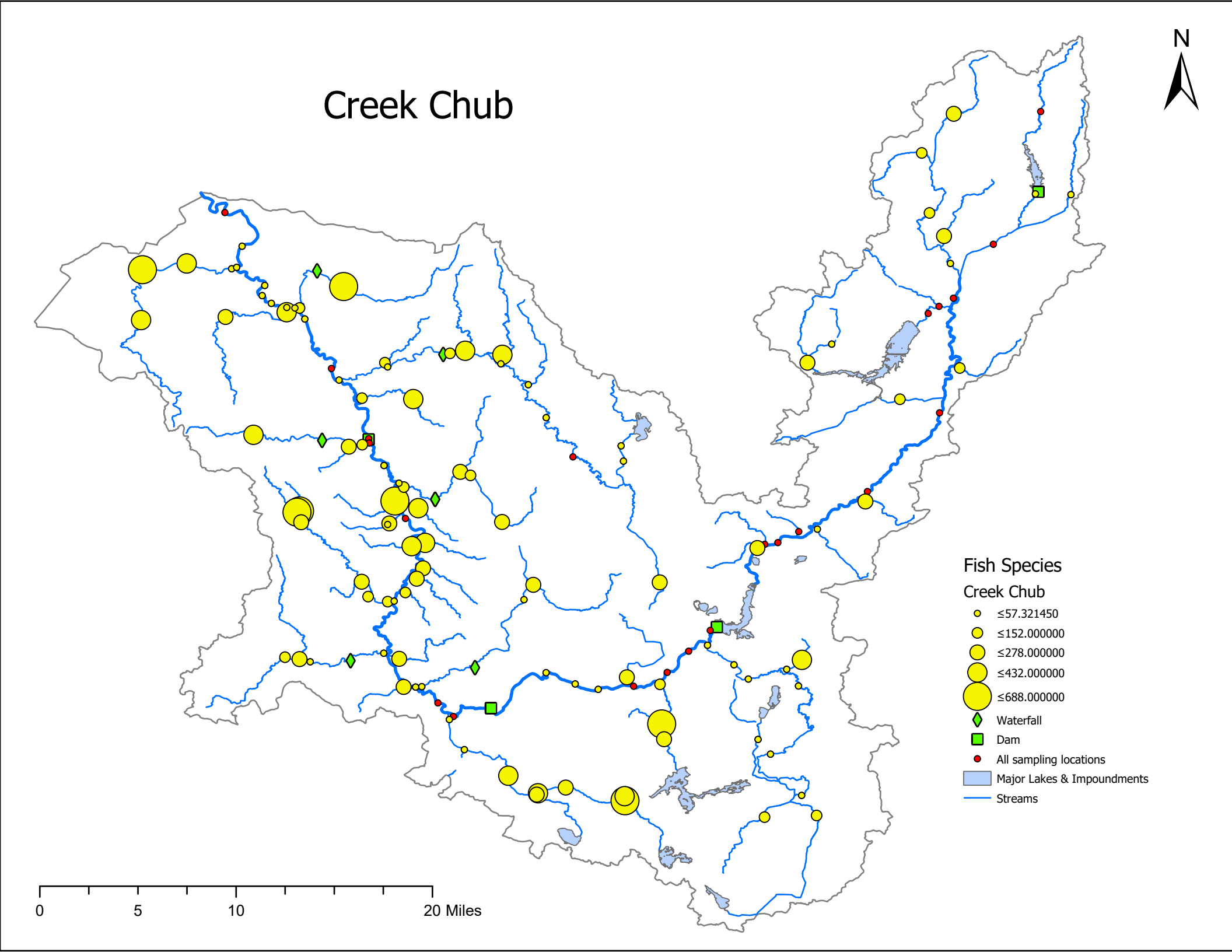

Goldfish
N
Fish Species
Goldfish
≤8.400000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

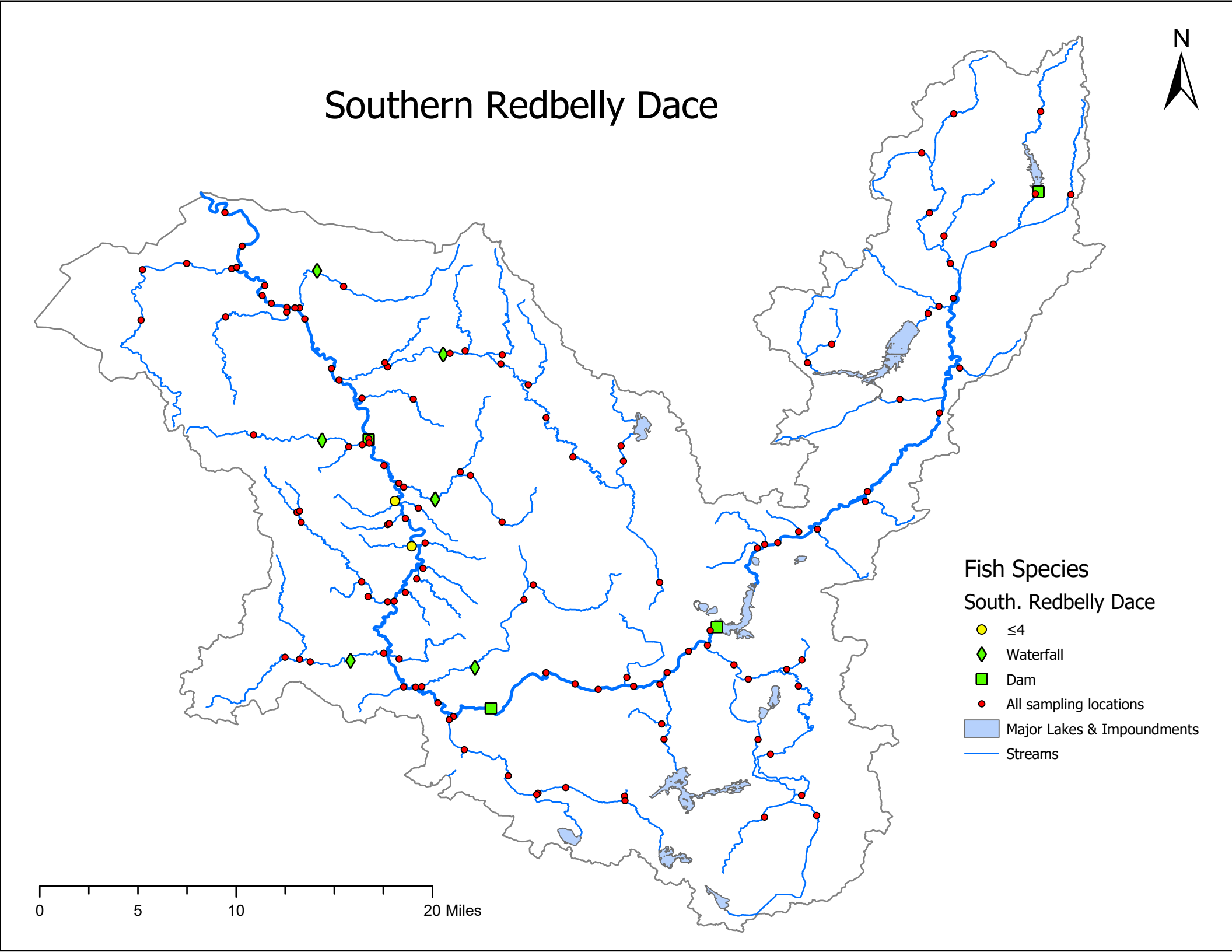

Golden Shiner
N
Fish Species
Golden Shiner
≤8.000000
≤26.000000
≤126.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

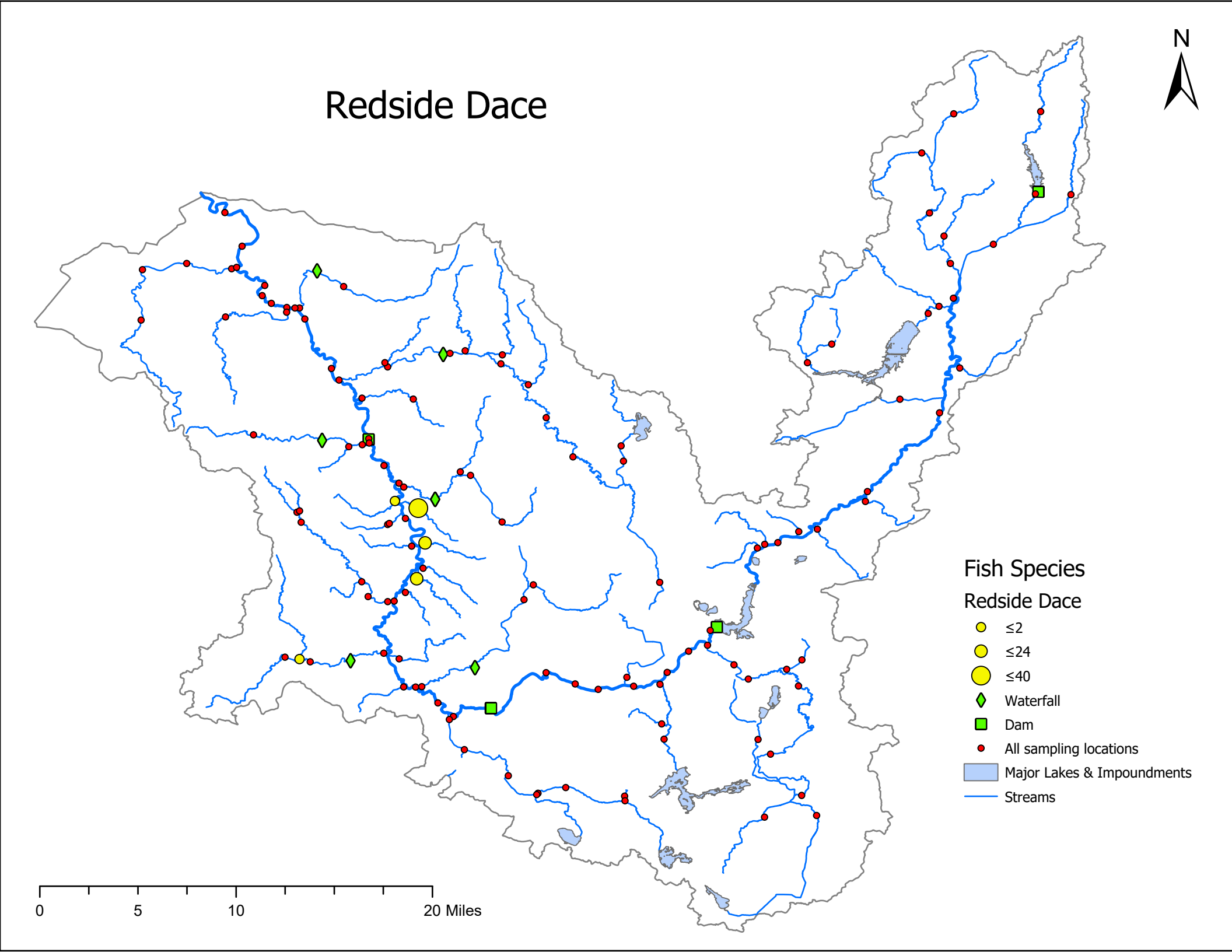

Hornyhead Chub
N
Fish Species
Hornyhead Chub
≤28.500000
≤46.500000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

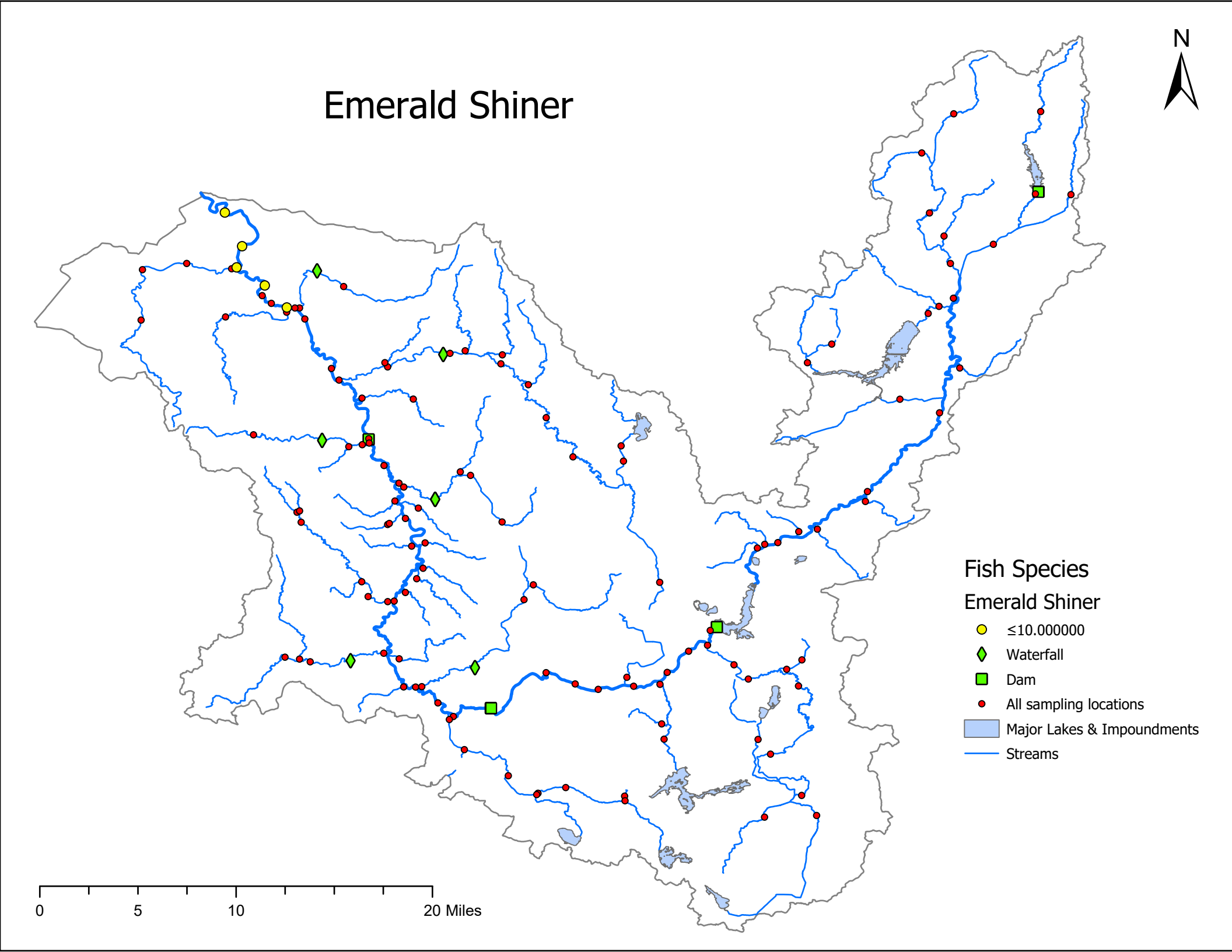

River Chub
N
Fish Species
River Chub
≤12.000000
≤32.250000
≤82.000000
≤132.000000
≤315.750000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

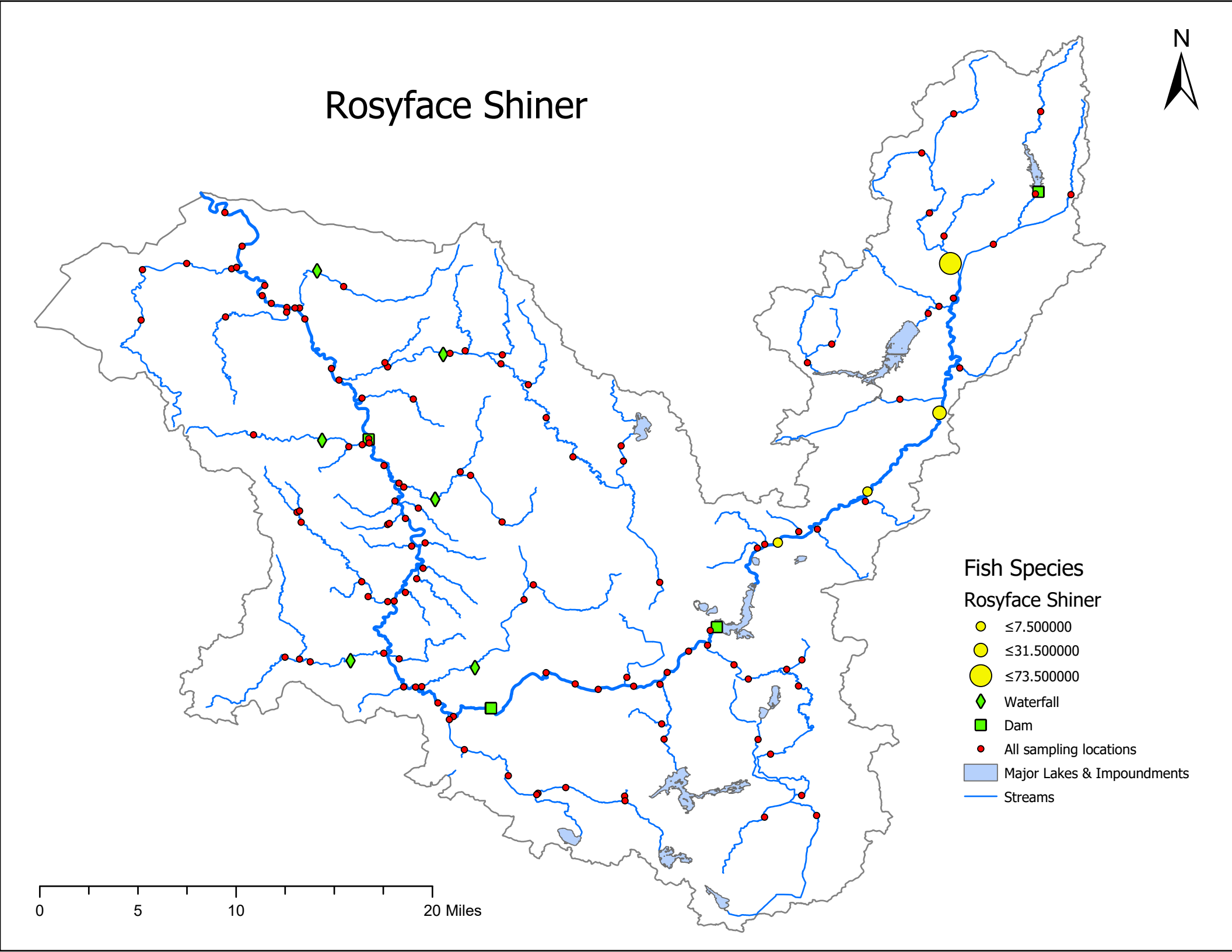

Western Blacknose Dace
N
Fish Species
Western Blacknose Dace
≤74.000000
≤226.000000
≤384.000000
≤693.000000
≤1479.000000
≤2326.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

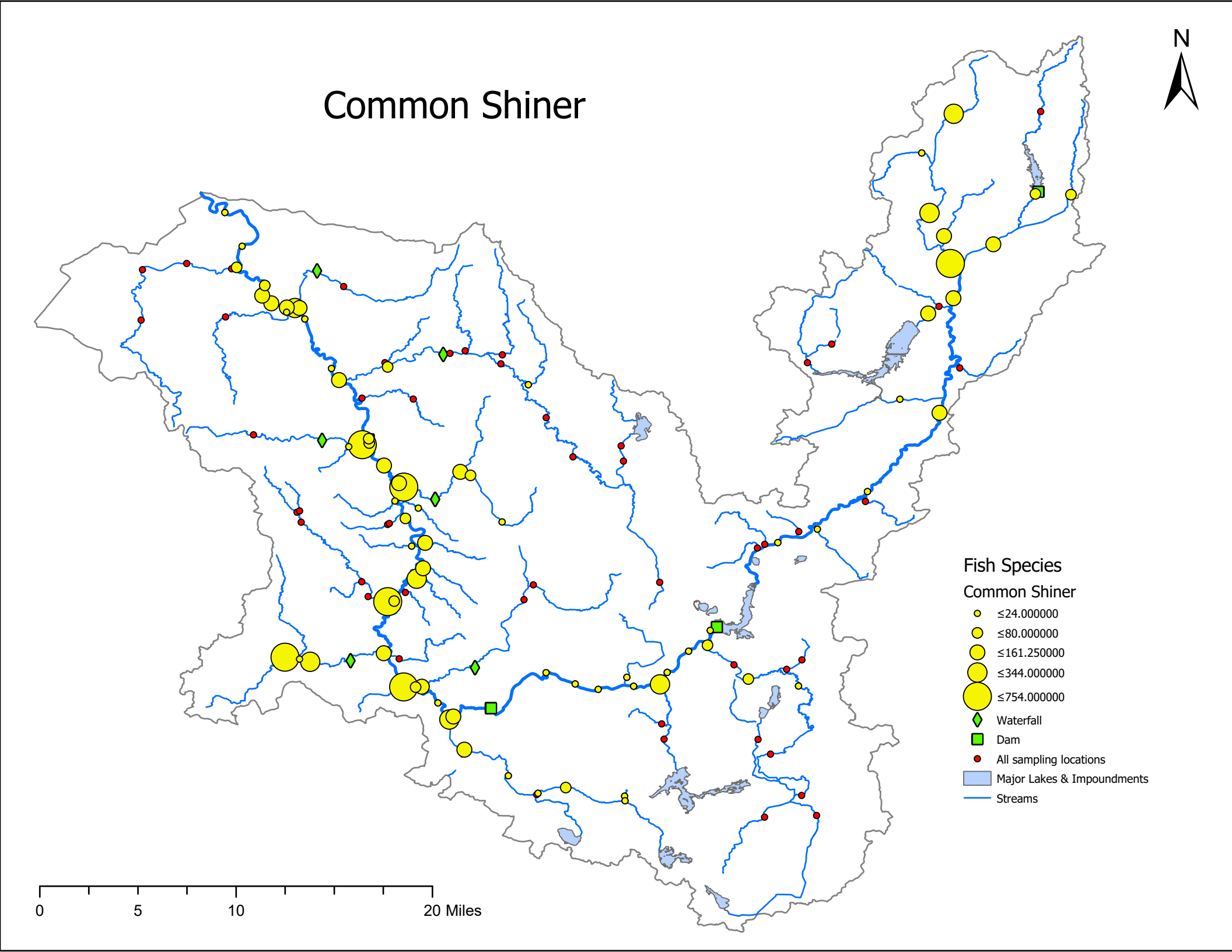

Creek Chub
N
Fish Species
Creek Chub
≤57.321450
≤152.000000
≤278.000000
≤432.000000
≤688.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

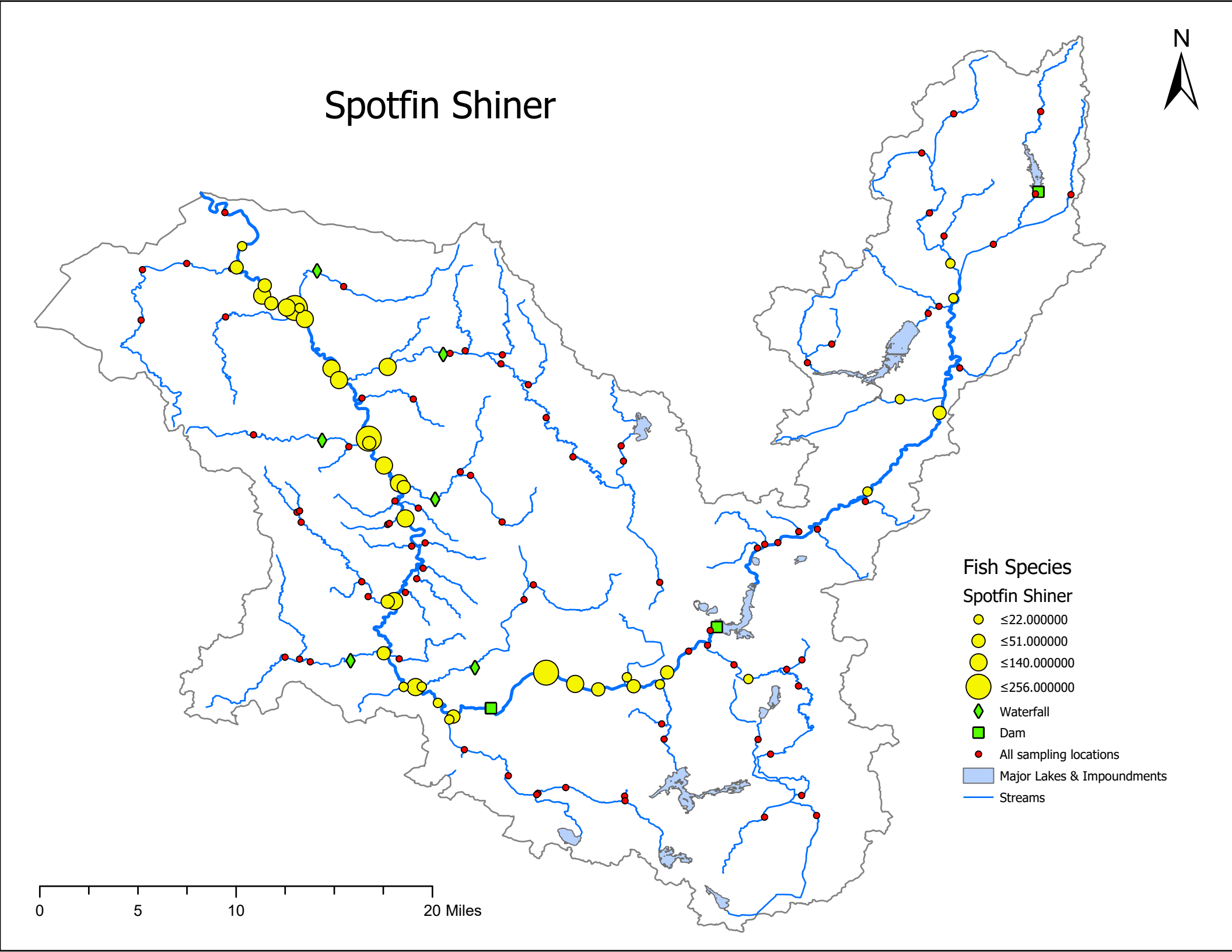

Southern Redbelly Dace
N
Fish Species
South. Redbelly Dace
≤4
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

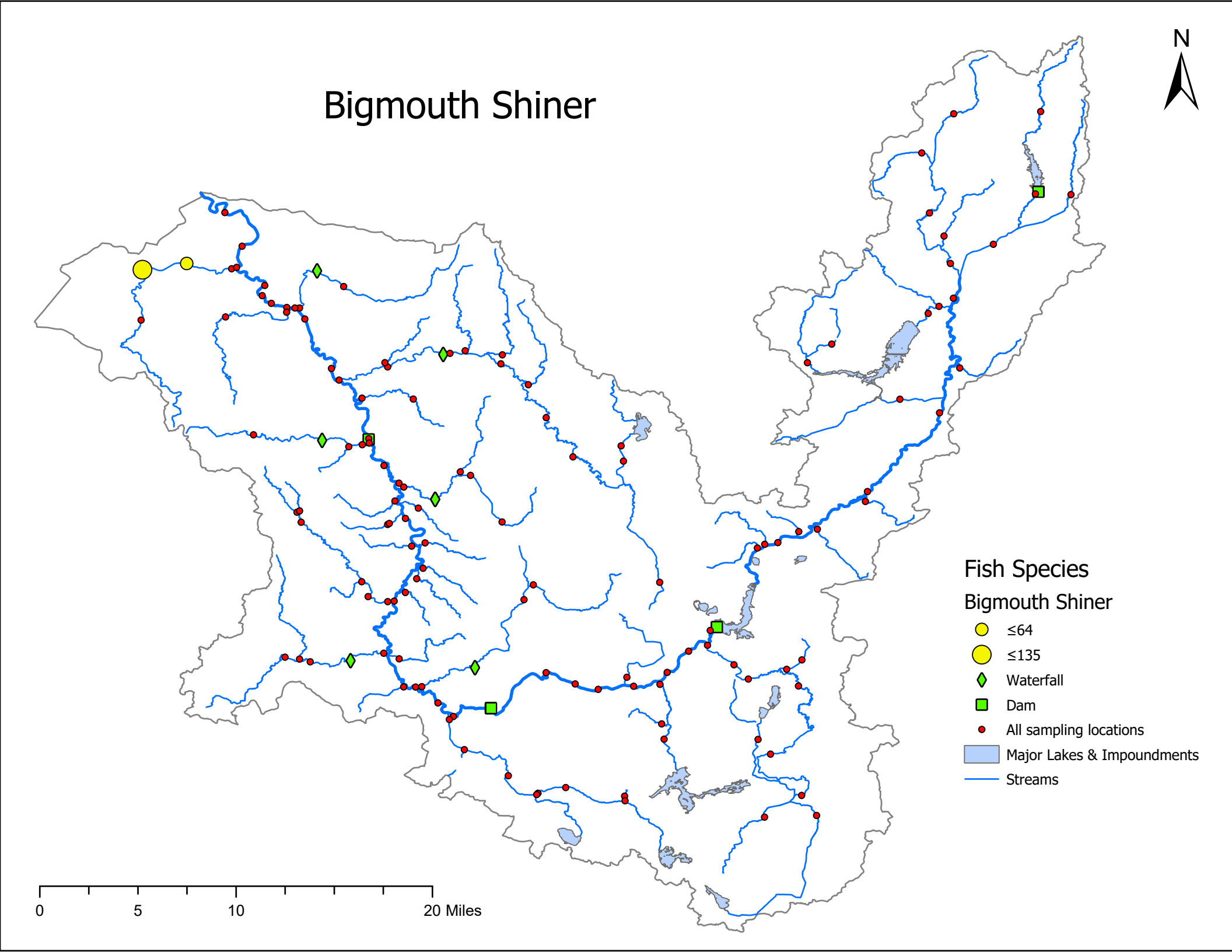

Redside Dace
N
Fish Species
Redside Dace
≤2
≤24
≤40
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

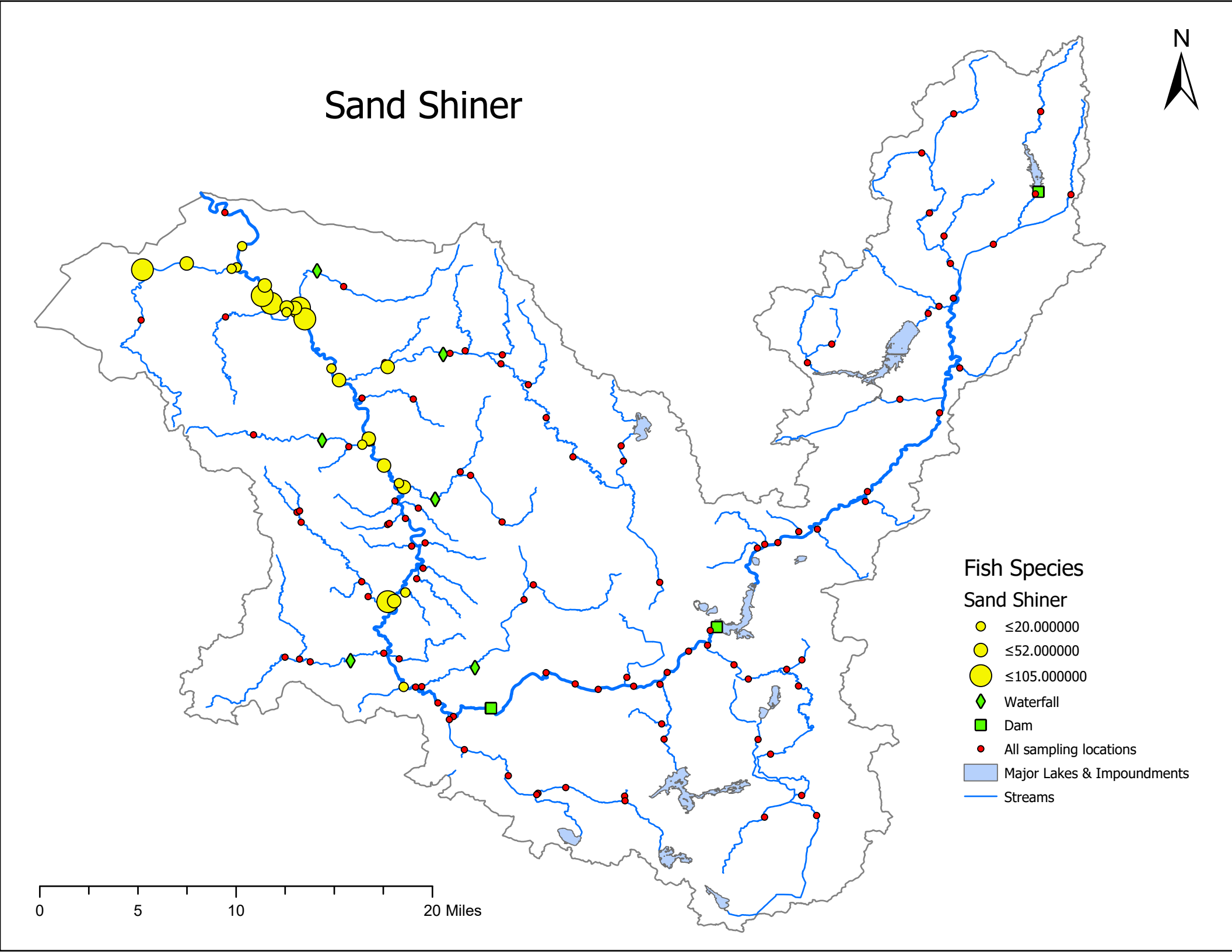

Emerald Shiner
N
Fish Species
Emerald Shiner
≤10.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

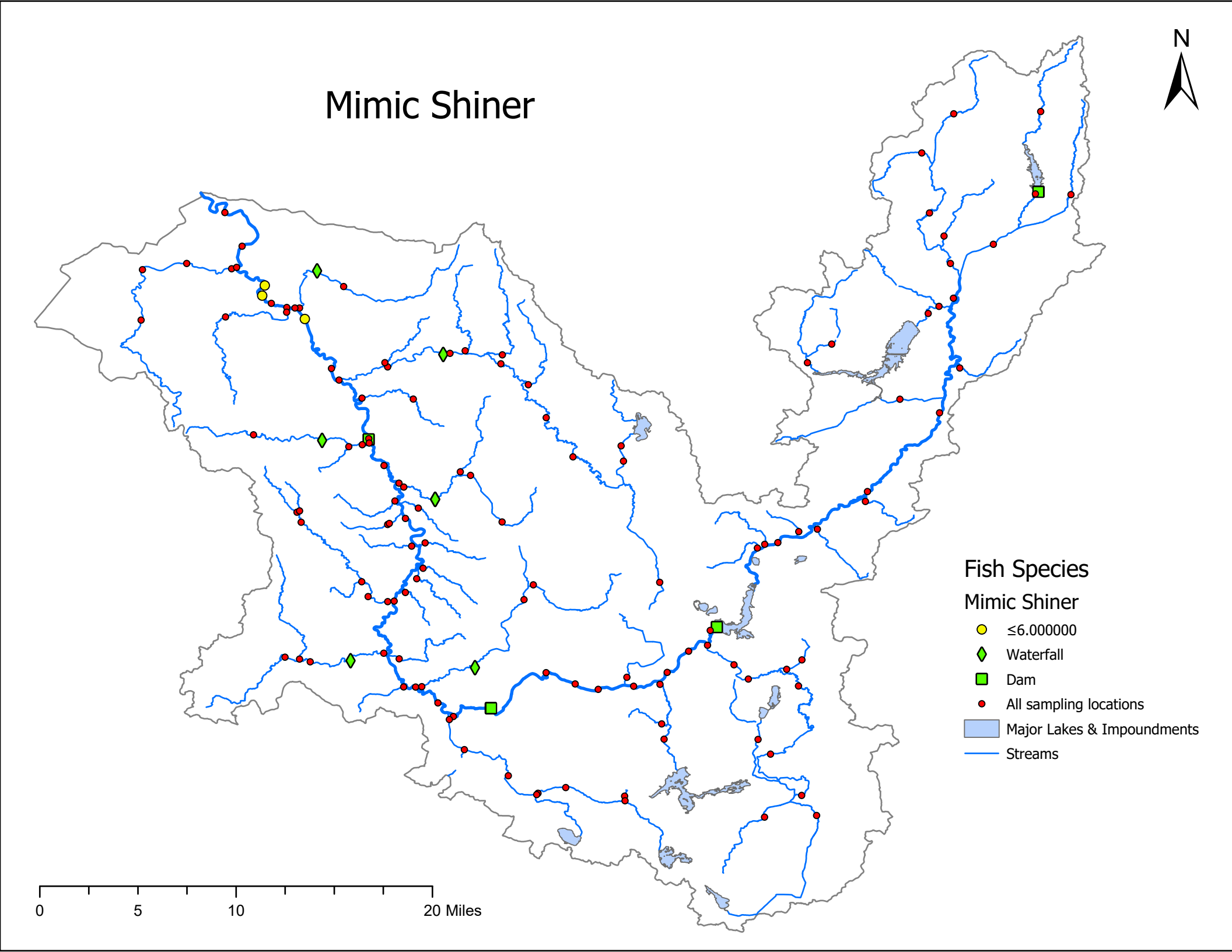

Rosyface Shiner
N
Fish Species
Rosyface Shiner
≤7.500000
≤31.500000
≤73.500000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

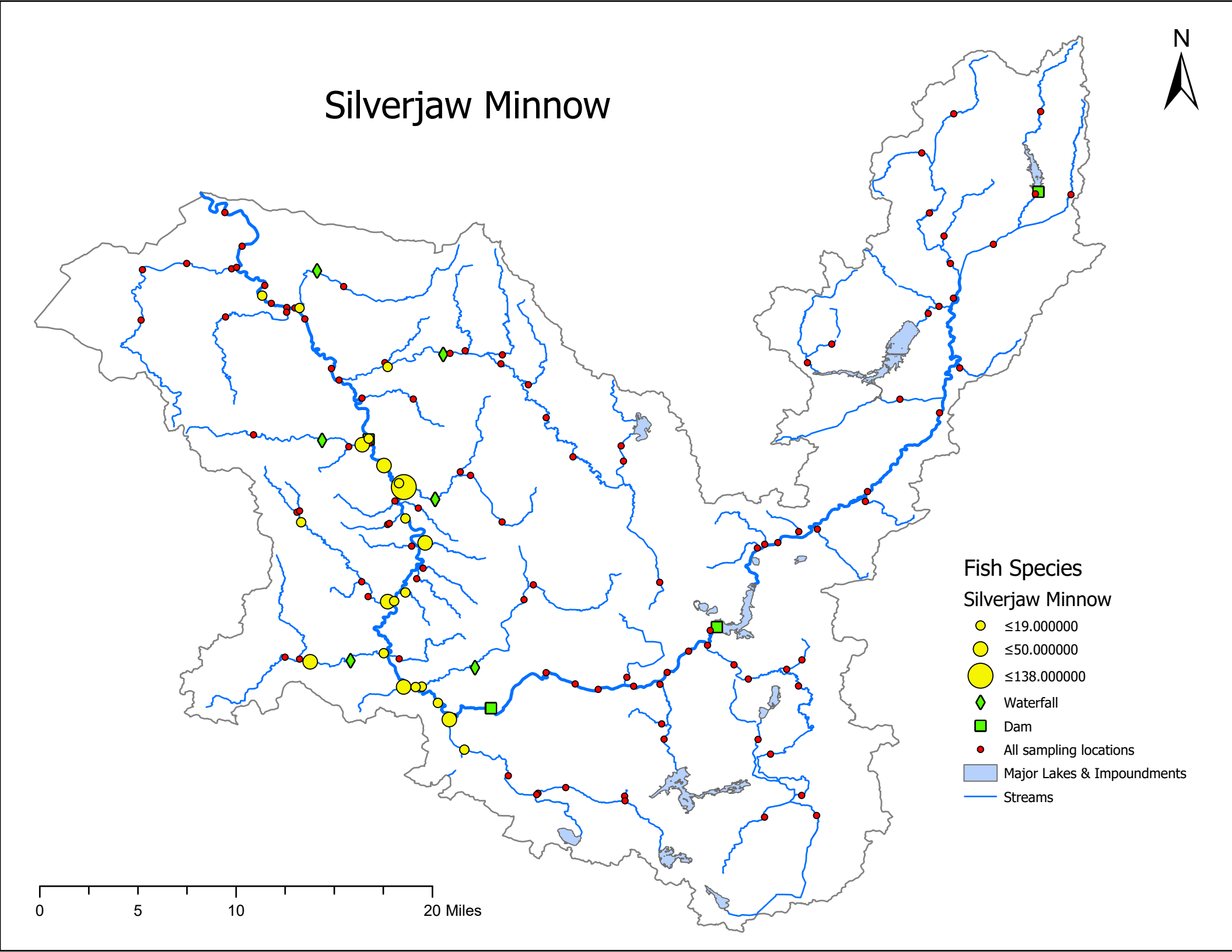

Common Shiner
N
Fish Species
Common Shiner
≤24.000000
≤80.000000
≤161.250000
≤344.000000
≤754.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

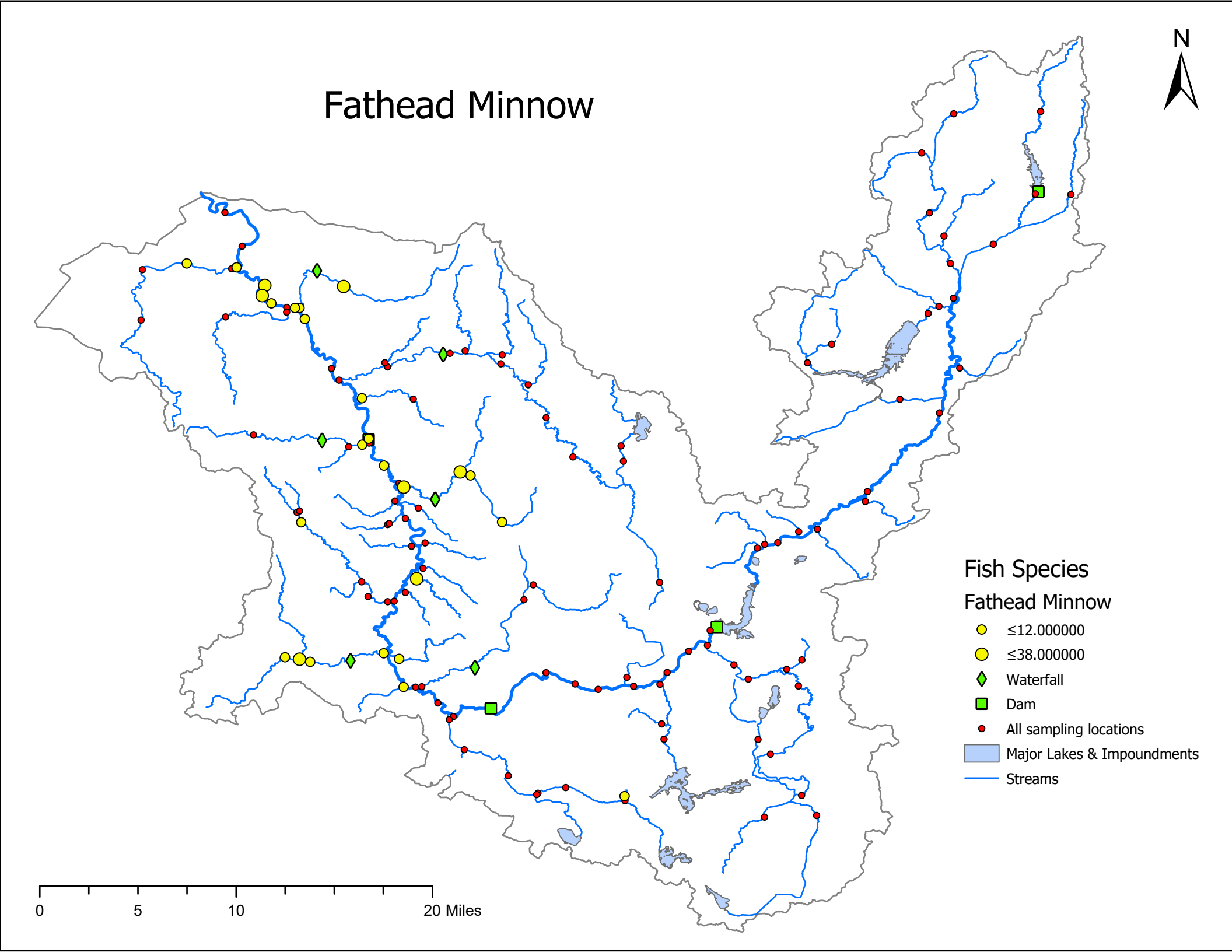

Spotfin Shiner
N
Fish Species
Spotfin Shiner
≤22.000000
≤51.000000
≤140.000000
≤256.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

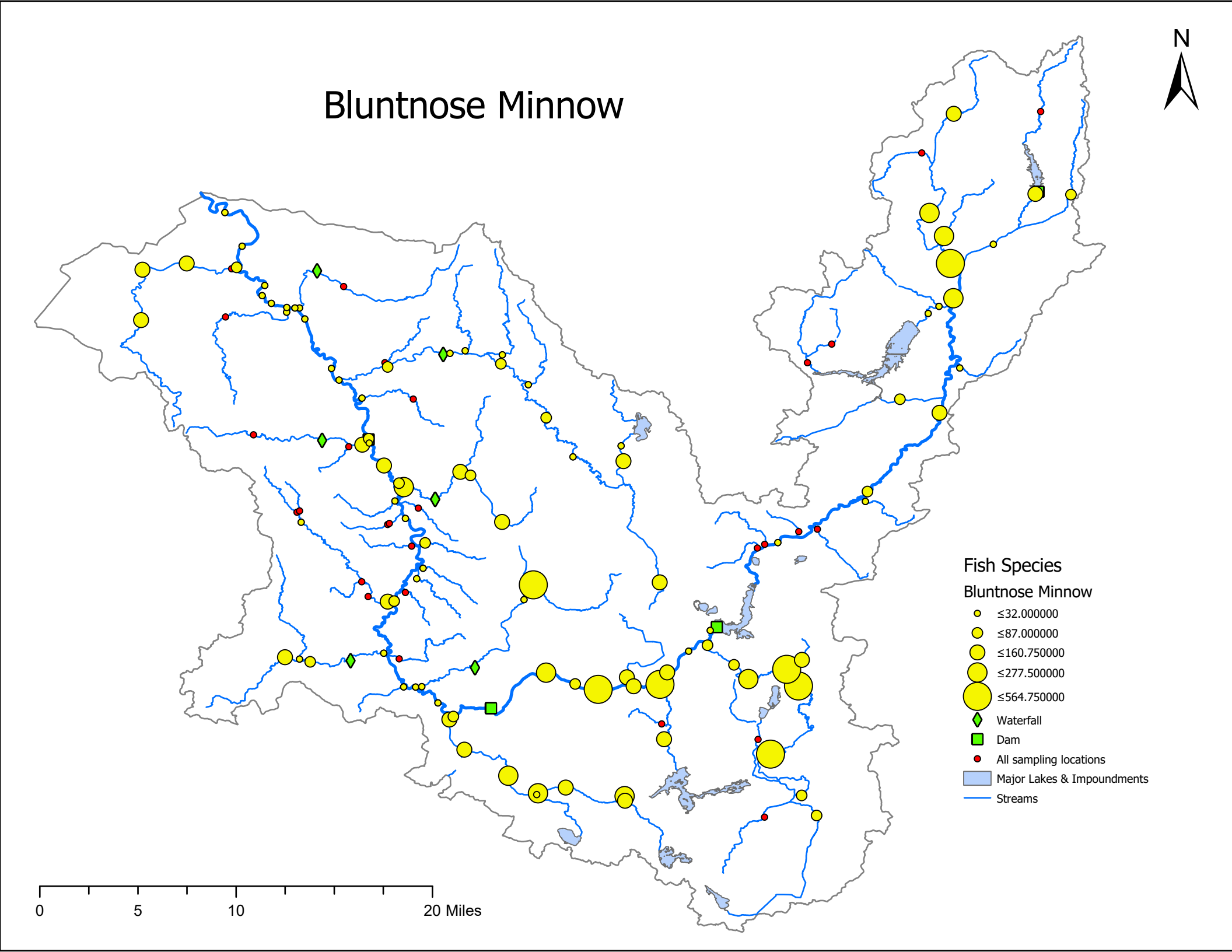

Bigmouth Shiner
N
Fish Species
Bigmouth Shiner
≤64
≤135
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

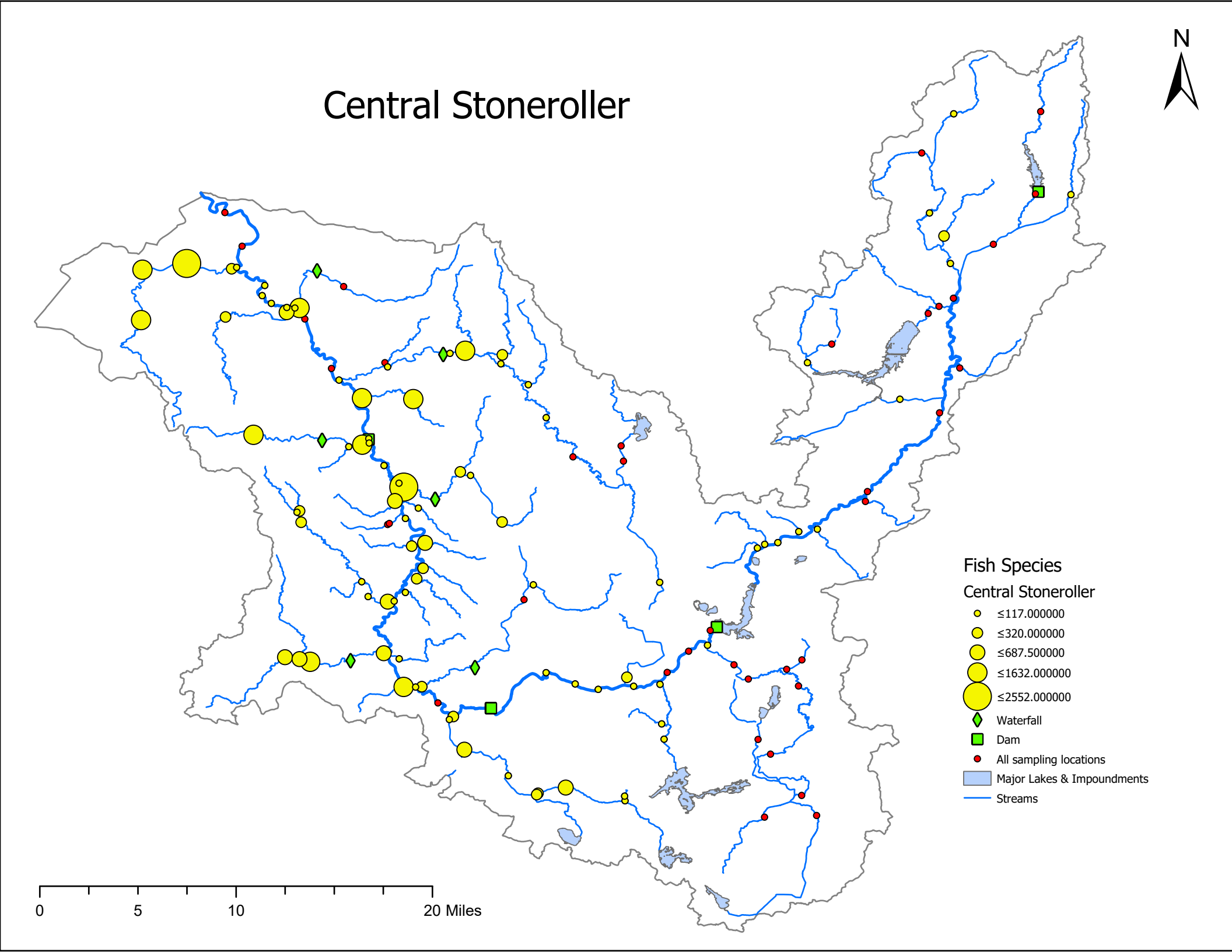

Sand Shiner
N
Fish Species
Sand Shiner
≤20.000000
≤52.000000
≤105.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

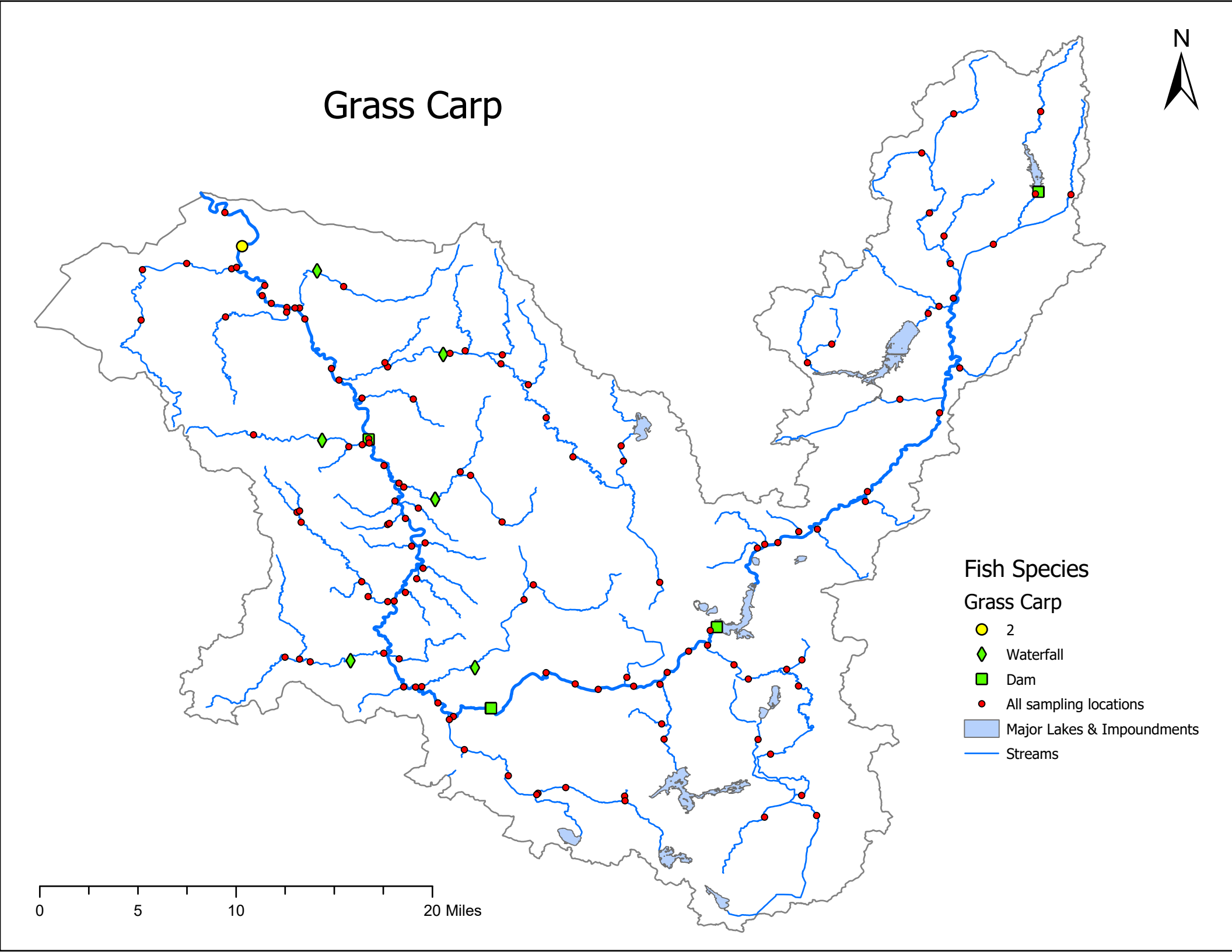

Mimic Shiner
N
Fish Species
Mimic Shiner
≤6.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

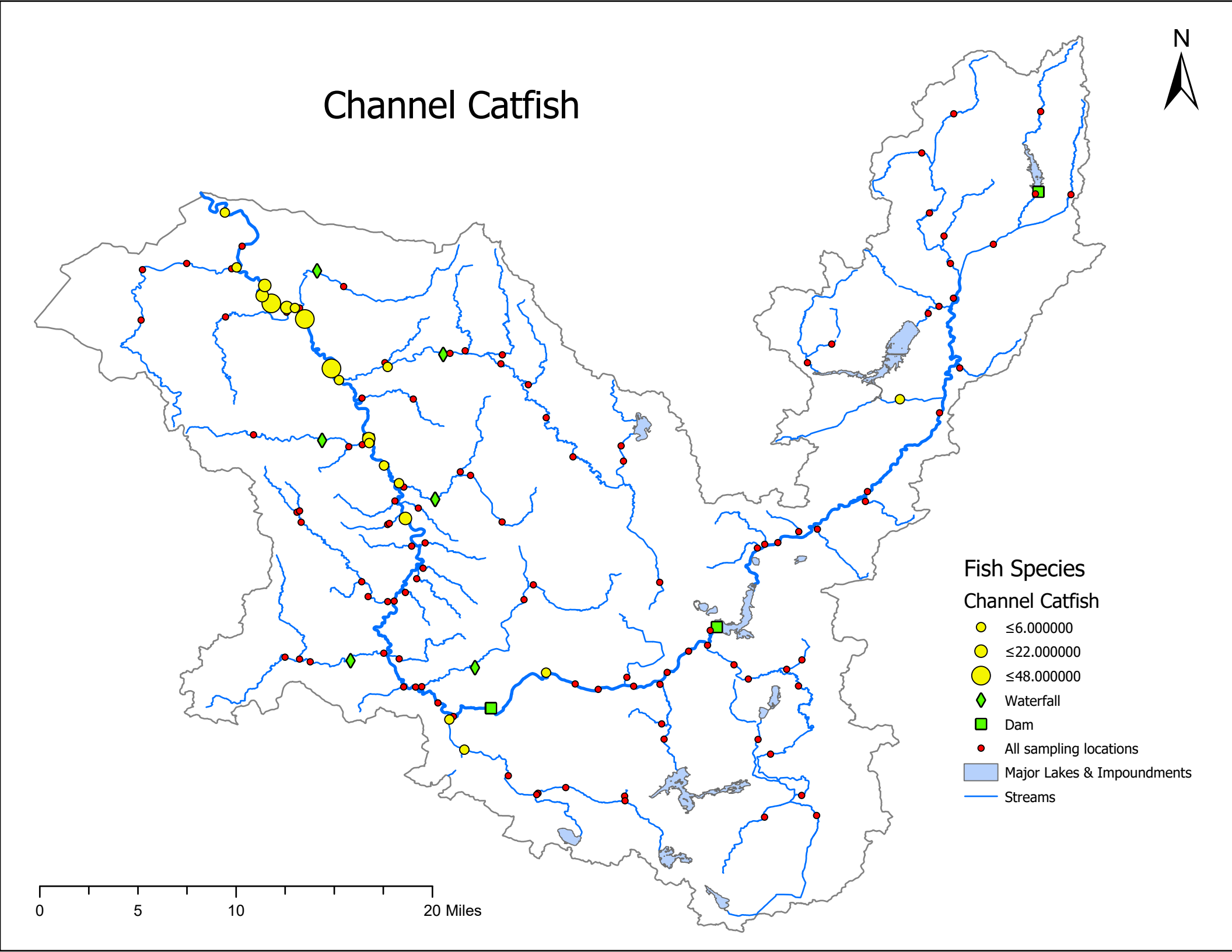

Silverjaw Minnow
N
Fish Species
Silverjaw Minnow
≤19.000000
≤50.000000
≤138.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

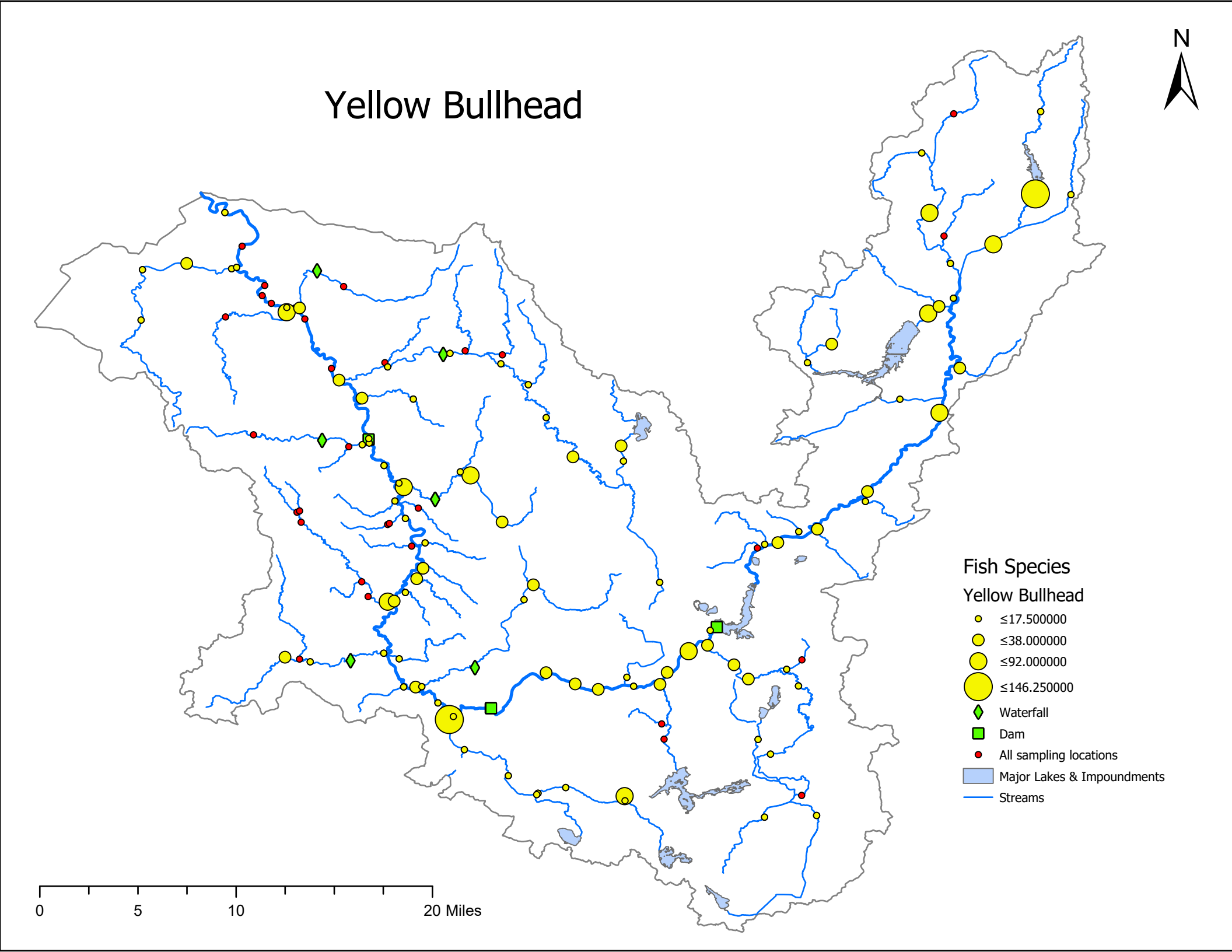

Fathead Minnow
N
Fish Species
Fathead Minnow
≤12.000000
≤38.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

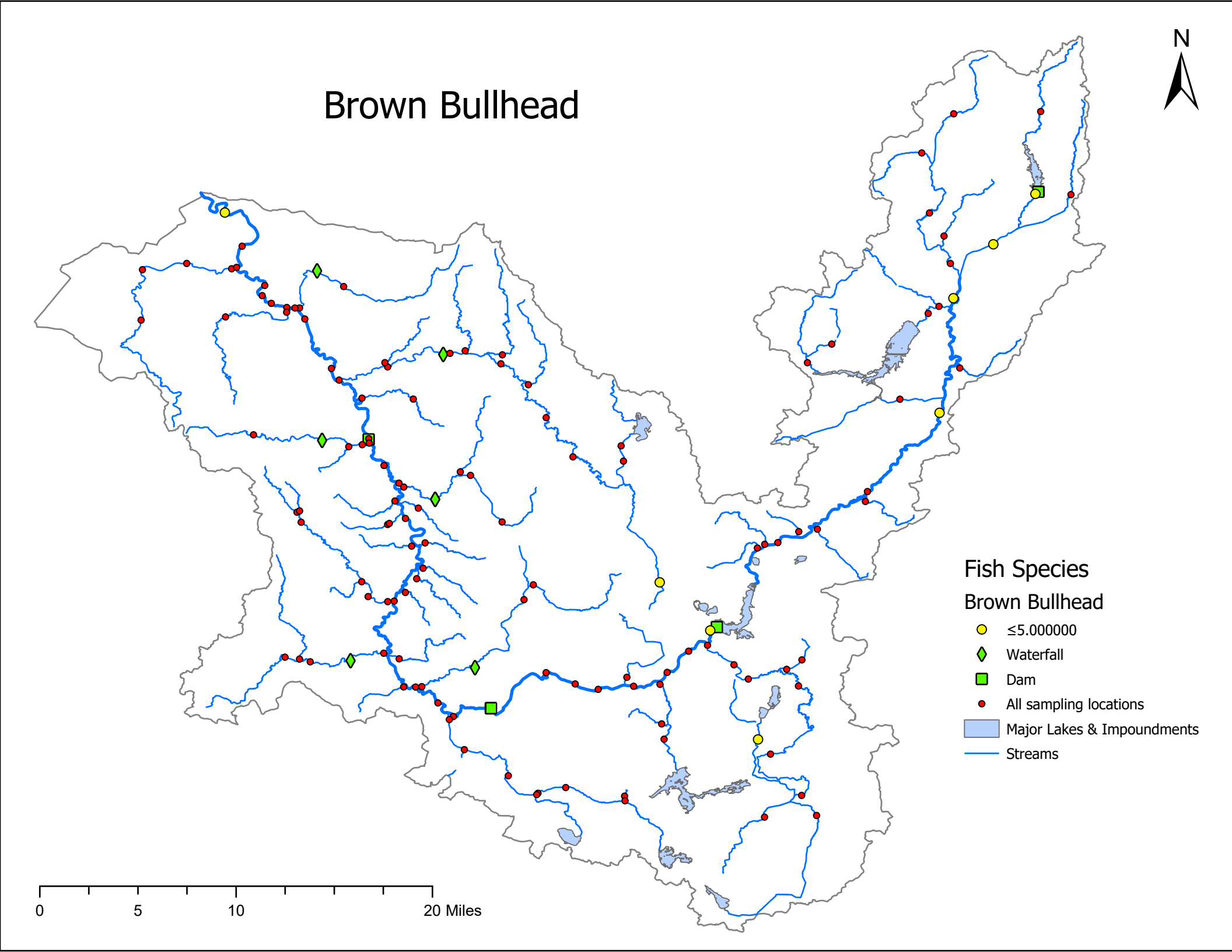

Bluntnose Minnow
N
Fish Species
Bluntnose Minnow
≤32.000000
≤87.000000
≤160.750000
≤277.500000
≤564.750000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

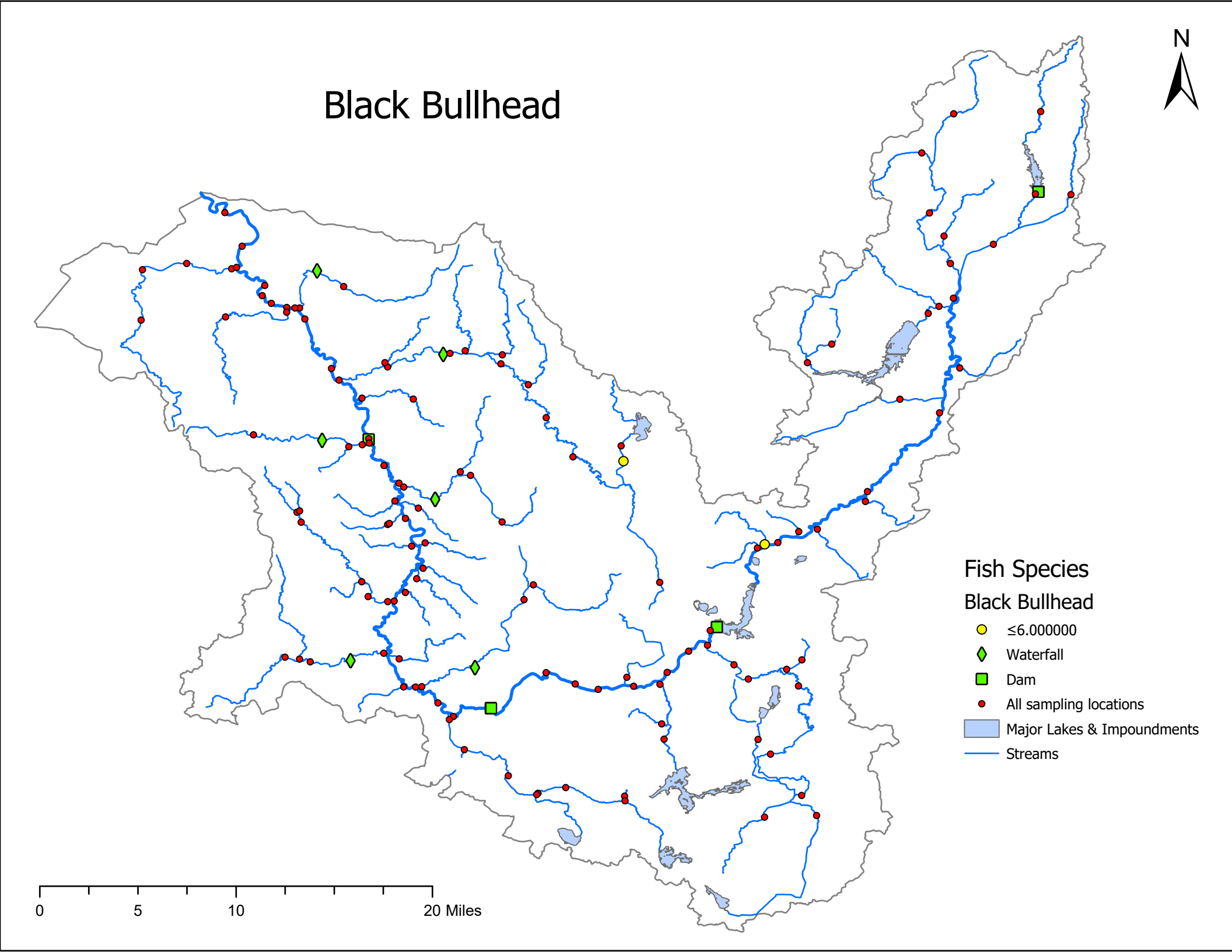

Central Stoneroller
N
Fish Species
Central Stoneroller
≤117.000000
≤320.000000
≤687.500000
≤1632.000000
≤2552.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

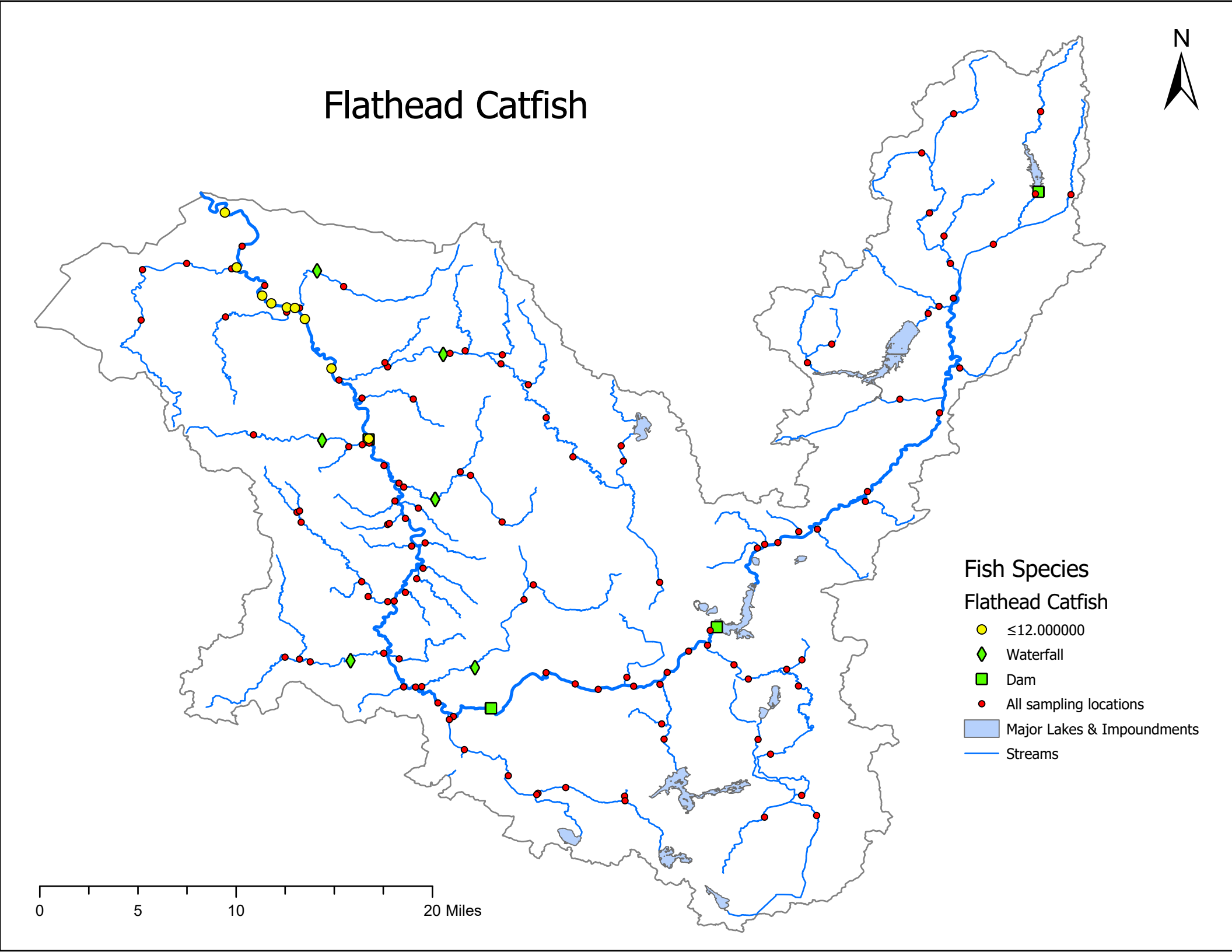

Grass Carp
N
Fish Species
Grass Carp
2
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

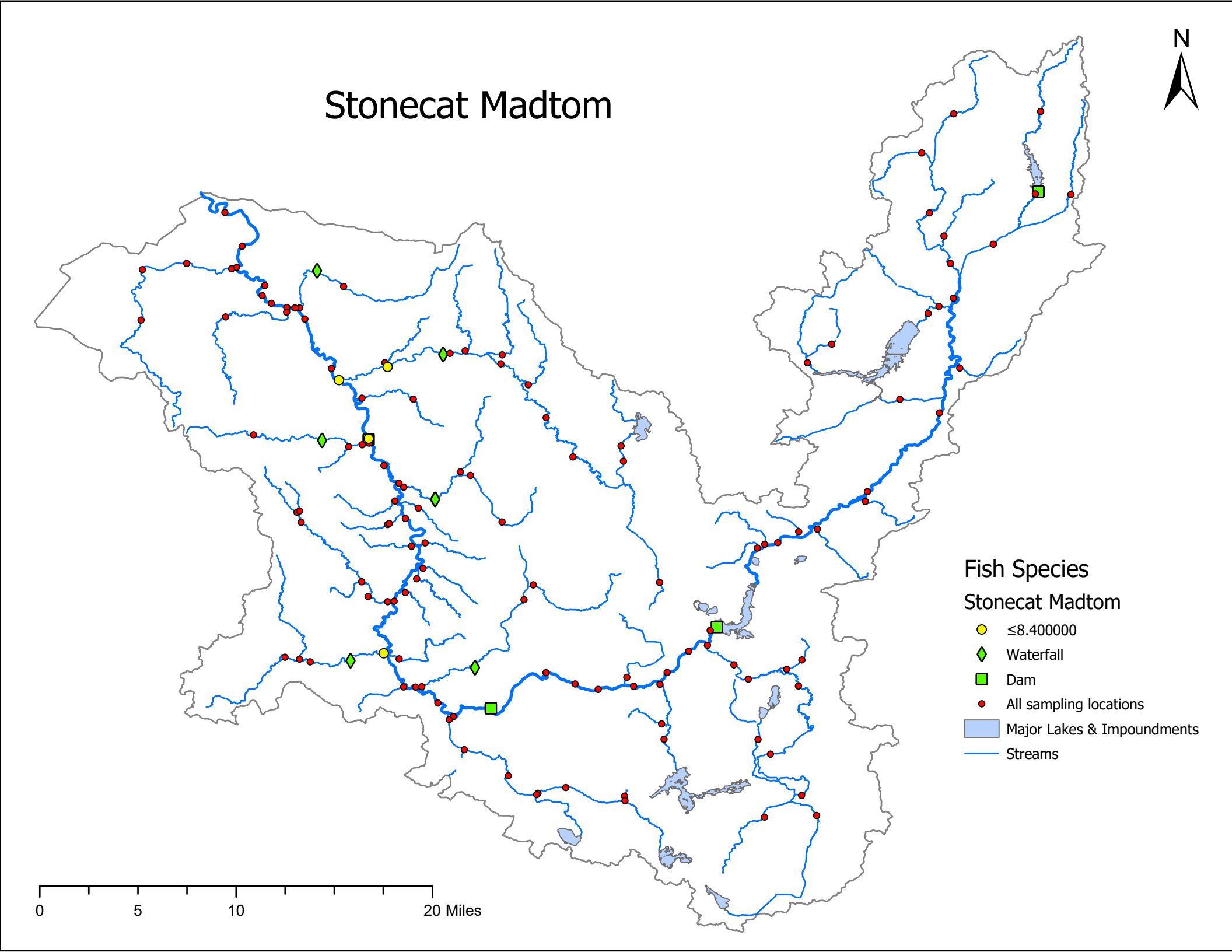

Channel Catfish
N
Fish Species
Channel Catfish
≤6.000000
≤22.000000
≤48.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

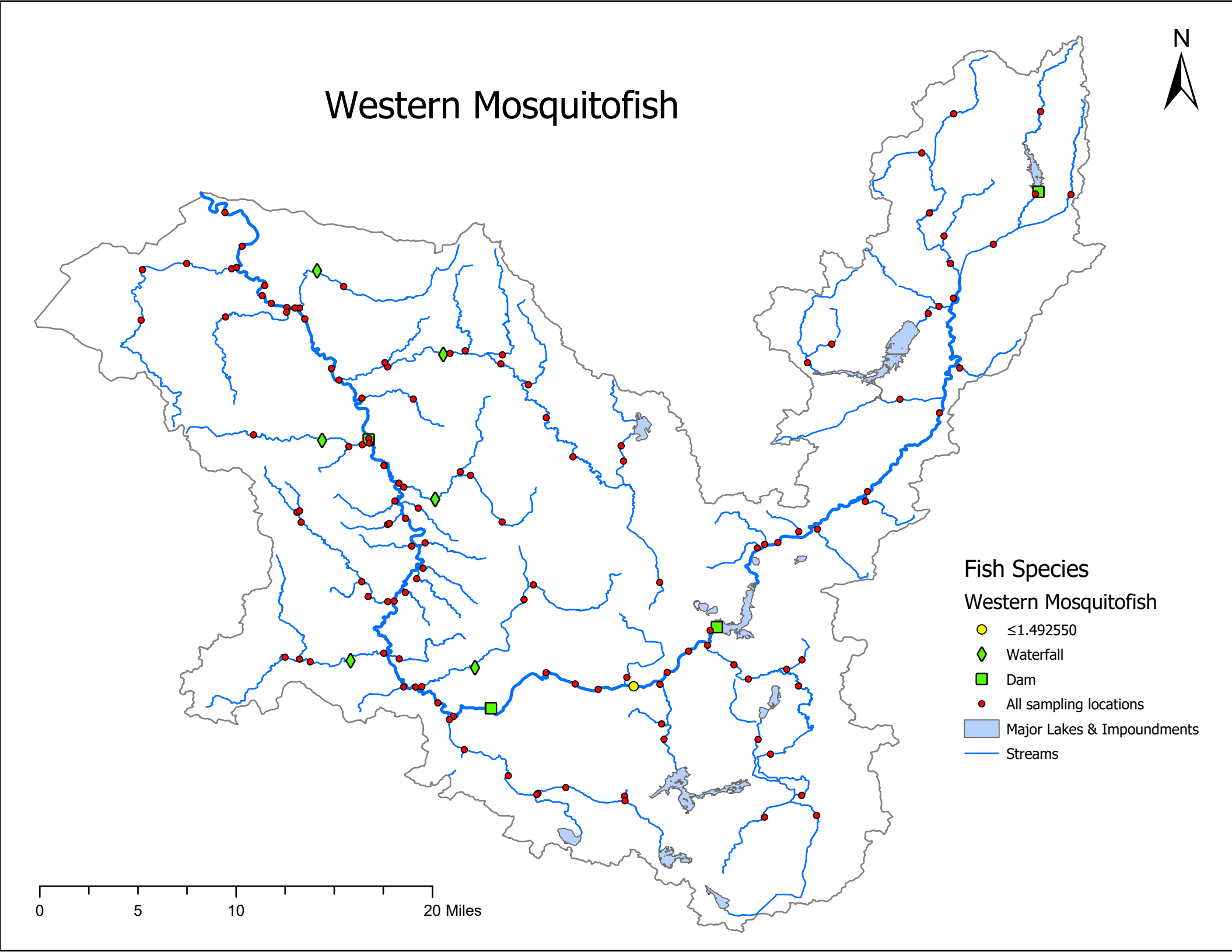

Yellow Bullhead
N
Fish Species
Yellow Bullhead
≤17.500000
≤38.000000
≤92.000000
≤146.250000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

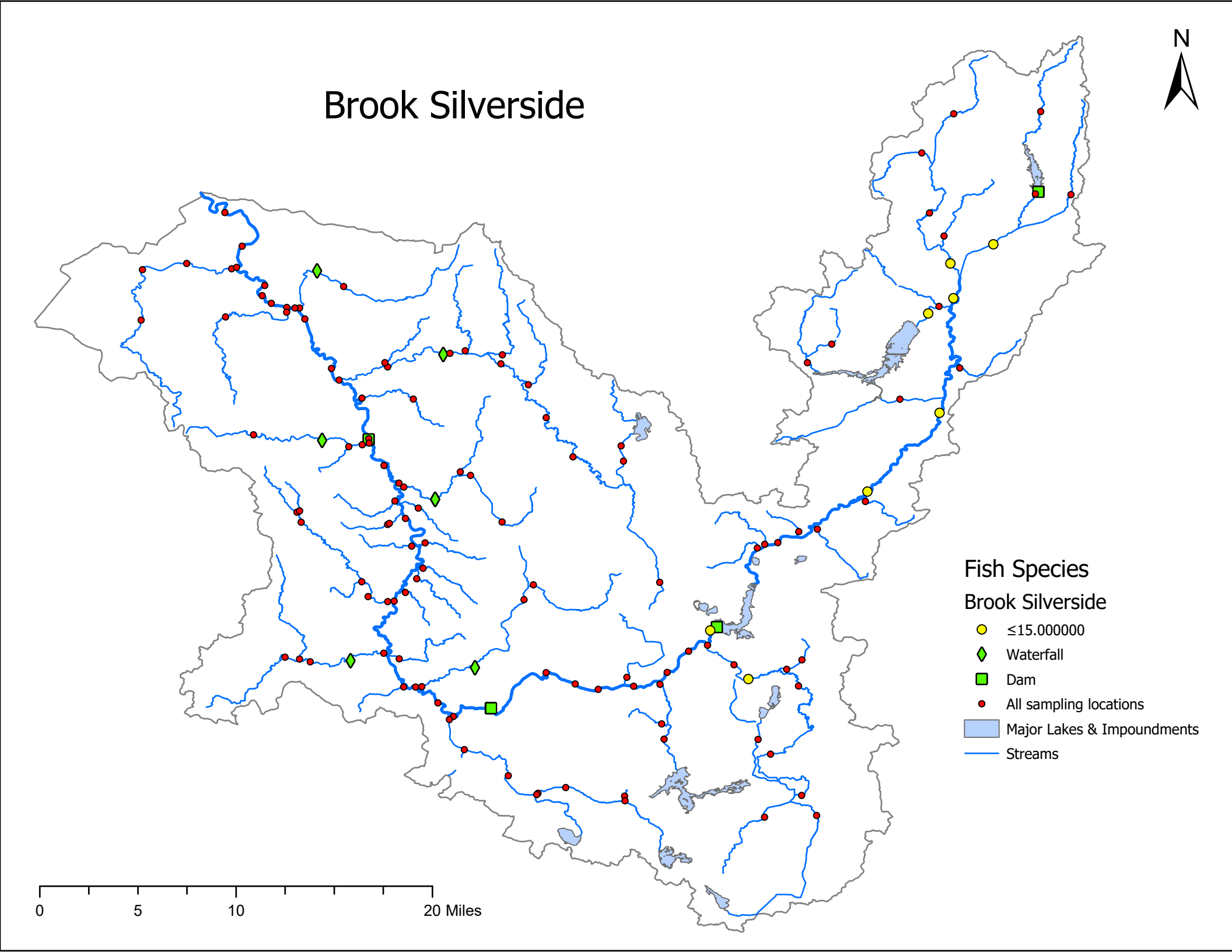

Brown Bullhead
N
Fish Species
Brown Bullhead
≤5.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

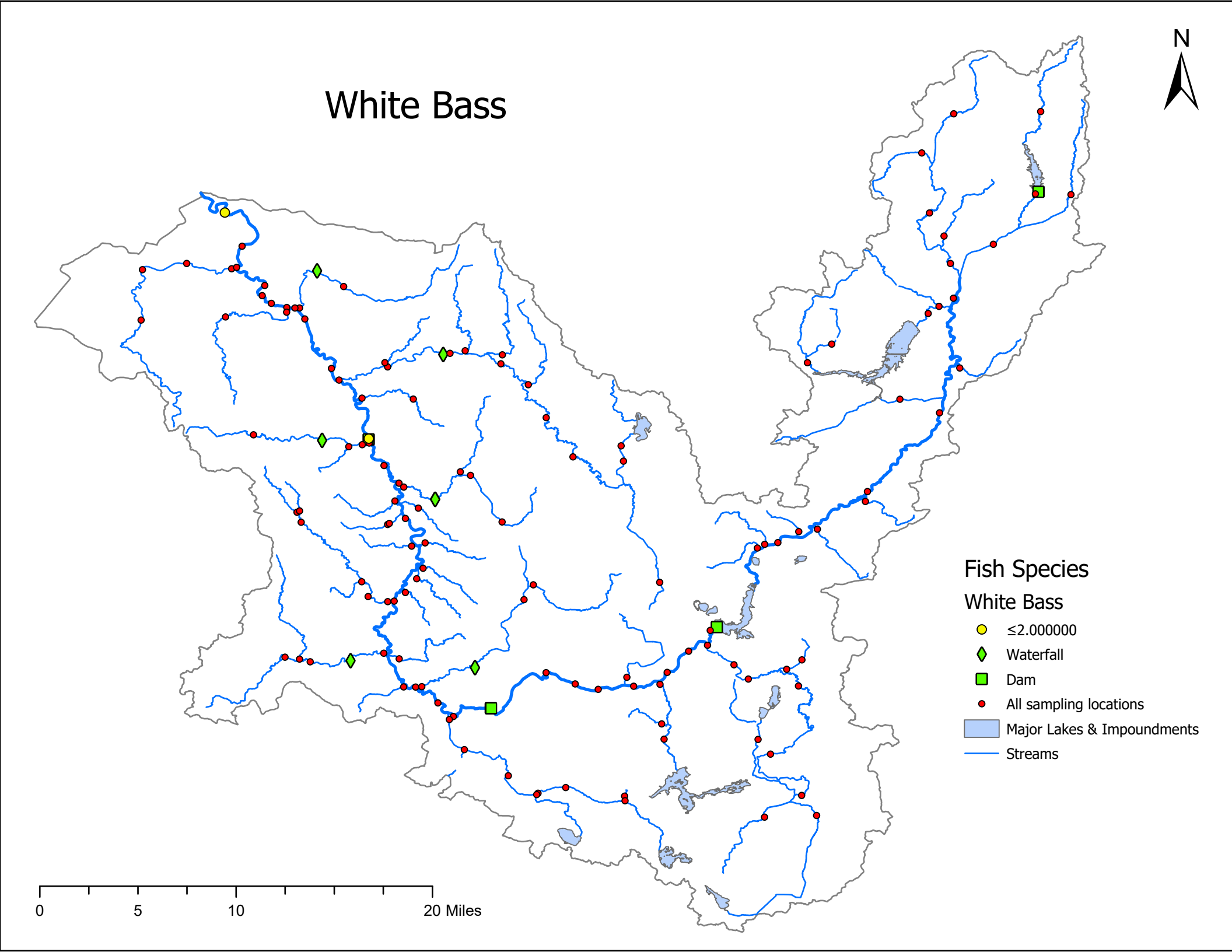

Black Bullhead
N
Fish Species
Black Bullhead
≤6.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

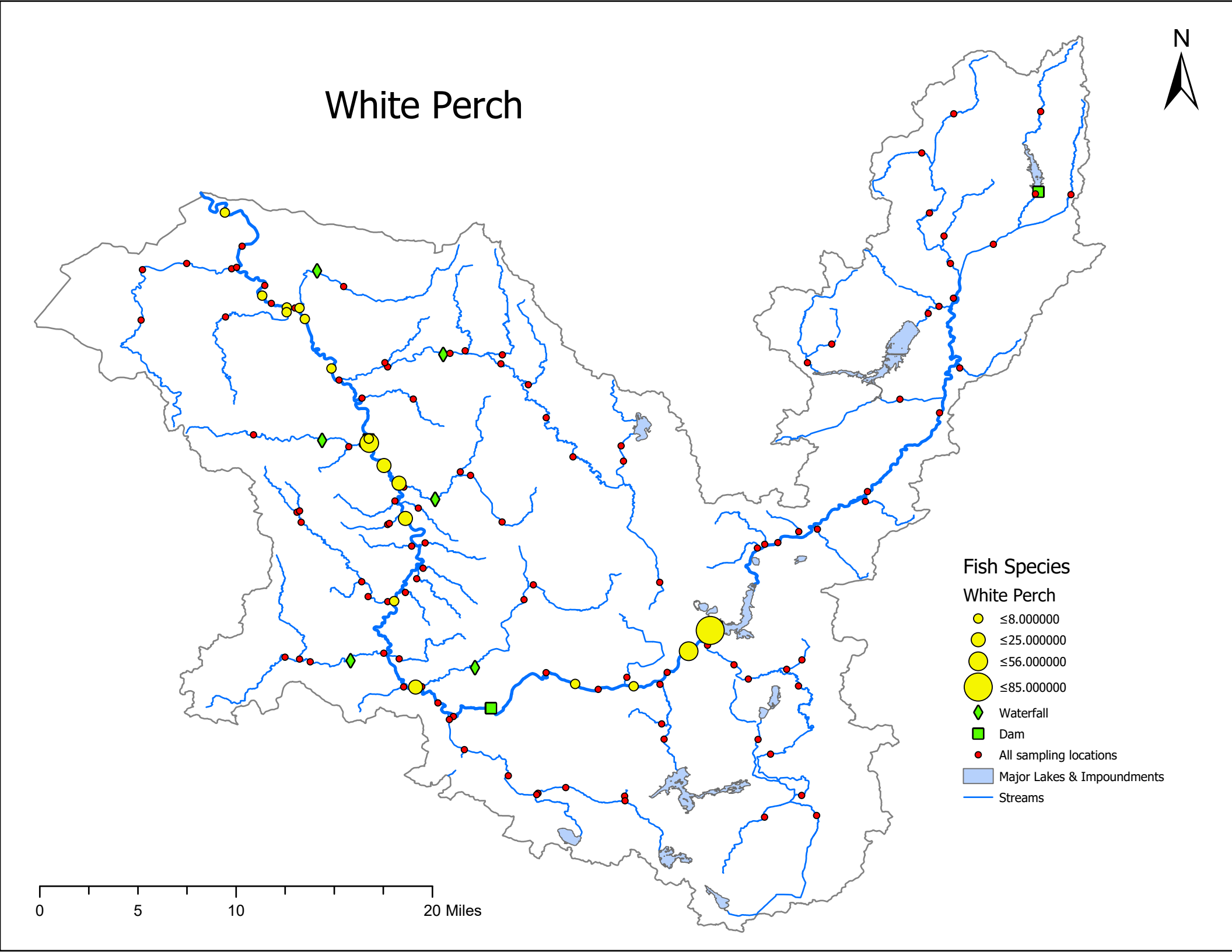

Flathead Catfish
N
Fish Species
Flathead Catfish
≤12.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

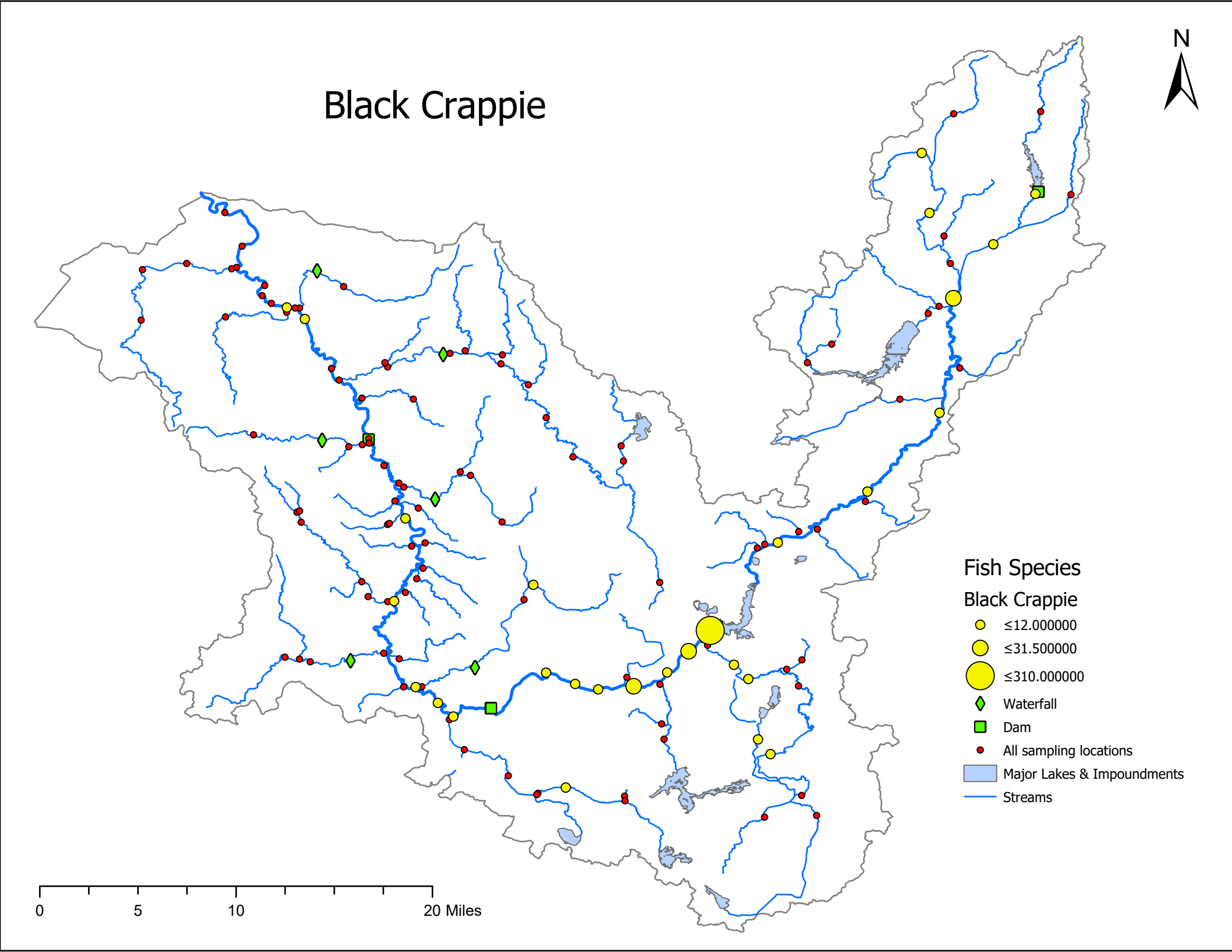

Stonecat Madtom
N
Fish Species
Stonecat Madtom
≤8.400000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

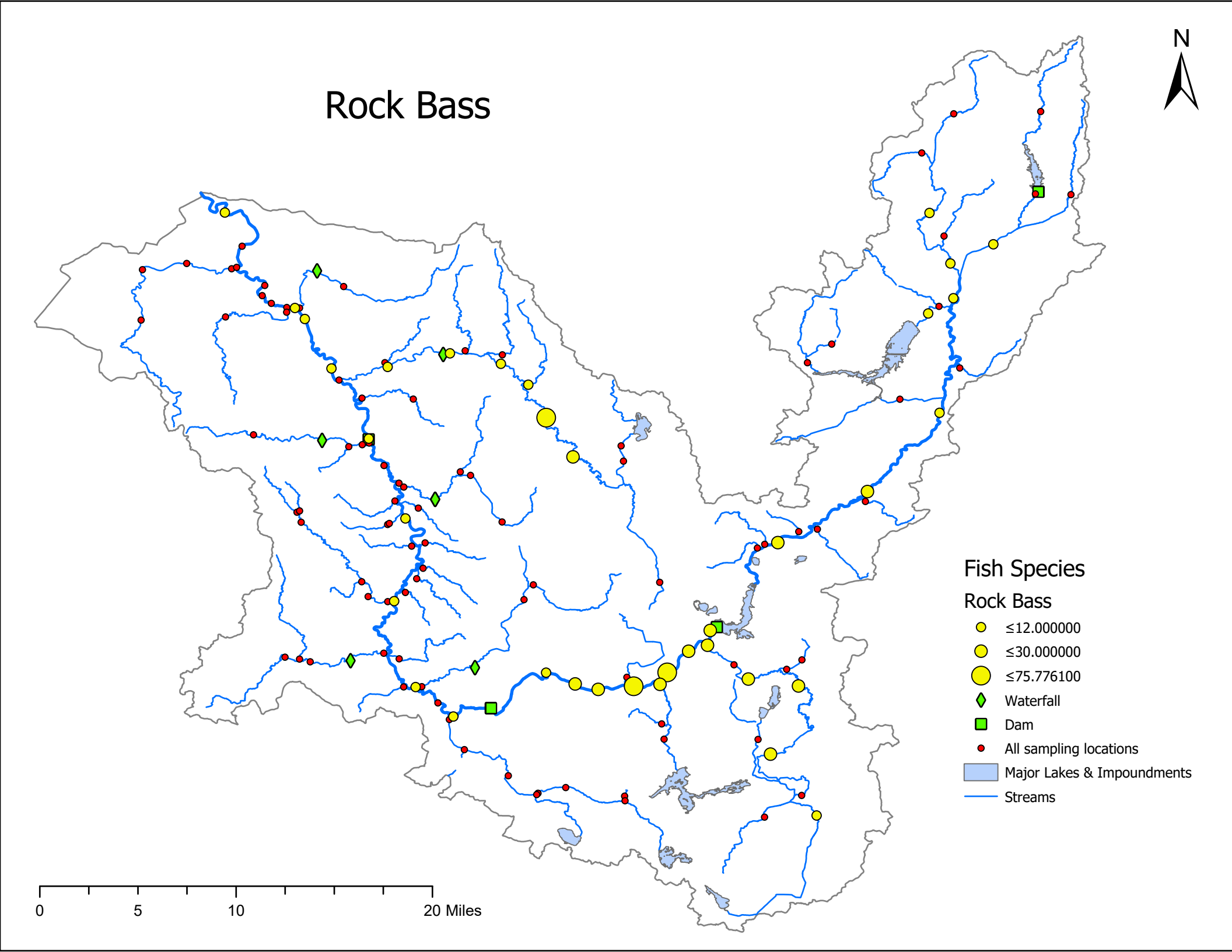

Western Mosquitofish
N
Fish Species
Western Mosquitofish
≤1.492550
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

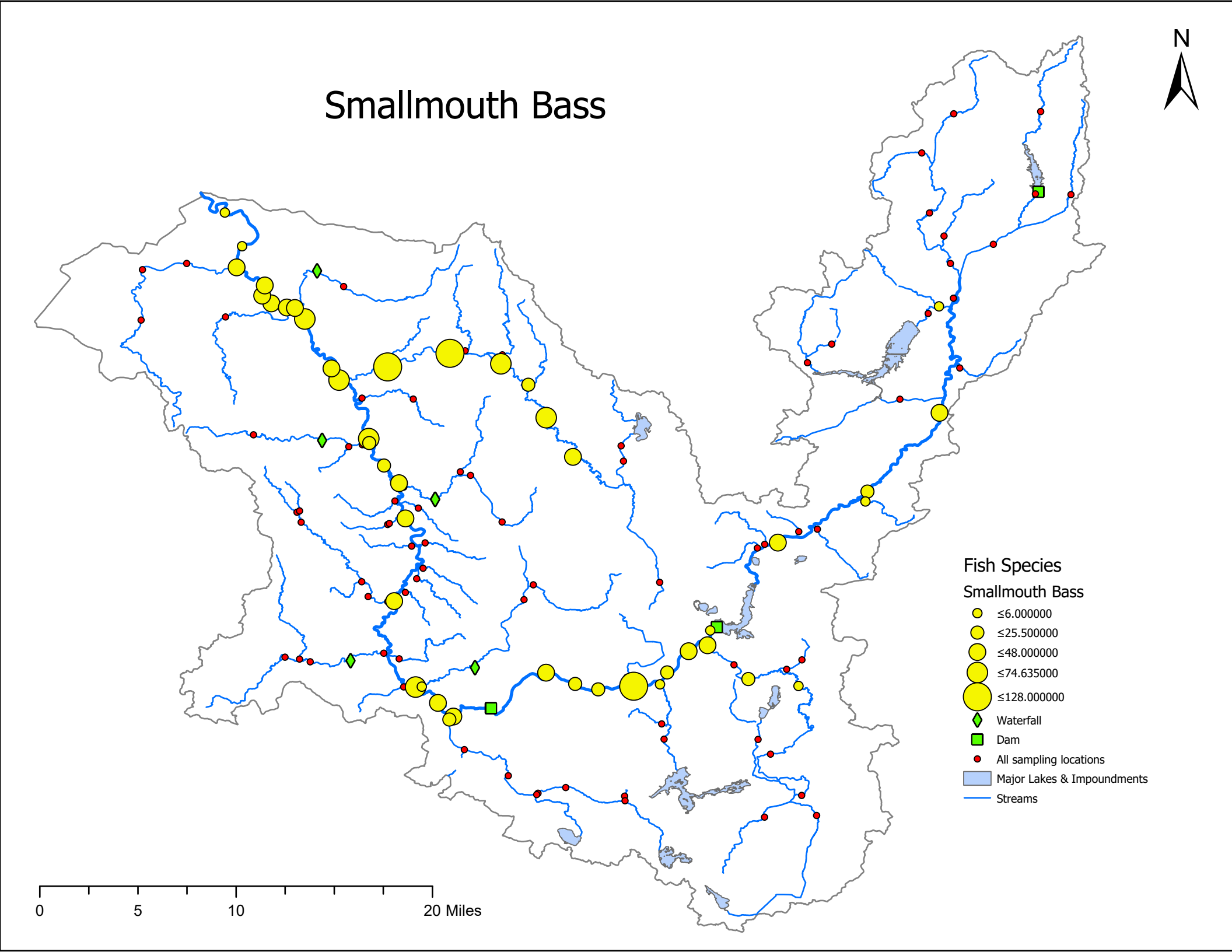

Brook Silverside
N
Fish Species
Brook Silverside
≤15.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

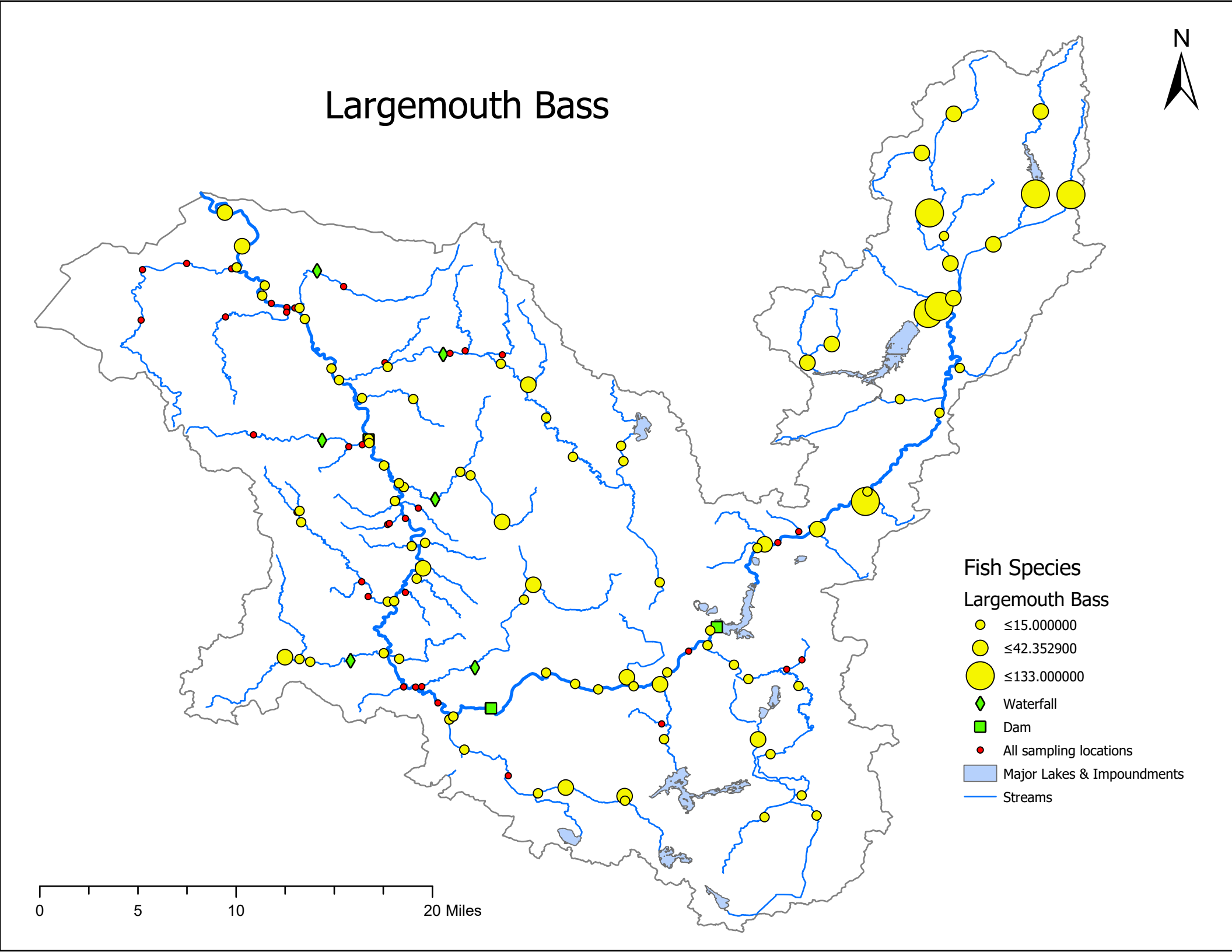

White Bass
N
Fish Species
White Bass
≤2.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

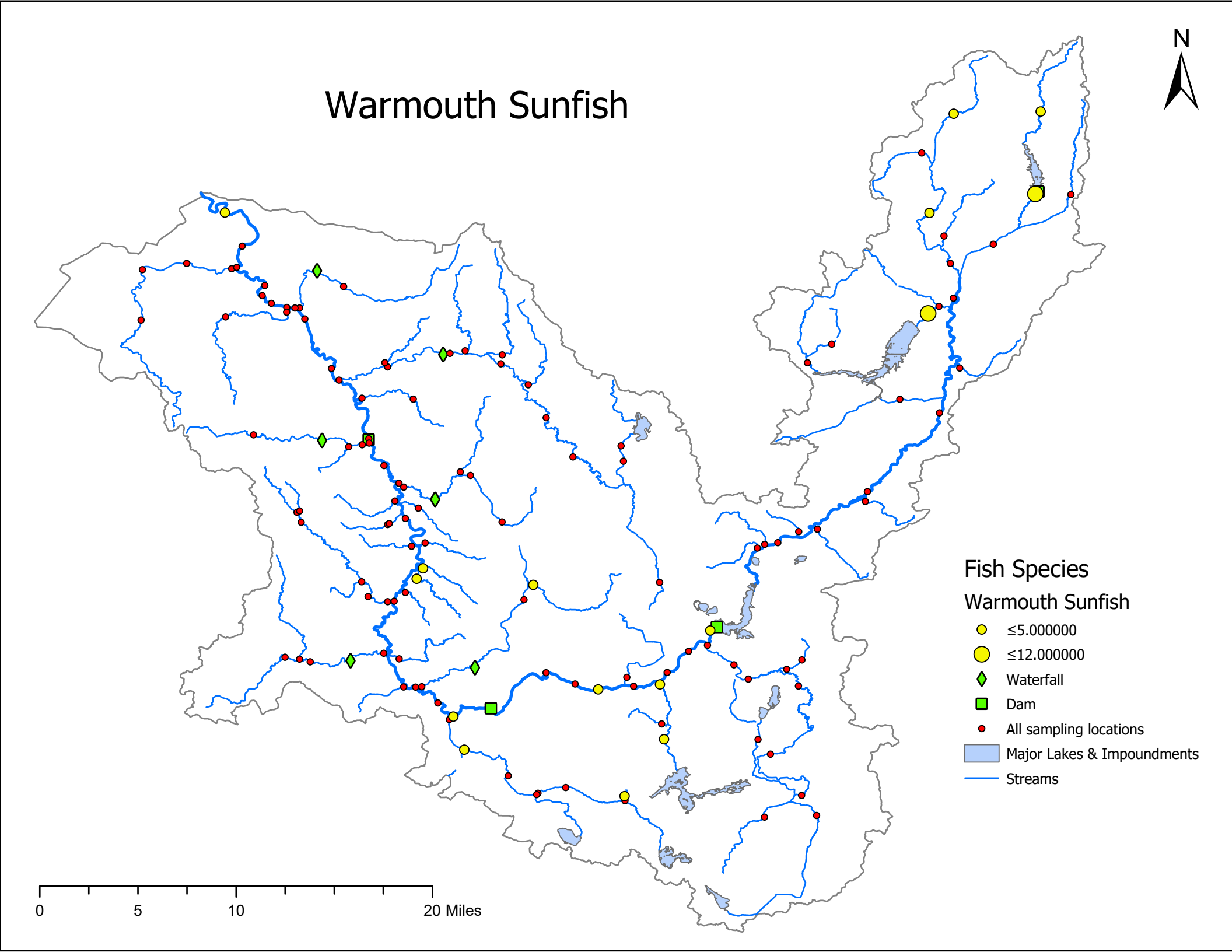

White Perch
N
Fish Species
White Perch
≤8.000000
≤25.000000
≤56.000000
≤85.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

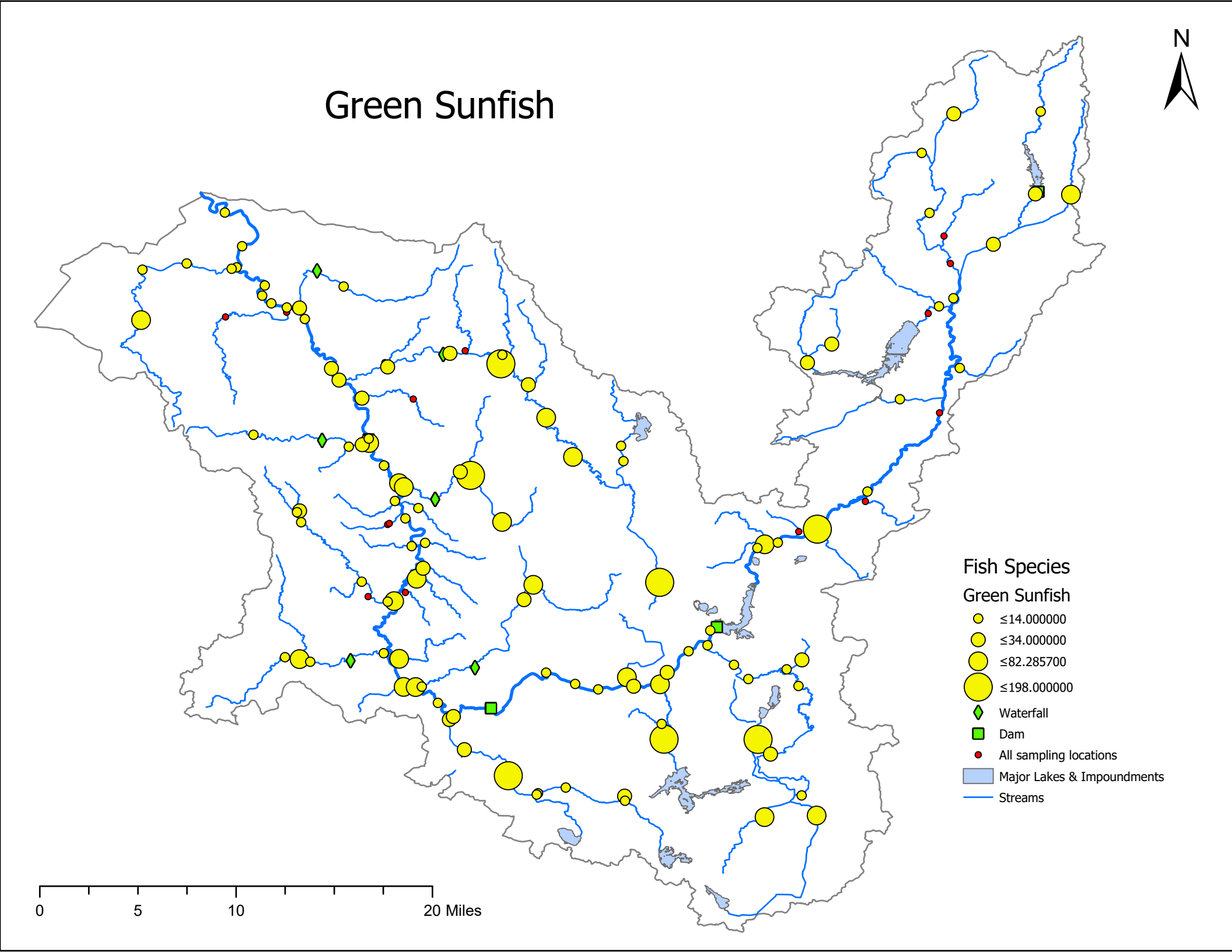

Black Crappie
N
Fish Species
Black Crappie
≤12.000000
≤31.500000
≤310.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

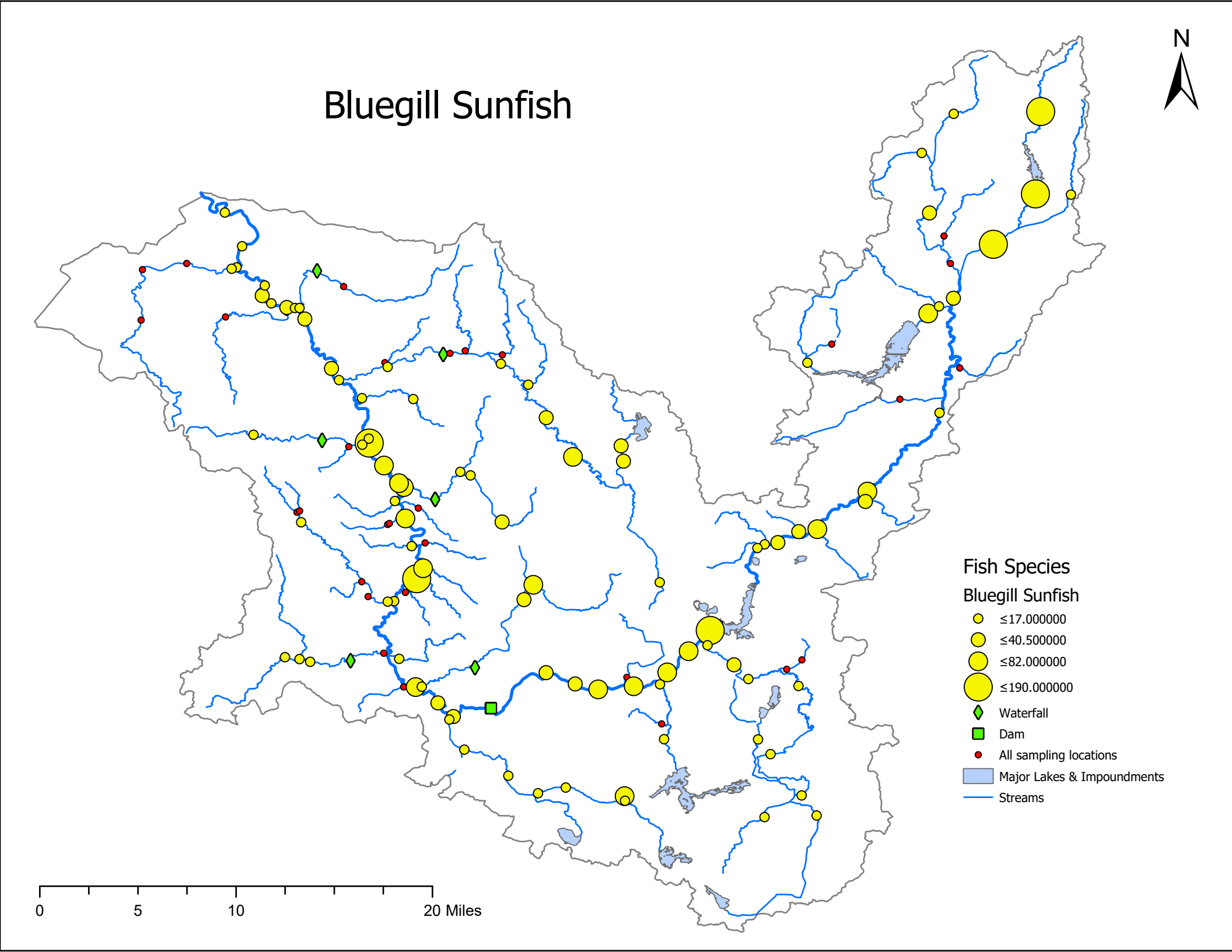

Rock Bass
N
Fish Species
Rock Bass
≤12.000000
≤30.000000
≤75.776100
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

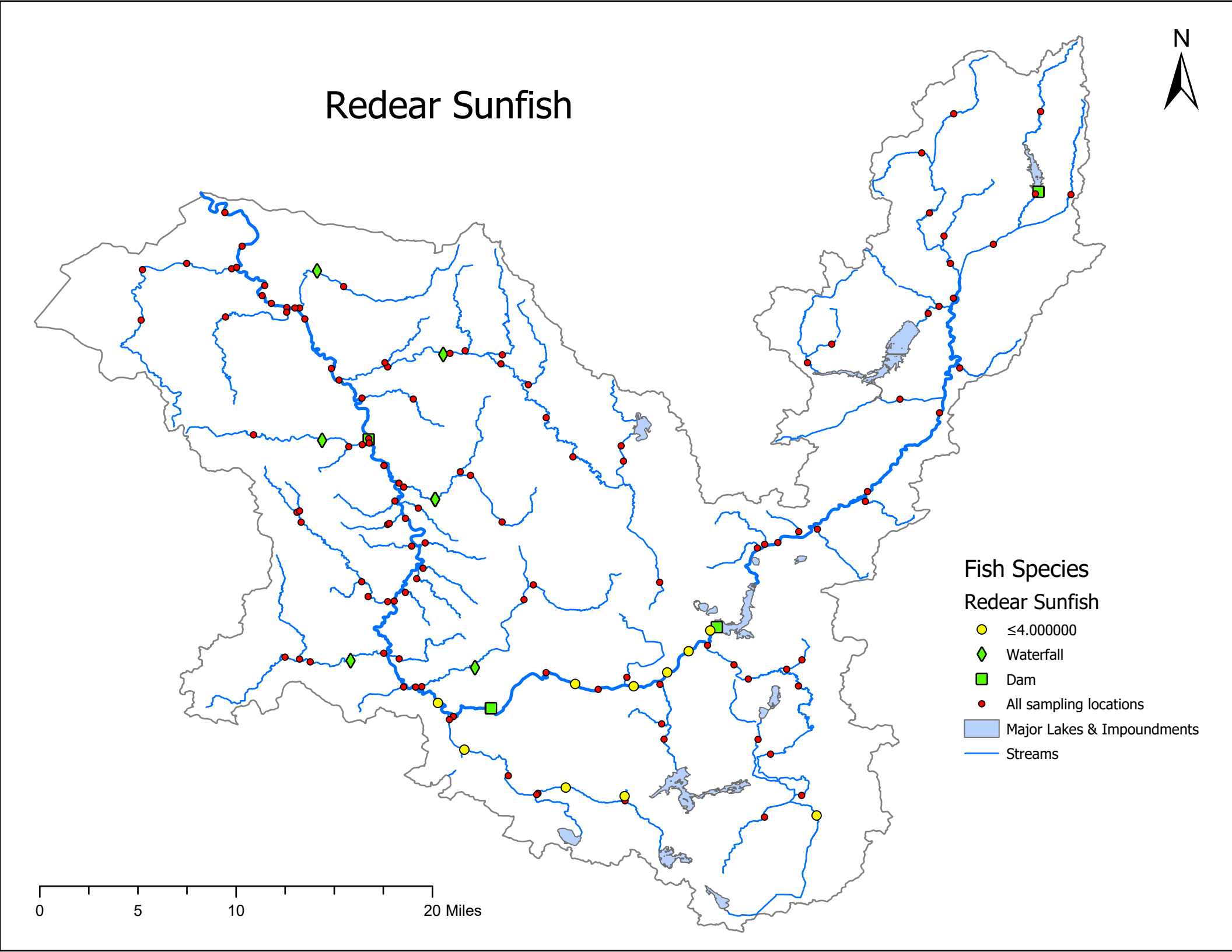

Smallmouth Bass
N
Fish Species
Smallmouth Bass
≤6.000000
≤25.500000
≤48.000000
≤74.635000
≤128.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

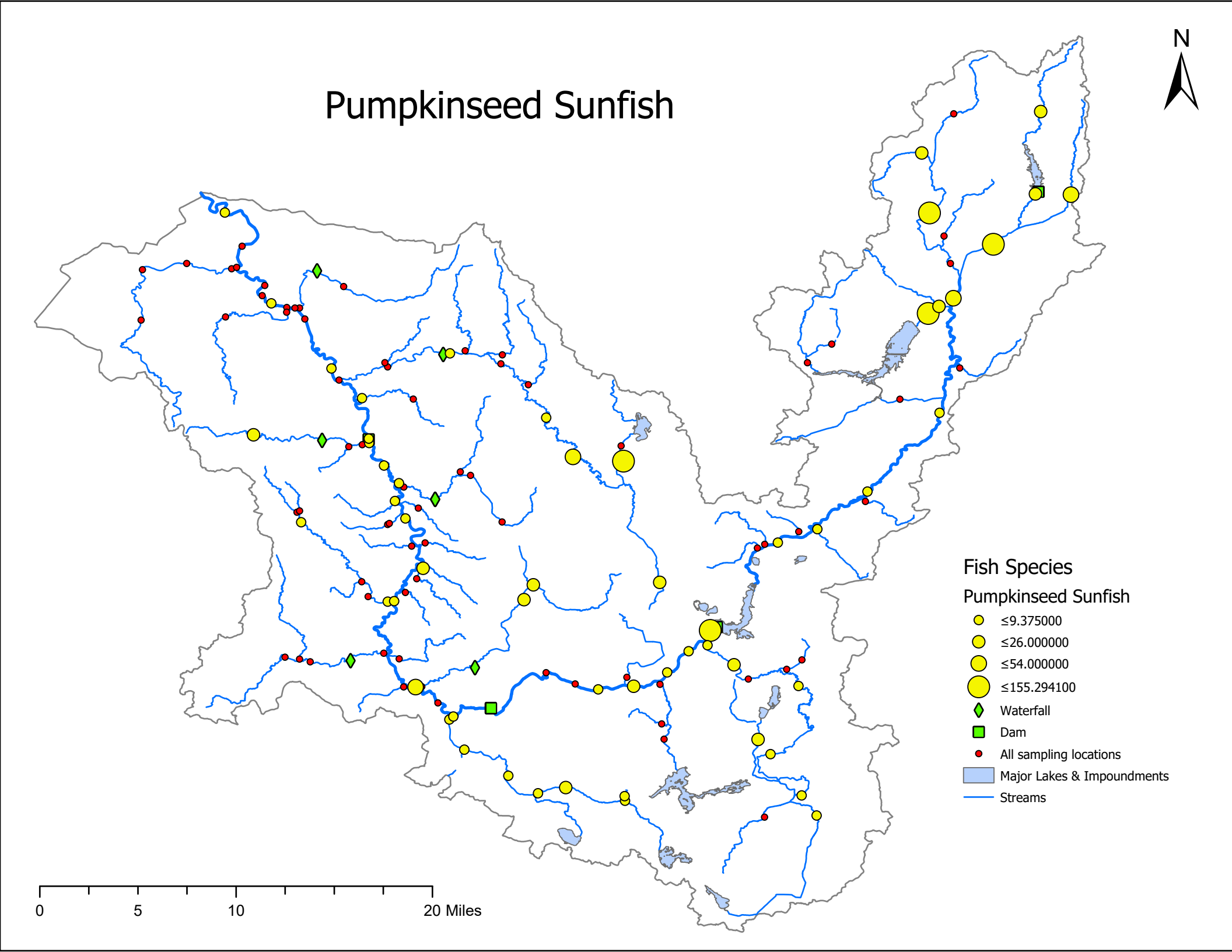

Largemouth Bass
N
Fish Species
Largemouth Bass
≤15.000000
≤42.352900
≤133.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

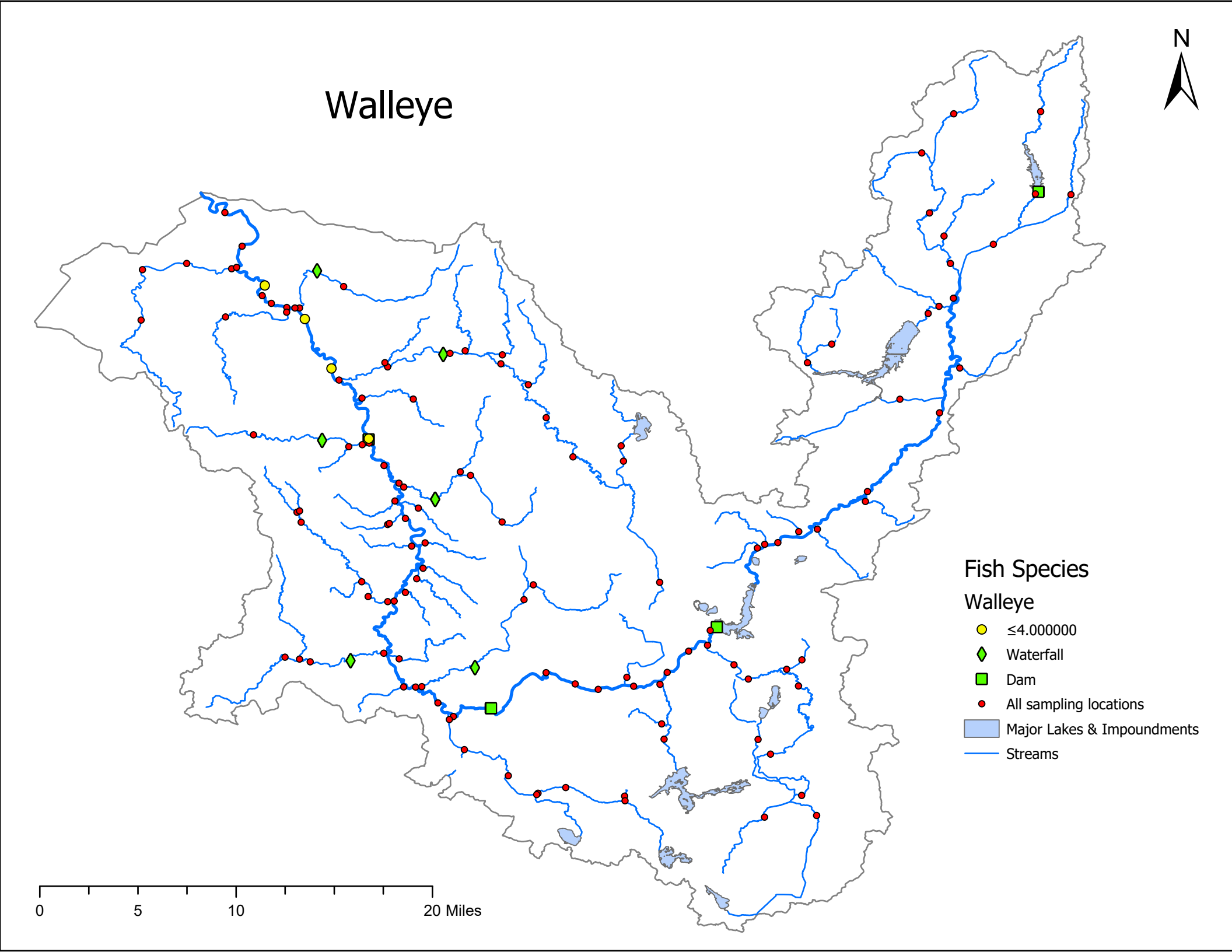

Warmouth Sunfish
N
Fish Species
Warmouth Sunfish
≤5.000000
≤12.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

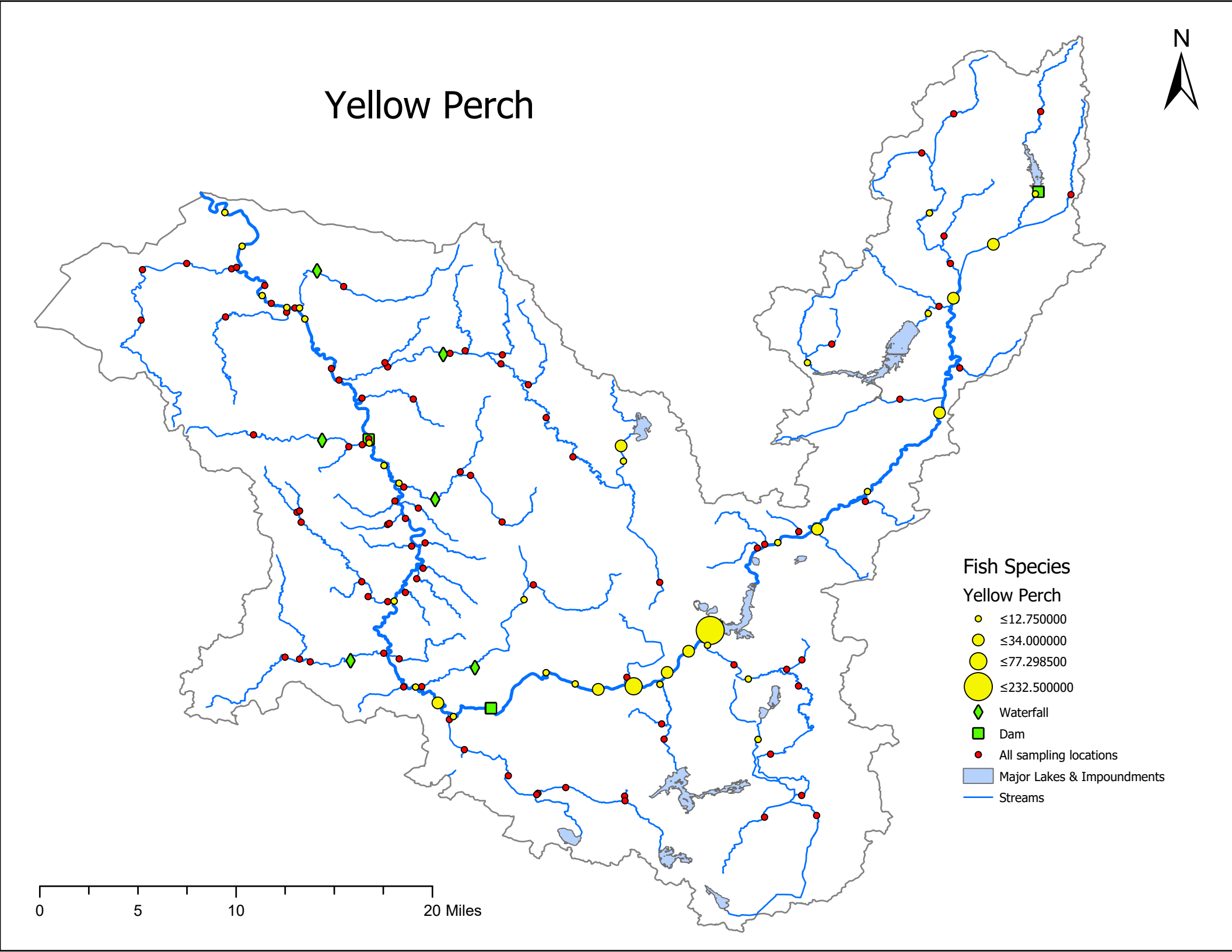

Green Sunfish
N
Fish Species
Green Sunfish
≤14.000000
≤34.000000
≤82.285700
≤198.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

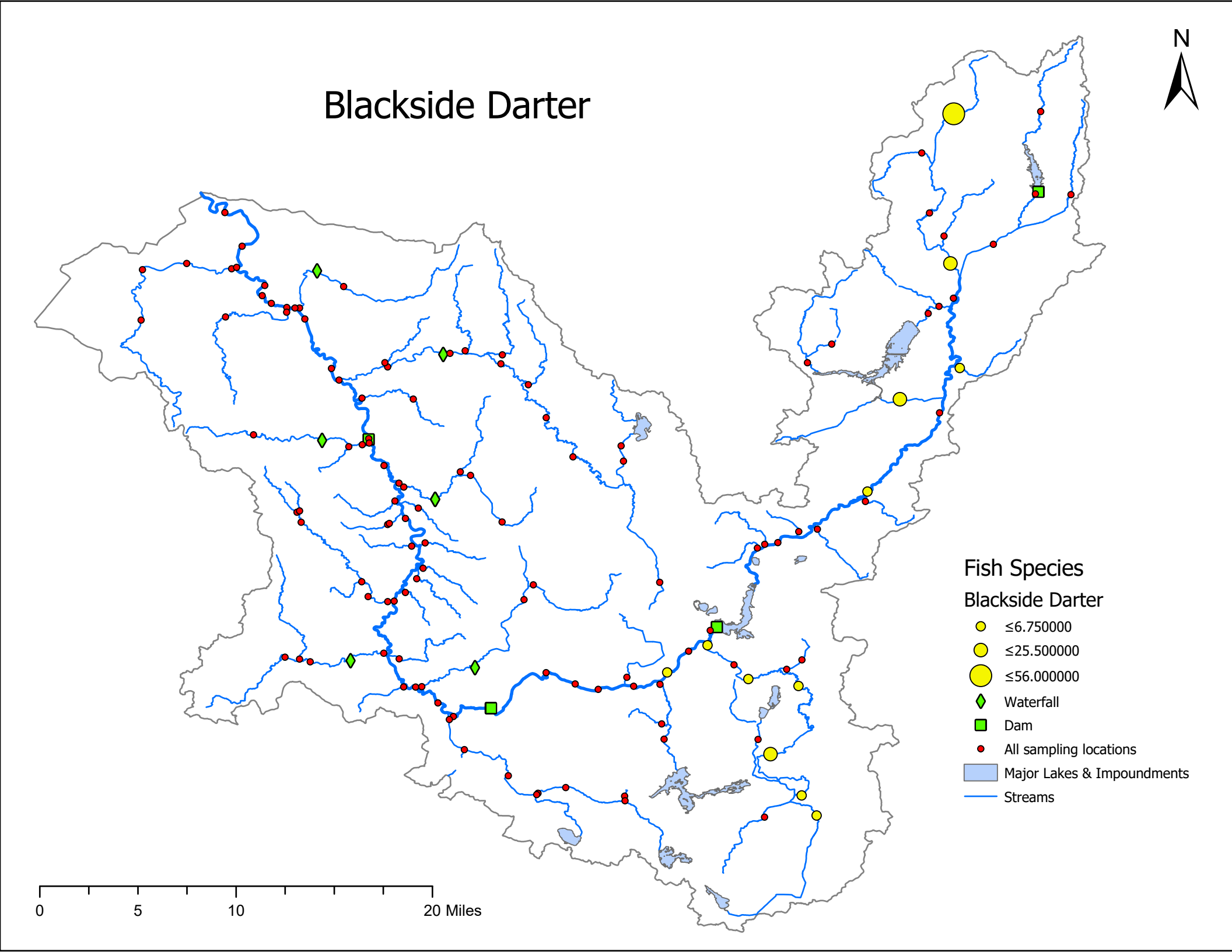

Bluegill Sunfish
N
Fish Species
Bluegill Sunfish
≤17.000000
≤40.500000
≤82.000000
≤190.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

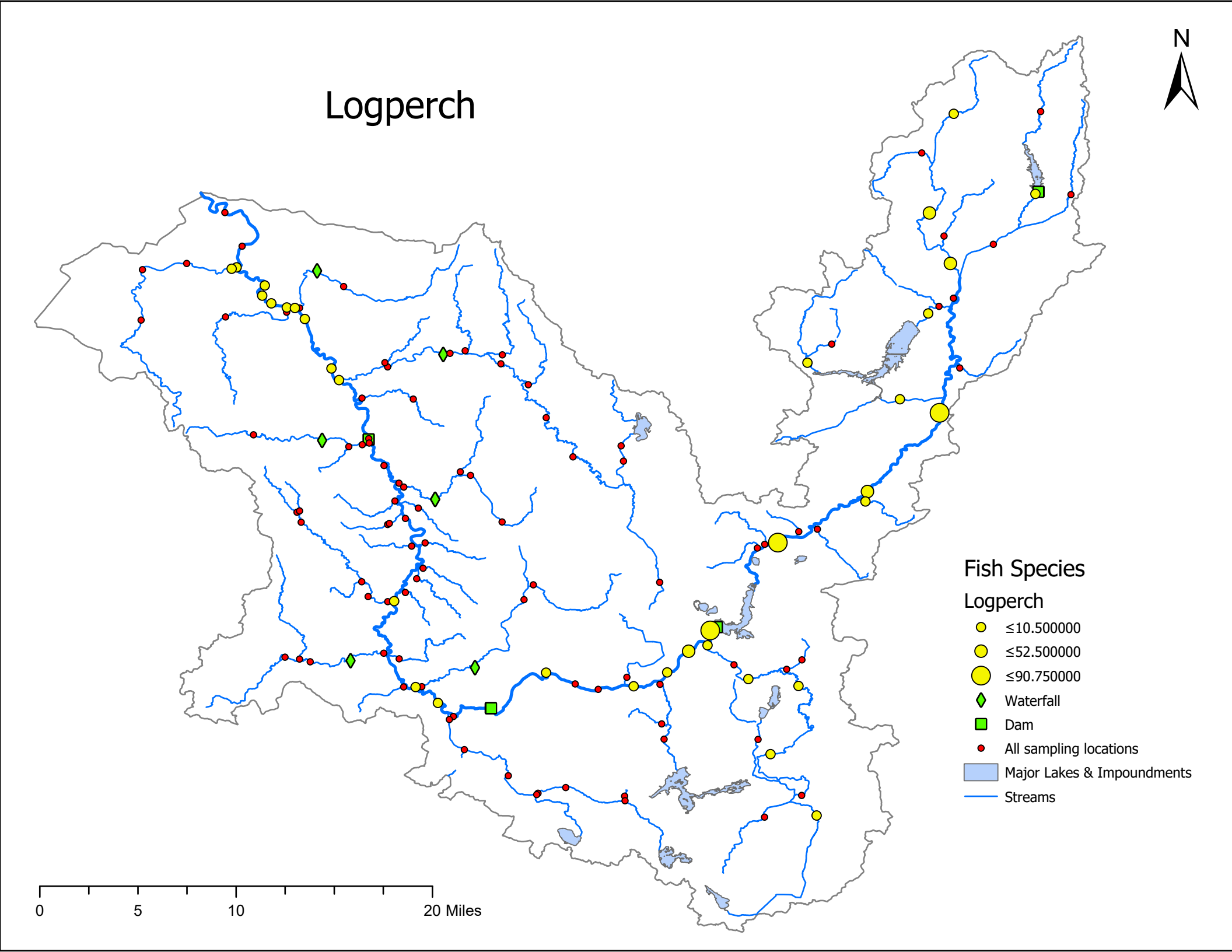

Redear Sunfish
N
Fish Species
Redear Sunfish
≤4.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

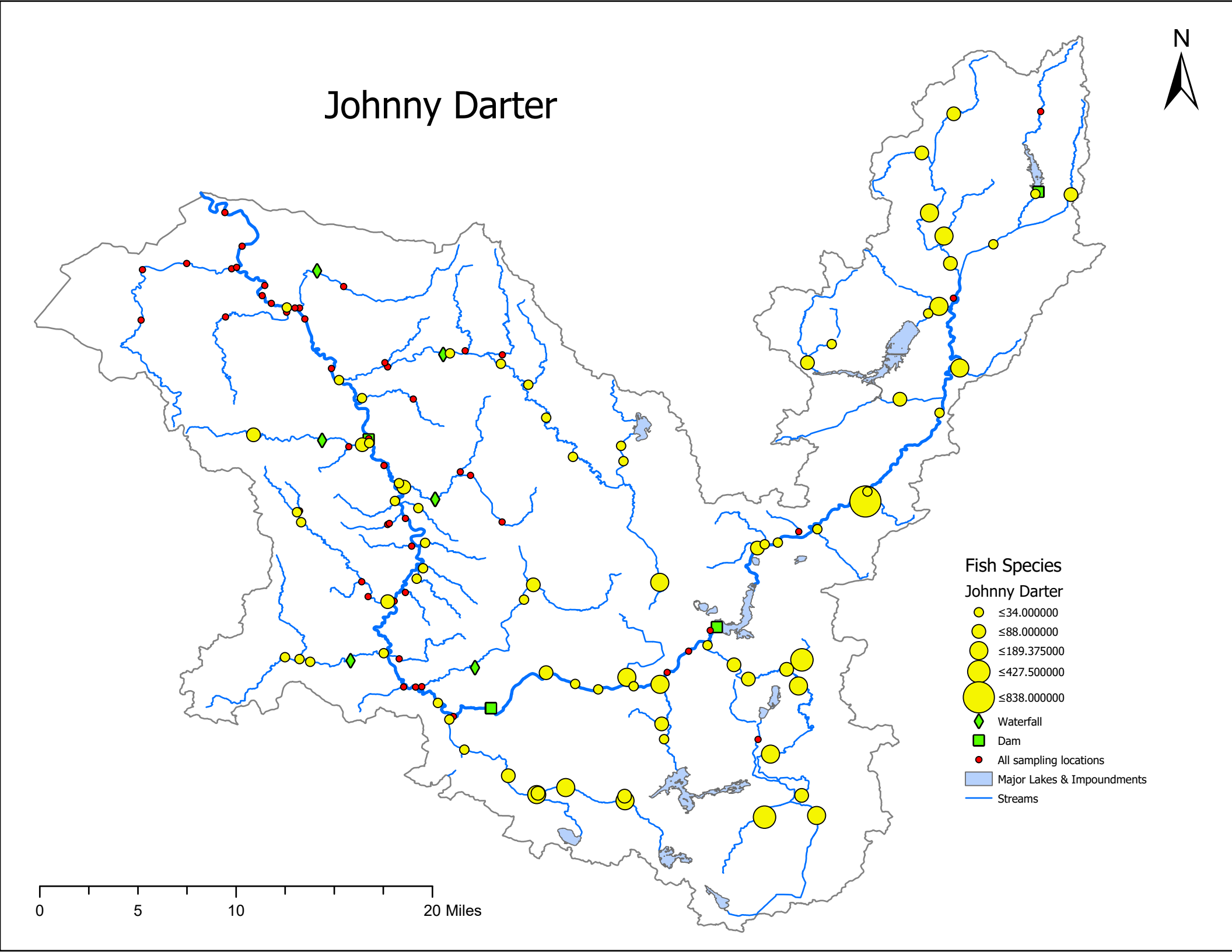

Pumpkinseed Sunfish
N
Fish Species
Pumpkinseed Sunfish
≤9.375000
≤26.000000
≤54.000000
≤155.294100
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

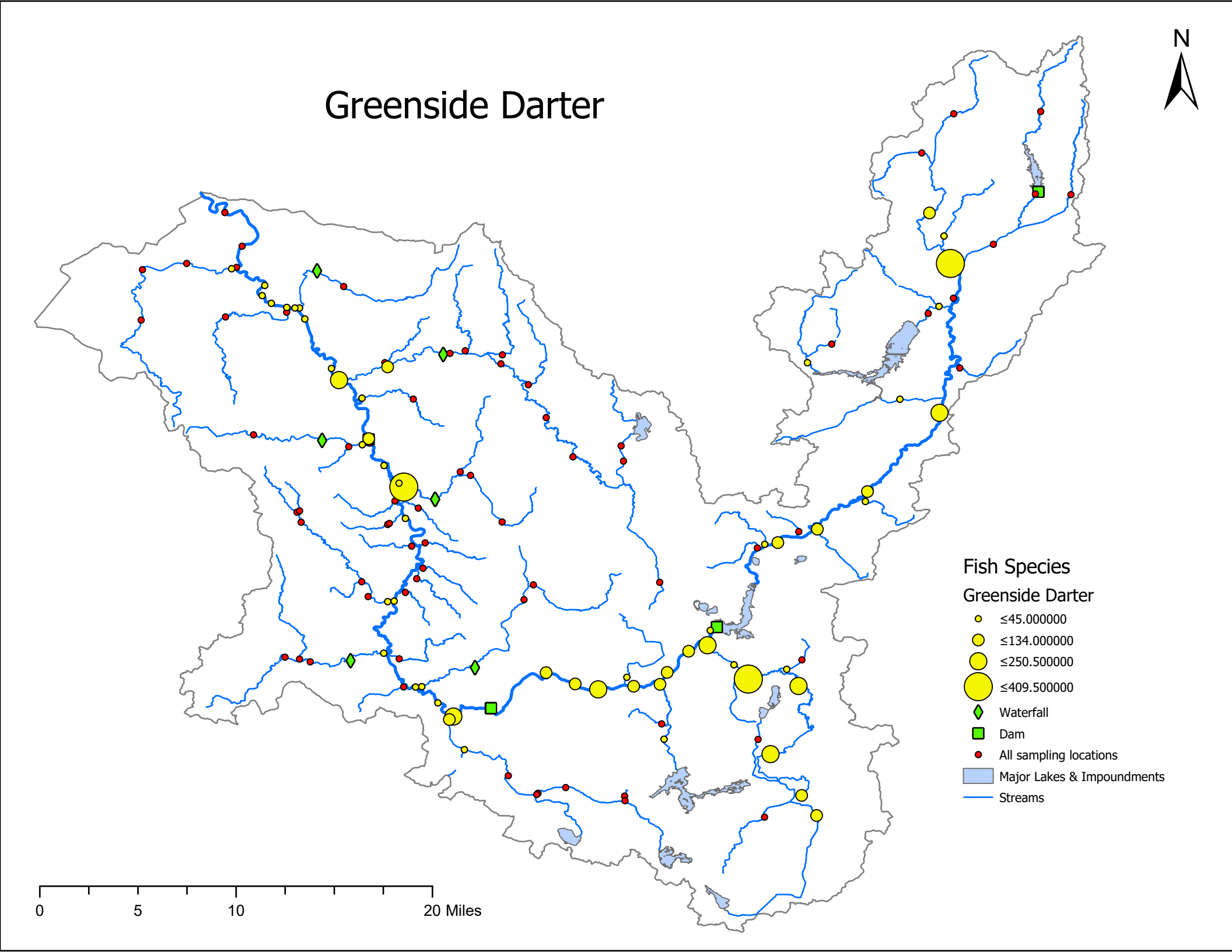

Walleye
N
Fish Species
Walleye
≤4.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

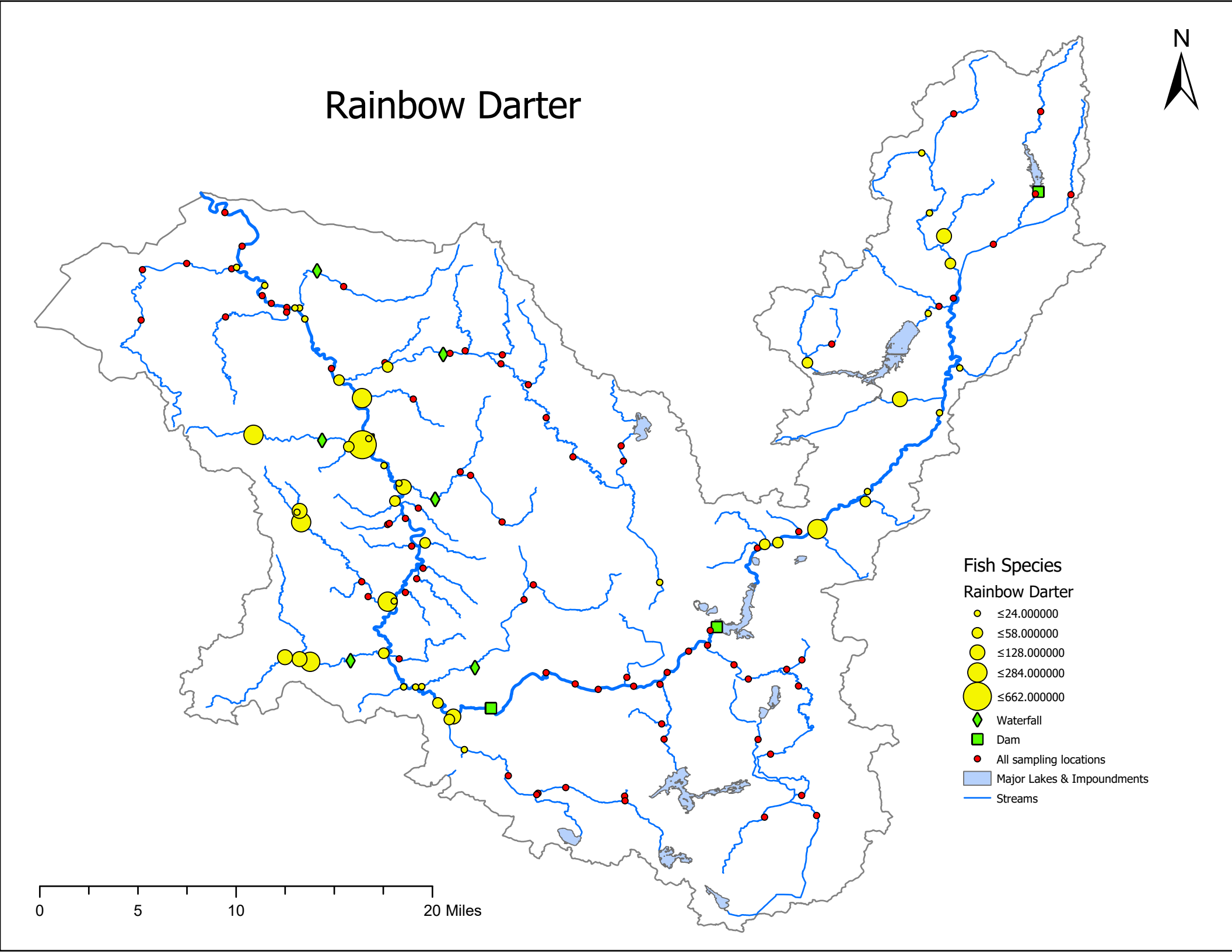

Yellow Perch
N
Fish Species
Yellow Perch
≤12.750000
≤34.000000
≤77.298500
≤232.500000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

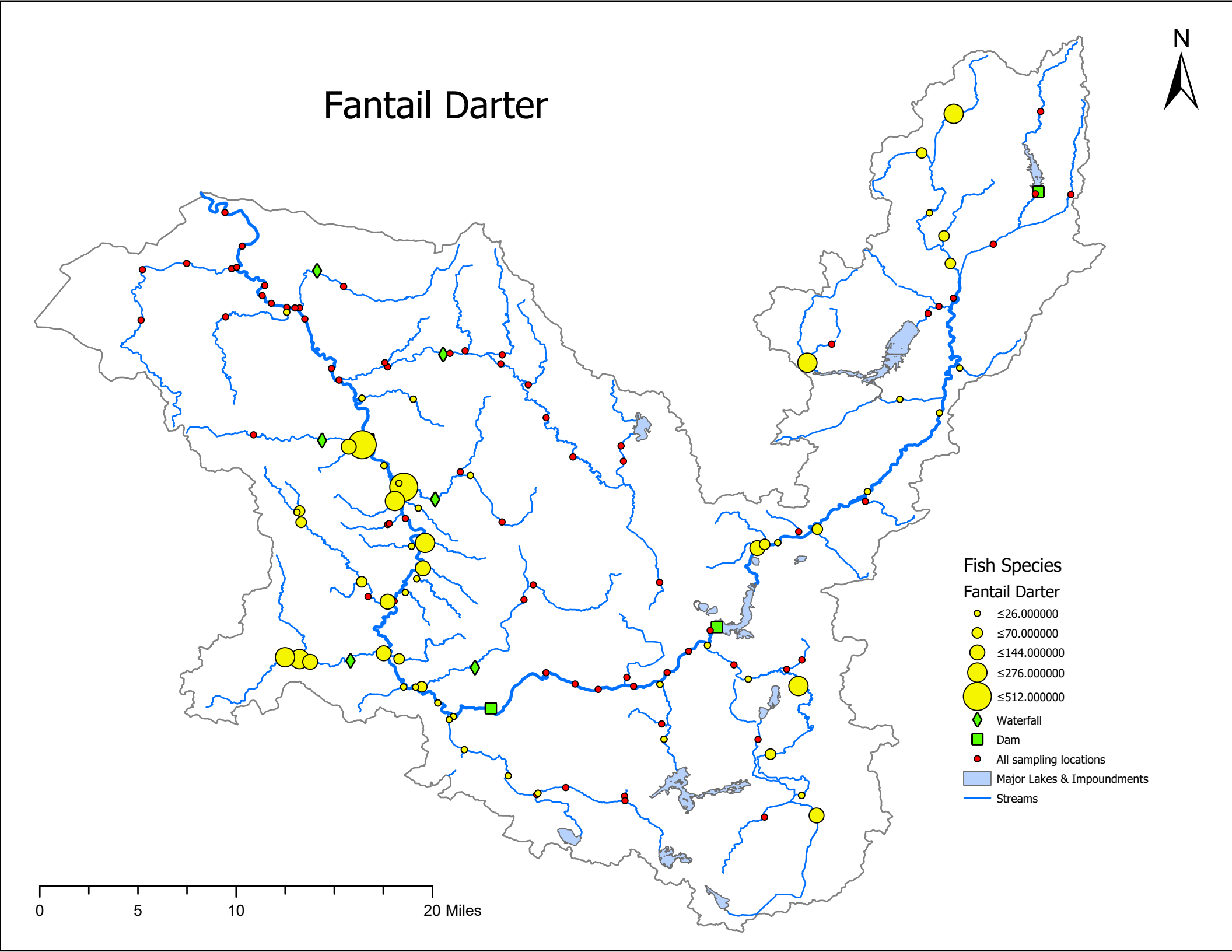

Blackside Darter
N
Fish Species
Blackside Darter
≤6.750000
≤25.500000
≤56.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

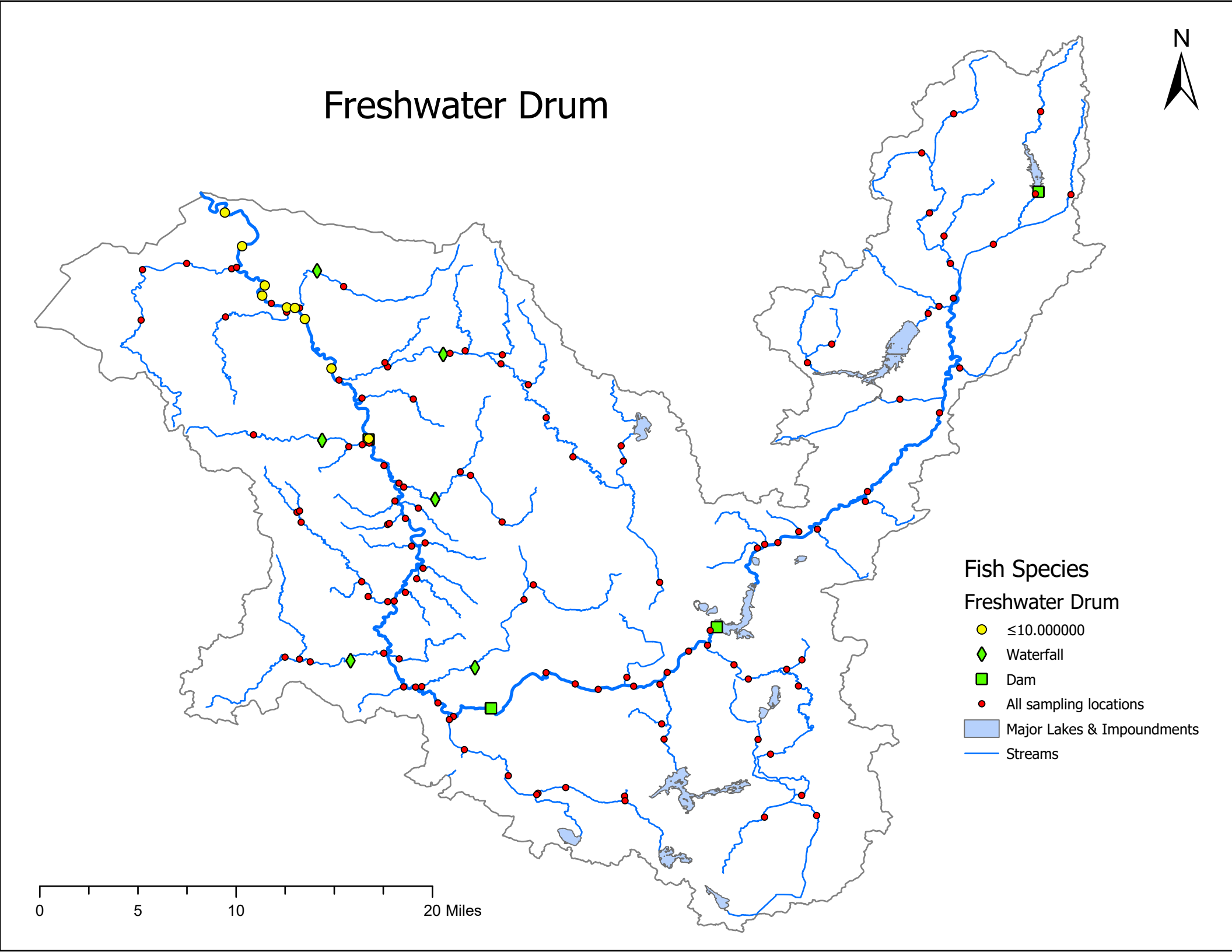

Logperch
N
Fish Species
Logperch
≤10.500000
≤52.500000
≤90.750000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

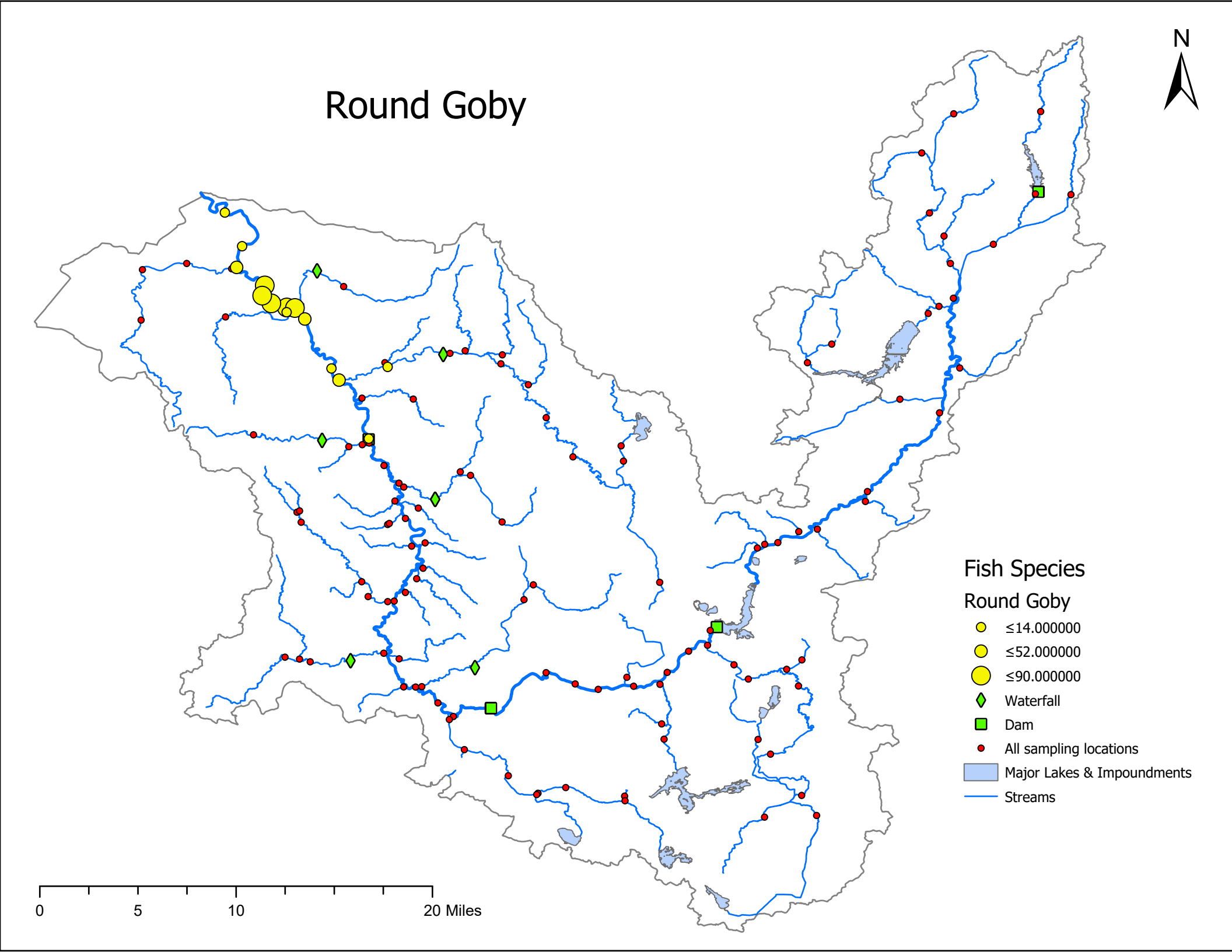

Johnny Darter
N
Fish Species
Johnny Darter
≤34.000000
≤88.000000
≤189.375000
≤427.500000
≤838.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

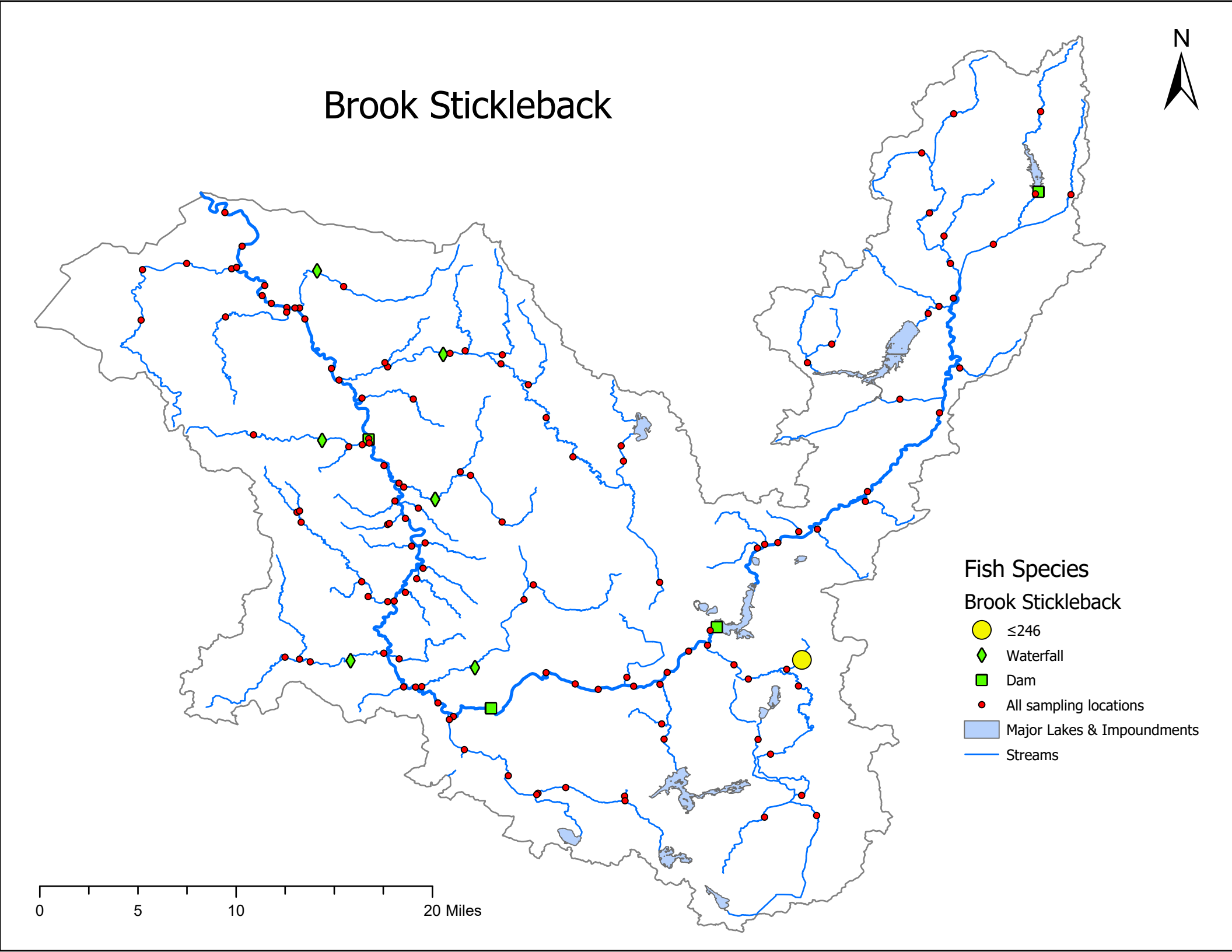

Greenside Darter
N
Fish Species
Greenside Darter
≤45.000000
≤134.000000
≤250.500000
≤409.500000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Rainbow Darter
N
Fish Species
Rainbow Darter
≤24.000000
≤58.000000
≤128.000000
≤284.000000
≤662.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Fantail Darter
N
Fish Species
Fantail Darter
≤26.000000
≤70.000000
≤144.000000
≤276.000000
≤512.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Freshwater Drum
N
Fish Species
Freshwater Drum
≤10.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Round Goby
N
Fish Species
Round Goby
≤14.000000
≤52.000000
≤90.000000
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles


Brook Stickleback
N
Fish Species
Brook Stickleback
≤246
Waterfall
Dam
All sampling locations
Major Lakes & Impoundments
Streams
0
5
10
20 Miles

Appendix G – Fish Community IBI, MIwb, and Metric Scores

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2017																	
87.26	A	8/9/2017	38.0	18(3)	5(5)	2(1)	0(1)	20.0(3)	44.1(3)	21.9(3)	13.8(5)	8.4(3)	73.8(5)	0.00(5)	680(5)	42	9.1
83.80	A	8/8/2017	82.0	20(3)	5(5)	3(3)	0(1)	22.1(3)	40.4(3)	34.6(1)	30.5(1)	8.7(3)	57.3(5)	0.00(5)	450(5)	38	9.1
57.67	A	7/25/2017	208.0	21(5)	6(5)	3(3)	0(1)	1.8(1)	16.8(1)	14.2(5)	14.0(5)	4.0(1)	56.5(5)	0.00(5)	1085(5)	42	9.5
52.50	A	9/14/2017	307.0	19(3)	5(5)	2(1)	1(1)	29.6(3)	37.3(3)	20.6(3)	16.7(3)	21.0(5)	55.3(5)	0.74(3)	864(5)	40	9.7
	A	8/1/2017	307.0	19(3)	5(5)	2(1)	1(1)	22.4(3)	36.1(3)	21.2(3)	18.2(3)	21.5(5)	51.2(3)	0.30(5)	776(5)	40	9.9
42.60	A	7/26/2017	340.0	22(5)	6(5)	2(1)	1(1)	17.2(1)	59.5(5)	16.4(3)	15.3(5)	4.7(1)	67.0(5)	0.43(5)	970(5)	42	9.4
39.70	A	9/13/2017	433.0	22(5)	5(5)	2(1)	1(1)	29.3(3)	46.9(3)	20.5(3)	13.1(5)	7.6(3)	72.7(5)	0.00(5)	740(5)	44	9.7
	A	8/3/2017	433.0	20(3)	5(5)	2(1)	1(1)	30.7(3)	50.8(5)	24.5(3)	18.5(3)	9.9(3)	65.1(5)	0.00(5)	654(5)	42	9.1
33.20	A	9/12/2017	480.0	20(3)	3(3)	2(1)	1(1)	27.2(3)	64.0(5)	46.6(1)	35.1(1)	2.7(1)	58.5(5)	0.00(5)	484(5)	34	8.2
	A	7/26/2017	480.0	20(3)	4(5)	2(1)	1(1)	19.0(3)	46.8(3)	36.5(1)	28.0(1)	4.8(1)	64.3(5)	0.00(5)	580(5)	34	8.9
26.50	A	8/2/2017	499.0	17(3)	5(5)	2(1)	0(1)	32.8(3)	58.5(5)	16.2(3)	16.9(3)	4.7(1)	69.6(5)	0.00(5)	620(5)	40	9.3
24.10	A	9/13/2017	555.0	21(5)	2(3)	2(1)	0(1)	23.8(3)	53.7(5)	33.1(1)	20.5(3)	3.5(1)	69.7(5)	0.20(5)	658(5)	38	9.5
	A	8/2/2017	555.0	16(3)	3(3)	2(1)	0(1)	33.2(3)	63.3(5)	22.8(3)	18.8(3)	7.8(3)	66.0(5)	0.00(5)	576(5)	40	8.8
22.40	A	8/10/2017	559.0	22(5)	3(3)	2(1)	0(1)	17.4(1)	45.1(3)	31.0(1)	29.1(1)	2.0(1)	61.6(5)	0.00(5)	636(5)	32	8.9
20.80	A	8/10/2017	583.0	17(3)	3(3)	2(1)	0(1)	5.3(1)	41.1(3)	37.9(1)	26.7(3)	3.9(1)	58.6(5)	0.70(3)	354(3)	28	8.5
20.67	A	8/11/2017	583.0	29(5)	4(5)	6(5)	1(1)	25.3(3)	37.6(3)	12.3(5)	15.4(5)	8.1(3)	71.9(5)	0.22(5)	798(5)	50	10.6
15.61	A	7/19/2017	698.0	23(5)	4(5)	6(5)	0(1)	25.4(3)	29.2(3)	7.6(5)	21.3(3)	11.3(5)	58.8(5)	0.00(5)	538(5)	50	10.2
12.00	A	8/28/2017	709.0	28(5)	4(5)	6(5)	1(1)	11.8(1)	18.8(1)	5.5(5)	25.6(3)	11.2(5)	52.0(3)	1.04(3)	603(5)	42	10.2
11.33	A	8/17/2017	730.0	19(3)	2(3)	2(1)	0(1)	5.8(1)	38.3(3)	4.8(5)	1.7(5)	6.8(3)	75.3(5)	0.68(3)	562(5)	38	8.6
10.95	A	8/28/2017	743.0	27(5)	3(3)	6(5)	0(1)	16.2(1)	38.1(3)	7.0(5)	8.7(5)	6.0(3)	60.0(5)	0.81(3)	688(5)	44	10.5
10.30	A	8/30/2017	744.0	21(5)	3(3)	4(3)	0(1)	11.8(1)	37.0(3)	12.6(5)	17.3(3)	7.7(3)	52.3(3)	1.64(3)	638(5)	38	9.8
9.70	A	8/30/2017	744.0	26(5)	2(3)	4(3)	1(1)	10.6(1)	29.0(3)	9.5(5)	27.4(3)	5.7(3)	44.3(3)	0.23(5)	800(5)	40	10.4
8.90	A	8/29/2017	745.0	26(5)	2(3)	5(3)	2(3)	21.1(3)	32.6(3)	9.6(5)	26.4(3)	5.1(3)	45.0(3)	0.23(5)	788(5)	44	10.2
7.10	A	8/29/2017	786.0	23(5)	2(3)	4(3)	0(1)	7.3(1)	17.1(1)	18.2(3)	52.2(1)	6.5(3)	25.0(1)	0.54(3)	602(5)	30	9.1
Year: 2019																	
41.71	A	10/3/2019	402.0	19(3)	3(3)	2(1)	1(1)	1.5(1)	26.8(3)	19.6(3)	14.5(5)	13.8(5)	59.4(5)	0.00(5)	222(3)	38	7.5

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 2017																	
75.83	D	8/9/2017	151.0	24(5)	4(5)	2(1)	2(1)	5(3)	66.5(5)	18.2(5)	11.6(5)	6.0(5)	80.8(5)	0.00(5)	825(5)	50	9.5
69.96	D	8/2/2017	159.0	26(5)	5(5)	4(3)	1(1)	6(5)	41.3(5)	28.3(3)	19.7(3)	9.0(5)	70.7(5)	0.33(5)	322(3)	48	8.8
64.30	D	9/20/2017	178.0	21(3)	5(5)	3(3)	2(1)	5(3)	53.4(5)	6.9(5)	1.2(5)	10.8(5)	87.6(5)	0.00(5)	710(3)	48	9.1
	D	8/3/2017	178.0	17(3)	3(3)	1(1)	2(1)	5(3)	58.7(5)	7.1(5)	0.0(5)	12.3(5)	87.2(5)	0.00(5)	489(3)	44	8.8
55.80	D	7/27/2017	292.0	16(3)	5(5)	2(1)	1(1)	2(1)	34.2(3)	18.7(3)	8.3(5)	12.4(5)	69.0(5)	0.00(5)	424(3)	40	9.2
54.32	D	7/27/2017	293.0	20(3)	5(5)	2(1)	1(1)	3(3)	27.5(3)	25.7(3)	18.3(5)	11.4(5)	66.2(5)	0.00(5)	498(3)	42	9.0
51.00	D	7/27/2017	323.0	21(3)	6(5)	2(1)	1(1)	2(1)	36.2(5)	40.4(1)	36.5(1)	6.0(5)	54.0(3)	0.15(5)	597(3)	34	8.8
50.00	D	9/20/2017	326.0	19(3)	4(5)	2(1)	1(1)	2(1)	45.6(5)	22.5(3)	15.5(5)	4.6(3)	70.5(5)	0.00(5)	584(3)	40	9.0
	D	7/27/2017	326.0	19(3)	4(5)	2(1)	1(1)	2(1)	32.1(3)	14.0(5)	9.7(5)	5.1(5)	75.5(5)	0.26(5)	506(3)	42	8.7
48.70	D	9/20/2017	331.0	18(3)	3(3)	2(1)	1(1)	3(1)	36.2(5)	31.0(3)	28.5(3)	8.3(5)	61.1(5)	0.00(5)	646(3)	38	9.0
	D	8/1/2017	331.0	20(3)	4(5)	2(1)	1(1)	3(1)	25.9(3)	39.4(1)	37.7(1)	4.0(3)	56.4(5)	0.16(5)	585(3)	32	8.3
BIG CREEK (19-005-000)																	
Year: 2018																	
2.40	D	7/31/2018	35.0	10(3)	1(1)	1(1)	0(1)	0(1)	6.3(1)	25.0(5)	6.4(5)	0.0(1)	5.1(1)	0.00(5)	2199(5)	30	7.3
0.23	E	10/3/2018	37.0	10(3)	2(3)	1(1)	0(1)	2(1)	40.5(5)	51.2(1)	38.1(1)	0.0(1)	4.8(1)	0.00(5)	246(3)	26	5.5
TINKERS CREEK (19-007-000)																	
Year: 2018																	
18.00	D	7/31/2018	48.0	12(3)	4(5)	2(3)	0(1)	1(1)	27.7(3)	50.0(1)	28.8(3)	19.1(5)	52.2(3)	0.36(5)	208(3)	36	6.9
13.80	D	9/24/2018	54.0	12(3)	4(5)	2(3)	0(1)	1(1)	16.3(1)	51.6(1)	35.3(1)	34.2(5)	29.9(3)	0.00(5)	178(1)	30	7.4
	D	7/31/2018	54.0	15(3)	4(5)	2(3)	0(1)	1(1)	26.7(3)	41.2(3)	29.8(3)	37.3(5)	30.6(3)	0.00(5)	225(3)	38	7.9
8.65	D	9/19/2018	69.0	12(3)	3(3)	2(3)	0(1)	1(1)	21.3(3)	64.9(1)	29.3(3)	16.9(5)	51.1(3)	0.00(5)	118(1)	32	7.0
	D	7/31/2018	69.0	14(3)	3(3)	2(3)	0(1)	1(1)	18.2(3)	61.2(1)	23.5(3)	16.6(5)	38.5(3)	0.00(5)	218(3)	34	7.4
6.32	D	7/30/2018	84.0	12(3)	3(3)	2(3)	0(1)	1(1)	17.9(1)	43.0(1)	14.0(5)	28.5(5)	16.8(1)	0.00(5)	272(3)	32	7.3
2.50	E	9/24/2018	91.0	21(3)	3(3)	2(3)	1(1)	2(1)	41.8(5)	21.8(5)	18.6(5)	13.7(5)	55.1(5)	0.39(3)	598(3)	42	9.2

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
0.10	D	7/30/2018	96.0	20(3)	2(3)	2(3)	1(1)	4(3)	53.1(5)	16.8(5)	7.7(5)	6.7(5)	69.2(5)	0.12(5)	802(5)	48	9.2
BRANDYWINE CREEK (19-010-000)																	
Year: 2018																	
0.26	E	9/6/2018	27.0	20(5)	2(3)	2(3)	0(1)	4(5)	26.1(3)	12.6(5)	8.3(5)	0.1(1)	40.9(3)	0.19(3)	4582(5)	42	9.6
FURNACE RUN (19-020-000)																	
Year: 2018																	
0.27	E	9/5/2018	20.0	19(5)	3(3)	2(3)	0(1)	4(5)	43.2(5)	20.0(5)	7.8(5)	0.4(1)	54.1(5)	0.07(5)	1658(5)	48	9.2
YELLOW CREEK (19-021-000)																	
Year: 2018																	
4.08	E	8/1/2018	23.0	17(3)	2(3)	2(3)	1(1)	3(3)	38.2(5)	13.5(5)	6.3(5)	0.1(1)	37.8(3)	0.00(5)	2870(5)	42	9.1
0.14	E	9/20/2018	31.0	17(3)	1(1)	2(3)	1(1)	3(3)	27.1(3)	22.5(5)	3.6(5)	0.2(1)	22.7(1)	0.00(5)	1380(5)	36	8.0
	E	7/31/2018	31.0	17(3)	1(1)	2(3)	1(1)	4(3)	38.1(5)	26.2(5)	6.0(5)	0.2(1)	34.3(3)	0.00(5)	681(3)	38	7.6
MUD BROOK (19-024-000)																	
Year: 2018																	
0.18	E	9/20/2018	29.0	17(3)	2(3)	2(3)	1(1)	3(3)	49.9(5)	29.7(3)	2.3(5)	0.1(1)	39.4(3)	0.00(5)	778(5)	40	8.2
	E	7/30/2018	29.0	16(3)	2(3)	2(3)	1(1)	3(3)	37.1(5)	42.3(3)	5.6(5)	0.8(1)	19.5(1)	0.00(5)	264(3)	36	7.3
BREAKNECK CREEK (19-028-000)																	
Year: 2018																	
14.60	D	8/30/2018	42.0	19(3)	5(5)	3(3)	0(1)	5(5)	25.0(3)	57.0(1)	52.2(1)	4.4(3)	41.6(3)	0.00(5)	456(3)	36	8.0
	D	7/24/2018	42.0	13(3)	3(3)	1(1)	0(1)	4(3)	18.6(3)	62.6(1)	55.4(1)	3.9(3)	36.3(3)	0.00(5)	458(3)	30	7.1
7.00	D	8/29/2018	56.0	18(3)	4(5)	3(3)	0(1)	5(5)	25.9(3)	40.5(3)	38.5(1)	4.4(3)	56.0(5)	0.13(5)	664(3)	40	8.1
	D	7/26/2018	56.0	17(3)	4(5)	2(3)	0(1)	4(3)	17.2(1)	49.9(1)	46.2(1)	7.3(5)	45.6(3)	0.29(3)	525(3)	32	8.0
3.08	D	8/29/2018	61.0	22(5)	3(3)	3(5)	0(1)	5(5)	65.1(5)	28.3(5)	23.1(3)	7.9(5)	67.4(5)	0.00(5)	518(3)	50	7.8
	D	8/6/2018	61.0	23(5)	4(5)	3(5)	0(1)	5(5)	51.8(5)	37.8(3)	32.4(3)	6.5(5)	59.1(5)	0.00(5)	710(3)	50	8.2
0.05	D	8/29/2018	79.0	20(3)	4(5)	2(3)	1(1)	5(5)	37.7(5)	9.1(5)	3.0(5)	16.8(5)	79.1(5)	0.00(5)	495(3)	50	8.4

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
0.05	D	8/6/2018	79.0	24(5)	4(5)	2(3)	1(1)	5(5)	35.3(3)	15.6(5)	10.5(5)	9.8(5)	79.1(5)	0.00(5)	1048(5)	52	8.9
CONGRESS LAKE OUTLET (FEEDER CANAL) (19-028-004)																	
Year: 2018																	
11.70	D	8/30/2018	26.0	18(5)	4(5)	2(3)	0(1)	5(5)	34.8(3)	51.0(1)	26.5(3)	1.6(3)	53.8(5)	0.16(5)	458(3)	42	6.8
	E	7/12/2018	26.0	16(3)	3(3)	2(3)	0(1)	5(5)	36.7(5)	45.7(3)	17.6(5)	2.8(3)	62.5(5)	0.20(5)	508(3)	44	6.9
5.63	E	7/11/2018	44.0	10(3)	4(5)	0(1)	0(1)	0(1)	0.0(1)	66.4(1)	0.0(5)	9.6(5)	77.9(5)	0.00(5)	70(1)	34	5.3
LITTLE CUYAHOGA RIVER (19-030-000)																	
Year: 2018																	
8.40	E	8/14/2018	30.0	14(3)	4(5)	1(1)	0(1)	1(1)	28.7(3)	55.8(1)	19.3(3)	2.4(3)	17.2(1)	0.00(5)	520(3)	30	7.3
	E	7/11/2018	30.0	13(3)	3(3)	1(1)	0(1)	1(1)	16.2(1)	46.8(3)	20.7(3)	1.7(3)	13.2(1)	0.00(5)	606(3)	28	7.7
7.15	D	8/14/2018	31.0	12(3)	3(3)	1(1)	0(1)	1(1)	38.5(5)	74.5(1)	21.3(3)	0.1(1)	7.5(1)	0.00(5)	436(3)	28	7.0
	D	7/10/2018	31.0	12(3)	3(3)	1(1)	0(1)	2(3)	29.9(3)	66.7(1)	25.1(3)	0.1(1)	8.5(1)	0.00(5)	377(3)	28	7.0
5.11	D	8/15/2018	47.0	13(3)	3(3)	2(3)	0(1)	2(1)	39.2(5)	86.6(1)	27.0(3)	0.0(1)	10.4(1)	0.09(5)	222(3)	30	6.9
	D	7/10/2018	47.0	12(3)	3(3)	2(3)	0(1)	2(1)	45.9(5)	87.4(1)	23.7(3)	0.0(1)	14.4(1)	0.09(5)	207(3)	30	7.0
2.14	D	8/14/2018	54.0	19(3)	4(5)	2(3)	0(1)	4(3)	66.7(5)	63.7(1)	7.1(5)	0.6(1)	12.0(1)	0.00(5)	1196(5)	38	8.2
	D	7/10/2018	54.0	18(3)	3(3)	2(3)	0(1)	3(3)	66.7(5)	69.2(1)	7.5(5)	0.4(1)	9.6(1)	0.07(5)	630(3)	34	7.5
0.30	D	8/13/2018	62.0	20(3)	3(3)	2(3)	1(1)	4(3)	52.1(5)	58.5(1)	21.8(3)	1.9(3)	48.3(3)	0.72(3)	518(3)	34	8.1
	D	7/11/2018	62.0	21(5)	3(3)	2(3)	1(1)	4(3)	64.8(5)	55.8(1)	31.1(3)	1.5(3)	42.2(3)	0.00(5)	795(5)	40	8.8
BRIDGE CREEK (19-035-000)																	
Year: 2018																	
1.32	D	8/7/2018	31.0	18(3)	4(5)	2(3)	0(1)	3(3)	38.7(5)	25.3(5)	10.5(5)	15.6(5)	73.2(5)	0.00(5)	460(3)	48	8.7
WEST BRANCH CUYAHOGA RIVER (19-036-000)																	
Year: 2018																	
5.60	D	8/7/2018	25.0	25(5)	6(5)	3(5)	1(1)	5(5)	36.9(5)	35.0(3)	20.0(3)	6.2(5)	63.5(5)	0.00(5)	790(5)	52	9.6
0.87	D	8/7/2018	35.0	22(5)	1(1)	3(3)	2(3)	6(5)	66.7(5)	21.5(5)	19.4(3)	3.3(3)	74.5(5)	0.00(5)	1448(5)	48	9.1

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
CUYAHOGA RIVER (19-001-000)																
Year: 2017																
96.20	E	8/9/2017	6.0	9(3)	1(1)	0(1)	0(1)	0(1)	1(1)	15.1(5)	4.2(5)	3.4(5)	74.8(5)	0.00(5)	242(3)	36
90.86	D	9/8/2017	19.0	18(5)	3(1)	0(1)	1(1)	1(1)	4(3)	41.2(3)	25.2(3)	12.4(5)	67.6(5)	0.00(5)	294(3)	36
Year: 2018																
90.86	D	8/13/2018	19.0	17(5)	4(3)	0(1)	1(1)	2(1)	4(3)	50.6(3)	24.3(3)	19.2(5)	49.8(5)	0.00(5)	626(3)	38
WEST CREEK (19-001-004)																
Year: 2018																
3.70	E	6/28/2018	5.0	4(1)	3(3)	1(1)	0(1)	0(1)	2(1)	82.1(1)	0.7(5)	20.7(5)	0.0(1)	0.26(3)	204(3)	26
0.19	E	8/1/2018	13.0	11(3)	6(3)	2(3)	2(1)	1(1)	4(3)	58.9(1)	16.2(5)	28.9(5)	6.6(1)	0.00(5)	598(3)	34
SAGAMORE CREEK (19-001-011)																
Year: 2018																
2.92	E	7/18/2018	3.0	8(3)	3(3)	2(3)	0(1)	1(1)	2(1)	30.2(5)	0.6(5)	21.2(5)	0.6(1)	0.10(5)	1284(5)	38
0.20	E	8/31/2018	6.0	14(5)	5(3)	2(3)	2(1)	4(5)	5(3)	22.4(5)	6.1(5)	11.7(5)	23.5(3)	0.00(5)	1830(5)	48
SPRING CREEK (19-001-012)																
Year: 2018																
0.90	E	6/28/2018	1.0	2(1)	2(3)	1(1)	0(1)	0(1)	1(1)	100.0(1)	0.0(5)	12.9(5)	0.0(1)	0.00(5)	0(1)	26
Year: 2019																
0.80	F	8/21/2019	1.0	2(1)	2(3)	1(1)	0(1)	0(1)	1(1)	100.0(1)	0.0(5)	51.7(3)	0.0(1)	0.00(5)	0(1)	24
SAND RUN (19-001-014)																
Year: 2018																
0.13	E	8/16/2018	3.0	15(5)	9(5)	2(3)	3(3)	2(3)	5(5)	48.0(3)	3.0(5)	12.1(5)	22.0(3)	0.00(5)	1614(5)	50
HARPER DITCH (19-001-020)																
Year: 2018																
0.20	E	8/28/2018	5.0	17(5)	3(3)	1(1)	3(3)	4(5)	5(5)	27.2(5)	3.2(5)	22.2(5)	81.3(5)	0.00(5)	498(5)	52

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
TRIB. TO CUYAHOGA R. (63.43) (19-001-022)																
Year: 2018																
0.10	E	7/25/2018	3.0	10(5)	2(1)	1(1)	0(1)	2(3)	1(1)	51.7(3)	3.9(5)	61.3(1)	40.9(5)	0.00(5)	222(3)	34
TRIB. TO CUYAHOGA R. (RM 65.19) (19-001-023)																
Year: 2018																
0.30	E	8/28/2018	3.0	5(3)	1(1)	0(1)	0(1)	0(1)	0(1)	17.1(5)	0.0(5)	0.0(5)	48.6(5)	0.00(5)	58(1)	34
TRIB. TO CUYAHOGA R. (RM 69.43) (19-001-024)																
Year: 2018																
0.20	E	8/15/2018	4.0	14(5)	2(1)	0(1)	5(5)	4(5)	5(5)	27.8(5)	12.4(5)	75.5(1)	67.2(5)	0.00(5)	1004(5)	48
TRIB. TO CUYAHOGA R. (63.82) (19-001-041)																
Year: 2018																
0.10	E	7/25/2018	4.0	13(5)	1(1)	1(1)	3(3)	4(5)	4(3)	29.2(5)	6.9(5)	20.8(5)	75.0(5)	0.00(5)	204(3)	46
TRIB TO CUYAHOGA R. (25.41) @ RIVERVIEW RD (19-001-045)																
Year: 2018																
0.15	E	8/13/2018	2.0	17(5)	7(5)	4(5)	2(3)	3(5)	6(5)	63.5(1)	16.4(3)	28.5(5)	17.1(3)	0.00(5)	688(5)	50
BIG CREEK (19-005-000)																
Year: 2018																
7.80	E	8/1/2018	11.0	7(1)	4(3)	1(1)	0(1)	0(1)	2(1)	47.0(3)	9.4(5)	24.4(5)	2.6(1)	0.10(5)	1042(5)	32
4.40	E	8/1/2018	19.0	9(3)	6(3)	1(1)	1(1)	0(1)	2(1)	41.5(3)	5.3(5)	25.5(5)	8.6(1)	0.00(5)	1448(5)	34
MILL CREEK (19-006-000)																
Year: 2018																
0.12	E	10/3/2018	19.0	15(3)	8(5)	1(1)	2(1)	1(1)	4(3)	48.0(3)	35.7(1)	8.8(5)	16.7(1)	0.20(5)	530(3)	32
	E	7/26/2018	19.0	17(5)	9(5)	1(1)	4(3)	2(1)	6(3)	42.8(3)	35.1(1)	6.6(5)	14.2(1)	0.00(5)	1812(5)	38

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
TINKERS CREEK (19-007-000)																
Year: 2018																
28.80	E	8/28/2018	4.0	12(5)	3(3)	0(1)	1(1)	2(3)	2(1)	75.6(1)	28.3(1)	73.2(1)	39.0(5)	0.00(5)	164(3)	30
	E	7/5/2018	4.0	13(5)	3(3)	0(1)	1(1)	2(3)	2(1)	75.8(1)	15.9(3)	58.3(1)	51.4(5)	0.00(5)	255(3)	32
WOOD CREEK (19-007-001)																
Year: 2018																
0.15	E	10/11/2018	3.0	2(1)	2(1)	1(1)	0(1)	0(1)	1(1)	100.0(1)	0.0(5)	85.4(1)	0.0(1)	0.00(5)	0(1)	20
	E	6/28/2018	3.0	2(1)	2(1)	1(1)	0(1)	0(1)	1(1)	100.0(1)	0.0(5)	65.9(1)	0.0(1)	0.00(5)	0(1)	20
BEAR CREEK (19-007-007)																
Year: 2018																
0.20	E	7/11/2018	5.0	5(1)	4(3)	1(1)	0(1)	0(1)	2(1)	57.1(1)	4.7(5)	16.3(5)	0.0(1)	0.00(5)	968(5)	30
HAWTHORN CREEK (19-007-008)																
Year: 2018																
0.75	E	7/11/2018	7.0	6(1)	4(3)	1(1)	0(1)	0(1)	2(1)	85.9(1)	3.5(5)	19.0(5)	0.2(1)	0.00(5)	226(3)	28
BEAVER MEADOW RUN (19-007-010)																
Year: 2018																
0.11	E	7/11/2018	6.0	14(5)	5(3)	1(1)	2(1)	1(1)	4(3)	40.6(3)	13.0(5)	25.0(5)	17.2(1)	0.00(5)	171(3)	36
POND BROOK (19-008-000)																
Year: 2019																
2.39	E	9/10/2019	11.0	12(3)	3(1)	0(1)	0(1)	1(1)	1(1)	63.8(1)	18.1(3)	17.4(5)	55.1(5)	0.00(5)	100(1)	28
Year: 2018																
1.41	E	7/11/2018	16.0	14(3)	3(1)	0(1)	0(1)	1(1)	1(1)	61.7(1)	35.2(1)	29.9(5)	50.1(5)	0.00(5)	204(3)	28

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
CHIPPEWA CREEK (19-009-000)																
Year: 2018																
6.03	E	7/12/2018	6.0	9(3)	3(3)	1(1)	1(1)	2(3)	3(3)	48.5(3)	1.0(5)	17.0(5)	10.6(1)	0.00(5)	1590(5)	38
0.36	E	9/5/2018	18.0	17(5)	8(5)	2(3)	4(3)	4(3)	6(3)	14.7(5)	5.3(5)	8.7(5)	48.3(3)	0.05(5)	3484(5)	50
TRIB. TO CHIPPEWA CREEK (RM 3.70) (19-009-001)																
Year: 2018																
0.10	E	6/28/2018	1.0	7(5)	4(5)	2(3)	1(3)	2(5)	3(5)	63.4(1)	0.0(5)	38.7(3)	26.8(5)	0.00(5)	246(5)	50
BRANDYWINE CREEK (19-010-000)																
Year: 2018																
7.02	E	7/18/2018	9.0	13(3)	7(5)	1(1)	0(1)	0(1)	3(3)	68.9(1)	29.8(1)	50.1(3)	17.7(1)	0.00(5)	232(3)	28
4.27	E	9/13/2018	16.0	12(3)	6(3)	2(3)	0(1)	1(1)	3(1)	76.6(1)	21.4(3)	55.5(1)	48.8(5)	0.00(5)	140(1)	28
INDIAN CREEK (19-010-001)																
Year: 2019																
0.01	E	8/14/2019	7.0	11(3)	6(5)	1(1)	0(1)	0(1)	3(3)	65.0(1)	14.3(3)	28.2(5)	17.8(3)	0.00(5)	588(5)	36
Year: 2018																
0.01	E	9/13/2018	7.0	10(3)	6(5)	1(1)	0(1)	0(1)	3(3)	74.1(1)	37.5(1)	46.5(3)	14.2(1)	0.00(5)	178(3)	28
STANFORD RUN (19-011-000)																
Year: 2018																
0.90	E	7/10/2018	2.0	9(5)	5(5)	3(3)	1(1)	2(5)	4(5)	88.0(1)	5.8(5)	46.9(3)	6.6(1)	0.00(5)	110(3)	42
SLIPPER RUN (19-012-000)																
Year: 2018																
0.16	E	7/18/2018	1.0	9(5)	5(5)	3(3)	0(1)	1(3)	3(5)	81.4(1)	0.0(5)	35.2(3)	2.9(1)	0.00(5)	180(5)	42

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	**IBI**
BOSTON RUN (19-013-000)																
Year: 2018																
0.22	E	7/18/2018	3.0	15(5)	7(5)	3(3)	3(5)	3(5)	6(5)	49.3(3)	9.8(5)	33.2(3)	24.4(3)	0.00(5)	840(5)	52
SALT RUN (19-016-000)																
Year: 2018																
0.30	E	7/10/2018	3.0	16(5)	6(5)	3(3)	1(1)	2(3)	3(3)	50.2(3)	20.4(3)	27.6(5)	35.3(5)	0.00(5)	494(5)	46
DICKERSON RUN (19-017-000)																
Year: 2019																
0.60	E	8/14/2019	2.0	18(5)	8(5)	4(5)	2(3)	2(3)	4(5)	58.7(1)	27.0(1)	23.1(5)	48.5(5)	0.00(5)	612(5)	48
ROBINSON RUN (19-019-000)																
Year: 2019																
0.10	E	7/23/2019	1.0	7(3)	4(3)	2(3)	1(3)	1(3)	2(3)	94.1(1)	3.9(5)	18.3(5)	6.5(1)	0.00(5)	18(1)	36
FURNACE RUN (19-020-000)																
Year: 2018																
7.25	E	9/5/2018	6.0	15(5)	6(5)	2(3)	2(1)	3(3)	4(3)	50.5(3)	7.6(5)	25.5(5)	26.1(3)	0.00(5)	578(5)	46
TRIB. TO FURNACE RUN (RM 7.90) (19-020-001)																
Year: 2018																
0.20	E	7/19/2018	1.0	8(5)	4(5)	2(3)	1(3)	3(5)	2(5)	84.3(1)	0.0(5)	50.3(3)	6.7(1)	0.00(5)	150(5)	46
ROCK CREEK (19-020-002)																
Year: 2018																
0.20	E	7/19/2018	1.0	8(5)	3(3)	2(3)	1(3)	2(5)	3(5)	68.7(1)	4.6(5)	40.9(3)	10.0(1)	0.00(5)	438(5)	44

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
RIDING RUN @WHEATLEY RD (19-020-003)																
Year: 2019																
0.10	E	7/23/2019	1.0	5(3)	3(3)	2(3)	0(1)	1(3)	1(1)	85.7(1)	0.0(5)	36.3(3)	9.3(1)	0.00(5)	86(3)	32
Year: 2018																
0.10	E	7/19/2018	1.0	4(3)	3(3)	2(3)	0(1)	1(3)	1(1)	88.0(1)	0.0(5)	45.7(3)	5.4(1)	0.00(5)	83(3)	32
TRIB TO FURNACE RUN (1.20) (19-020-004)																
Year: 2019																
0.10	F	8/21/2019	2.0	3(1)	3(3)	1(1)	0(1)	0(1)	1(1)	88.8(1)	0.0(5)	11.5(5)	0.0(1)	0.00(5)	76(3)	28
YELLOW CREEK (19-021-000)																
Year: 2018																
5.30	E	8/1/2018	11.0	16(5)	7(5)	2(3)	3(3)	3(3)	5(3)	25.4(5)	12.2(5)	10.8(5)	56.0(5)	0.00(5)	2148(5)	52
NORTH FORK YELLOW CREEK (19-022-000)																
Year: 2018																
0.10	E	8/1/2018	10.0	17(5)	8(5)	3(3)	4(3)	3(3)	6(5)	47.1(3)	11.8(5)	19.4(5)	30.4(3)	0.00(5)	860(5)	50
WOODWARD CREEK (19-023-000)																
Year: 2019																
0.60	E	7/23/2019	3.0	9(3)	5(5)	2(3)	0(1)	1(1)	2(3)	87.0(1)	9.4(5)	49.8(3)	20.9(3)	0.00(5)	120(3)	36
Year: 2018																
0.60	E	7/31/2018	3.0	7(3)	2(1)	2(3)	0(1)	1(1)	2(3)	95.4(1)	11.6(5)	31.4(3)	12.8(1)	0.00(5)	16(1)	28
MUD BROOK (19-024-000)																
Year: 2018																
8.34	E	7/30/2018	15.0	12(3)	2(1)	0(1)	0(1)	1(1)	1(1)	69.4(1)	28.7(3)	38.9(3)	39.8(3)	0.00(5)	66(1)	24

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
POWERS BROOK (19-025-000)																
Year: 2018																
0.30	E	9/4/2018	7.0	13(3)	4(3)	0(1)	0(1)	1(1)	1(1)	77.5(1)	49.2(1)	74.8(1)	25.6(3)	0.00(5)	225(3)	24
FISH CREEK (19-026-000)																
Year: 2018																
0.38	E	7/30/2018	11.0	14(3)	6(3)	1(1)	2(1)	2(3)	5(3)	57.0(1)	23.1(3)	58.6(1)	28.1(3)	0.00(5)	370(3)	30
PLUM CREEK (19-027-000)																
Year: 2018																
3.70	E	9/19/2018	4.0	14(5)	4(3)	2(3)	2(3)	3(5)	4(3)	88.3(1)	19.8(3)	86.5(1)	30.6(3)	0.00(5)	62(1)	36
0.15	E	9/19/2018	13.0	21(5)	5(3)	1(1)	3(3)	3(3)	4(3)	51.2(3)	34.5(1)	55.8(1)	48.5(5)	0.15(5)	634(3)	36
TRIB. TO PLUM CK.(2.77)@ SUNNYBROOK RD (19-027-001)																
Year: 2018																
0.35	E	8/16/2018	4.0	7(3)	3(3)	1(1)	0(1)	1(1)	2(1)	94.8(1)	4.9(5)	58.3(1)	4.4(1)	0.00(5)	66(1)	24
BREAKNECK CREEK (19-028-000)																
Year: 2018																
18.70	E	9/6/2018	4.0	14(5)	3(3)	2(3)	1(1)	4(5)	4(3)	26.9(5)	18.6(3)	49.4(3)	68.6(5)	0.00(5)	228(3)	44
BRIMFIELD DITCH (19-028-001)																
Year: 2018																
0.10	E	7/25/2018	5.0	13(5)	2(1)	0(1)	1(1)	2(3)	2(1)	35.7(3)	16.4(3)	54.3(3)	65.7(5)	0.00(5)	180(3)	34
WAHOO DITCH (19-028-002)																
Year: 2018																
1.22	E	7/25/2018	4.0	8(3)	3(3)	2(3)	0(1)	1(1)	2(1)	70.2(1)	31.8(1)	44.7(3)	31.4(3)	0.00(5)	518(5)	30
0.39	E	7/25/2018	6.0	9(3)	2(1)	0(1)	1(1)	2(3)	2(1)	84.8(1)	70.0(1)	85.5(1)	18.0(1)	0.00(5)	74(1)	20

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
POTTER CREEK (19-028-005)																
Year: 2018																
1.47	E	7/24/2018	3.0	9(3)	1(1)	0(1)	0(1)	1(1)	1(1)	35.7(3)	10.2(5)	82.9(1)	71.5(5)	0.21(5)	456(5)	32
LITTLE CUYAHOGA RIVER (19-030-000)																
Year: 2018																
11.20	E	8/14/2018	17.0	14(3)	5(3)	1(1)	0(1)	1(1)	2(1)	76.7(1)	23.6(3)	64.8(1)	37.2(3)	0.00(5)	140(1)	24
	E	7/9/2018	17.0	13(3)	5(3)	1(1)	0(1)	1(1)	3(1)	82.2(1)	31.7(3)	67.0(1)	21.6(1)	0.00(5)	198(1)	22
SPRINGFIELD LAKE OUTLET (19-031-000)																
Year: 2018																
0.01	E	7/10/2018	13.0	8(3)	4(3)	1(1)	0(1)	1(1)	2(1)	61.6(1)	16.4(5)	47.9(3)	13.7(1)	0.00(5)	332(3)	28
WINGFOOT LAKE OUTLET (19-032-000)																
Year: 2018																
0.05	E	7/9/2018	7.0	12(3)	5(3)	1(1)	0(1)	1(1)	3(3)	78.2(1)	19.1(3)	72.2(1)	18.3(1)	0.00(5)	218(3)	26
BLACK BROOK (19-033-000)																
Year: 2018																
1.78	E	8/8/2018	12.0	18(5)	5(3)	1(1)	3(3)	6(5)	6(3)	41.4(3)	16.6(3)	41.0(3)	41.7(3)	0.00(5)	309(3)	40
SAWYER BROOK (19-034-000)																
Year: 2018																
0.30	E	8/15/2018	3.0	13(5)	2(1)	1(1)	1(1)	4(5)	3(3)	55.4(3)	9.8(5)	58.7(1)	51.1(5)	0.00(5)	164(3)	38
BRIDGE CREEK (19-035-000)																
Year: 2018																
8.46	E	8/9/2018	14.0	16(5)	3(1)	2(3)	4(3)	5(5)	6(3)	34.4(3)	0.8(5)	37.4(3)	61.5(5)	0.00(5)	512(3)	44

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
TRIB. TO BRIDGE CREEK (RM 0.52) (19-035-001)																
Year: 2018																
0.01	E	8/15/2018	8.0	11(3)	1(1)	0(1)	2(1)	2(3)	1(1)	15.1(5)	0.8(5)	41.3(3)	65.1(5)	0.00(5)	214(3)	36
TRIB. TO BRIDGE CK. (8.85) @ AUBURN RD (19-035-003)																
Year: 2018																
1.40	E	8/8/2018	3.0	7(3)	1(1)	0(1)	0(1)	1(1)	0(1)	58.6(1)	0.0(5)	34.2(3)	48.7(5)	0.00(5)	92(3)	30
WEST BRANCH CUYAHOGA RIVER (19-036-000)																
Year: 2018																
12.30	E	8/8/2018	7.0	15(5)	4(3)	1(1)	1(1)	4(5)	4(3)	38.1(3)	18.5(3)	38.4(3)	56.2(5)	0.00(5)	764(5)	42
DIEDRICH CREEK (19-036-001)																
Year: 2018																
0.60	E	8/7/2018	5.0	10(3)	4(3)	1(1)	2(1)	4(5)	4(3)	48.1(3)	29.3(1)	54.1(3)	38.5(5)	0.00(5)	555(5)	38
BUTTERNUT CREEK (19-037-000)																
Year: 2018																
0.80	E	8/8/2018	4.0	16(5)	3(3)	1(1)	1(1)	3(5)	3(3)	49.2(3)	2.5(5)	27.1(5)	60.2(5)	0.00(5)	240(3)	44
TARE CREEK (19-038-000)																
Year: 2018																
3.10	E	8/8/2018	5.0	13(5)	5(3)	0(1)	0(1)	1(1)	2(1)	48.7(3)	31.4(1)	38.7(3)	42.5(5)	0.00(5)	300(3)	32

Appendix H – Historical Fish Community IBI, MIwb, and Metric Scores

1984 Sampling Results

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
BIG CREEK (19-005-000)																
Year: 1984																
7.80	E	9/5/1984	11.0	4(1)	3(1)	0(1)	0(1)	0(1)	1(1)	30.7(5)	9.5(5)	23.6(5)	0.0(1)	9.45(1)	147(1)	24
	E	8/16/1984	11.0	4(1)	3(1)	1(1)	0(1)	0(1)	2(1)	43.9(3)	1.0(5)	41.6(3)	0.0(1)	0.21(5)	450(3)	26
	D	8/6/1984	11.0	5(1)	4(3)	1(1)	0(1)	0(1)	2(1)	24.3(5)	1.2(5)	22.4(5)	0.0(1)	0.72(3)	525(3)	30
FORD BRANCH BIG CREEK (19-005-001)																
Year: 1984																
0.10	E	9/5/1984	12.0	2(1)	2(1)	0(1)	0(1)	0(1)	0(1)	11.8(1)	0.0(1)	11.8(1)	0.0(1)	0.00(5)	38(1)	16
	E	8/16/1984	12.0	3(1)	1(1)	0(1)	0(1)	0(1)	1(1)	12.5(1)	12.5(1)	0.0(1)	12.5(1)	0.00(1)	18(1)	12
	D	8/6/1984	12.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
MILL CREEK (19-006-000)																
Year: 1984																
5.62	D	9/5/1984	7.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/16/1984	7.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/2/1984	7.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
3.10	D	9/5/1984	15.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	E	8/16/1984	15.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/2/1984	15.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
0.12	D	9/5/1984	19.0	6(1)	4(3)	0(1)	0(1)	0(1)	1(1)	80.2(1)	22.1(3)	74.4(1)	1.2(1)	4.65(1)	30(1)	16
	D	8/16/1984	19.0	2(1)	2(1)	0(1)	0(1)	0(1)	0(1)	66.7(1)	0.0(1)	66.7(1)	0.0(1)	11.11(1)	5(1)	12
	D	8/2/1984	19.0	1(1)	1(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	33.3(1)	66.7(1)	0.0(1)	0.00(1)	0(1)	12
TINKERS CREEK (19-007-000)																
Year: 1984																
28.80	D	9/20/1984	4.0	8(3)	1(1)	0(1)	0(1)	1(1)	1(1)	75.5(1)	6.1(5)	57.1(1)	89.8(5)	2.04(5)	24(1)	26
	D	8/9/1984	4.0	11(5)	1(1)	0(1)	1(1)	2(3)	2(1)	47.8(3)	7.8(5)	51.1(3)	76.7(5)	2.22(3)	94(3)	34
	D	7/17/1984	4.0	10(3)	1(1)	0(1)	1(1)	2(3)	2(1)	63.2(1)	10.5(5)	54.4(3)	75.4(5)	1.75(5)	42(1)	30
26.70	D	9/18/1984	12.0	10(3)	1(1)	0(1)	0(1)	0(1)	1(1)	47.1(3)	16.1(5)	31.0(3)	70.1(5)	12.64(1)	69(1)	26
	D	8/20/1984	12.0	11(3)	1(1)	0(1)	0(1)	0(1)	1(1)	40.2(3)	8.8(5)	31.4(3)	81.4(5)	3.92(1)	92(1)	26

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
26.70	D	7/17/1984	12.0	13(3)	3(1)	0(1)	0(1)	1(1)	1(1)	57.0(1)	14.1(5)	42.2(3)	78.1(5)	12.50(1)	82(1)	24
25.40	D	9/18/1984	18.0	11(3)	1(1)	0(1)	1(1)	0(1)	1(1)	51.2(3)	23.8(3)	23.8(5)	69.1(5)	16.67(1)	62(1)	26
	D	8/15/1984	18.0	11(3)	1(1)	0(1)	0(1)	0(1)	1(1)	56.0(1)	18.4(3)	36.7(3)	68.8(5)	14.68(1)	72(1)	22
	D	7/17/1984	18.0	11(3)	1(1)	0(1)	0(1)	0(1)	1(1)	69.4(1)	36.7(1)	28.6(5)	55.1(5)	25.51(1)	45(1)	22
25.05	D	9/18/1984	19.0	9(3)	1(1)	0(1)	0(1)	1(1)	1(1)	74.4(1)	55.8(1)	19.8(5)	34.9(3)	19.77(1)	33(1)	20
	D	8/15/1984	19.0	10(3)	2(1)	0(1)	0(1)	1(1)	1(1)	64.4(1)	34.5(1)	35.6(3)	58.6(5)	21.84(1)	46(1)	20
	D	7/2/1984	19.0	11(3)	3(1)	0(1)	1(1)	0(1)	1(1)	62.5(1)	44.6(1)	23.2(5)	37.5(3)	53.57(1)	33(1)	20
WOOD CREEK (19-007-001)																
Year: 1984																
1.45	D	9/17/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/27/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	7/9/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
1.20	D	9/17/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/27/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	7/10/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
0.15	D	9/17/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/27/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	7/10/1984	3.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
DEER LICK RUN (19-007-002)																
Year: 1984																
0.76	D	10/3/1984	1.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	9/19/1984	1.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	8/23/1984	1.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
BEAVER MEADOW RUN (19-007-010)																
Year: 1984																
0.11	D	9/20/1984	6.0	8(3)	4(3)	1(1)	0(1)	0(1)	2(1)	74.8(1)	7.5(5)	53.7(3)	16.3(1)	6.12(1)	74(1)	22
	D	9/6/1984	6.0	9(3)	3(3)	0(1)	0(1)	0(1)	1(1)	65.4(1)	20.5(3)	41.7(3)	8.7(1)	7.87(1)	88(1)	20

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
0.11	D	8/15/1984	6.0	8(3)	4(3)	0(1)	0(1)	0(1)	2(1)	78.6(1)	28.6(1)	48.4(3)	6.4(1)	8.73(1)	54(1)	18
TRIB. TO TINKERS CREEK (RM 27.72) (19-007-021)																
Year: 1984																
0.79	D	9/17/1984	4.0	8(3)	3(3)	0(1)	0(1)	0(1)	1(1)	95.8(1)	11.9(5)	85.7(1)	10.7(1)	1.19(3)	14(1)	22
	D	8/27/1984	4.0	6(3)	1(1)	0(1)	0(1)	0(1)	1(1)	93.5(1)	19.6(3)	69.6(1)	13.0(1)	0.00(5)	6(1)	20
	D	8/9/1984	4.0	8(3)	3(3)	0(1)	0(1)	0(1)	1(1)	92.1(1)	13.2(3)	79.0(1)	25.0(3)	0.00(5)	15(1)	24
POND BROOK (19-008-000)																
Year: 1984																
3.70	D	9/17/1984	2.0	6(3)	1(1)	0(1)	0(1)	0(1)	1(1)	96.2(1)	67.9(1)	15.1(5)	26.4(5)	22.64(1)	4(1)	22
	D	8/27/1984	2.0	8(5)	2(1)	0(1)	0(1)	0(1)	1(1)	92.1(1)	64.5(1)	9.2(5)	30.3(5)	10.53(1)	12(1)	24
	D	7/18/1984	2.0	6(3)	2(1)	0(1)	0(1)	0(1)	1(1)	96.7(1)	53.3(1)	33.3(3)	40.0(5)	30.00(1)	2(1)	20
3.60	D	9/17/1984	5.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	100.0(1)	0.0(5)	0.0(1)	28.57(1)	0(1)	16
	D	8/27/1984	5.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12
	D	7/18/1984	5.0	2(1)	1(1)	0(1)	0(1)	0(1)	0(1)	85.7(1)	71.4(1)	14.3(1)	14.3(1)	0.00(1)	2(1)	12
1.41	D	9/25/1984	16.0	10(3)	0(1)	0(1)	0(1)	0(1)	1(1)	38.9(3)	11.1(5)	2.8(5)	75.0(5)	30.56(1)	33(1)	28
	D	8/28/1984	16.0	7(1)	0(1)	0(1)	0(1)	0(1)	1(1)	43.1(3)	36.9(1)	0.0(5)	50.8(5)	27.69(1)	56(1)	22
	D	7/17/1984	16.0	7(1)	0(1)	0(1)	0(1)	0(1)	1(1)	15.3(5)	11.9(5)	0.0(5)	61.0(5)	22.03(1)	75(1)	28
CHIPPEWA CREEK (19-009-000)																
Year: 1984																
0.36	E	9/11/1984	18.0	11(3)	6(3)	1(1)	1(1)	1(1)	3(1)	33.6(3)	5.3(5)	6.3(5)	5.5(1)	0.26(5)	422(3)	32
BRANDYWINE CREEK (19-010-000)																
Year: 1984																
8.00	E	8/29/1984	5.0	13(5)	5(3)	0(1)	0(1)	0(1)	2(1)	64.1(1)	12.4(5)	42.8(3)	46.9(5)	0.00(5)	470(3)	34
	E	8/15/1984	5.0	15(5)	5(3)	2(3)	0(1)	0(1)	2(1)	66.6(1)	7.7(5)	52.1(3)	41.0(5)	0.00(5)	762(5)	38
	E	7/23/1984	5.0	12(5)	3(3)	1(1)	0(1)	0(1)	1(1)	70.3(1)	10.8(5)	56.1(1)	23.5(3)	0.13(5)	562(5)	32
7.02	D	8/29/1984	9.0	11(3)	3(1)	1(1)	0(1)	0(1)	2(1)	89.1(1)	17.6(3)	30.3(3)	55.7(5)	0.25(5)	86(1)	26
	D	8/15/1984	9.0	15(5)	6(3)	2(3)	0(1)	0(1)	3(3)	82.4(1)	10.3(5)	32.3(3)	52.6(5)	0.00(5)	226(3)	38

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
7.02	D	7/23/1984	9.0	11(3)	3(1)	1(1)	0(1)	0(1)	1(1)	92.8(1)	12.0(5)	20.3(5)	82.1(5)	0.42(3)	49(1)	28
4.27	D	9/5/1984	16.0	11(3)	4(3)	1(1)	0(1)	0(1)	2(1)	90.2(1)	51.8(1)	60.1(1)	13.3(1)	0.00(5)	21(1)	20
	D	8/15/1984	16.0	11(3)	5(3)	2(3)	0(1)	0(1)	2(1)	96.5(1)	37.7(1)	68.8(1)	9.1(1)	0.00(5)	10(1)	22
	D	7/24/1984	16.0	8(1)	3(1)	1(1)	0(1)	0(1)	1(1)	93.0(1)	15.8(5)	82.2(1)	15.8(1)	0.00(5)	26(1)	20
MUD BROOK (19-024-000)																
Year: 1984																
8.34	D	9/6/1984	15.0	7(1)	2(1)	0(1)	0(1)	0(1)	1(1)	88.5(1)	30.8(1)	26.9(1)	65.4(1)	0.00(5)	4(1)	16
	D	8/14/1984	15.0	8(3)	0(1)	0(1)	0(1)	0(1)	0(1)	64.3(1)	0.0(5)	2.4(5)	85.7(5)	2.38(5)	22(1)	30
	D	8/1/1984	15.0	10(3)	1(1)	0(1)	0(1)	0(1)	1(1)	84.3(1)	18.6(3)	2.9(5)	77.1(5)	0.00(5)	16(1)	28
POWERS BROOK (19-025-000)																
Year: 1984																
1.37	E	9/6/1984	9.0	16(5)	6(3)	0(1)	0(1)	0(1)	2(1)	65.1(1)	21.9(3)	42.8(3)	38.5(3)	1.80(1)	258(3)	26
	D	8/14/1984	9.0	16(5)	5(3)	0(1)	0(1)	1(1)	2(1)	70.4(1)	17.1(3)	39.4(3)	43.3(5)	1.30(3)	228(3)	30
	E	7/31/1984	9.0	17(5)	6(3)	0(1)	0(1)	0(1)	2(1)	72.4(1)	13.9(5)	46.1(3)	36.3(3)	1.14(3)	282(3)	30
0.30	D	9/6/1984	7.0	11(3)	2(1)	0(1)	0(1)	0(1)	1(1)	78.5(1)	24.1(3)	0.5(5)	72.3(5)	2.05(1)	60(1)	24
	D	8/14/1984	7.0	13(3)	2(1)	0(1)	0(1)	0(1)	1(1)	67.9(1)	16.4(3)	0.6(5)	75.5(5)	0.63(5)	73(1)	28
	D	7/31/1984	7.0	15(5)	3(1)	1(1)	0(1)	0(1)	2(1)	61.5(1)	15.6(5)	1.1(5)	71.5(5)	3.35(1)	99(1)	28
BRIMFIELD DITCH (19-028-001)																
Year: 1984																
0.10	D	7/30/1984	5.0	11(3)	1(1)	0(1)	0(1)	1(1)	1(1)	52.9(3)	15.4(5)	19.2(5)	50.0(5)	3.85(1)	74(1)	28
WAHOO DITCH (19-028-002)																
Year: 1984																
1.22	E	9/10/1984	4.0	5(1)	2(1)	0(1)	0(1)	0(1)	1(1)	100.0(1)	16.2(3)	83.8(1)	59.5(5)	2.70(5)	0(1)	22
	E	8/30/1984	4.0	7(3)	3(3)	1(1)	0(1)	0(1)	2(1)	100.0(1)	21.4(3)	50.0(3)	64.3(5)	0.00(5)	0(1)	28
	D	8/13/1984	4.0	5(1)	2(1)	0(1)	0(1)	0(1)	1(1)	100.0(1)	13.0(3)	69.6(1)	60.9(5)	4.35(5)	0(1)	22
0.39	D	9/10/1984	6.0	3(1)	1(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	0.0(5)	27.1(5)	100.0(5)	0.00(5)	0(1)	28
	E	8/13/1984	6.0	4(1)	1(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	0.0(5)	45.2(3)	100.0(5)	0.00(5)	0(1)	26

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	**IBI**
0.39	D	7/30/1984	6.0	3(1)	1(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	0.0(5)	4.2(5)	100.0(5)	0.00(5)	0(1)	28

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 1984																	
46.25	D	9/11/1984	336.0	15(3)	5(5)	1(1)	1(1)	2(1)	2.7(1)	61.7(1)	52.2(1)	28.0(5)	19.8(1)	1.63(1)	249(3)	24	7.1
	D	9/4/1984	336.0	14(3)	4(5)	2(1)	1(1)	2(1)	4.0(1)	49.5(1)	41.2(1)	33.9(5)	24.0(1)	2.46(1)	289(3)	24	7.0
	D	8/7/1984	336.0	12(3)	3(3)	2(1)	1(1)	1(1)	0.8(1)	74.1(1)	61.3(1)	19.4(5)	17.2(1)	0.80(3)	229(3)	24	6.9
43.80	D	9/11/1984	338.0	15(3)	4(5)	1(1)	1(1)	0(1)	23.8(3)	6.4(5)	4.2(5)	0.8(1)	31.1(3)	0.91(3)	1434(5)	36	8.1
	D	9/4/1984	338.0	13(3)	2(3)	1(1)	1(1)	0(1)	40.2(5)	9.9(5)	4.7(5)	1.0(3)	52.3(3)	1.41(1)	836(5)	36	7.8
	D	8/7/1984	338.0	10(1)	3(3)	1(1)	0(1)	0(1)	52.7(5)	7.1(5)	1.8(5)	2.7(3)	82.1(5)	3.57(1)	1040(5)	36	7.9
BIG CREEK (19-005-000)																	
Year: 1984																	
2.40	D	9/5/1984	35.0	4(1)	1(1)	1(1)	0(1)	0(1)	3.0(1)	21.2(5)	12.1(5)	0.0(1)	9.1(1)	5.05(1)	156(1)	20	3.9
	D	8/16/1984	35.0	4(1)	1(1)	1(1)	0(1)	0(1)	2.2(1)	24.7(5)	6.5(5)	0.0(1)	18.3(1)	0.00(5)	140(1)	24	3.5
	D	8/6/1984	35.0	4(1)	1(1)	1(1)	0(1)	0(1)	5.3(1)	38.6(3)	5.3(5)	0.0(1)	21.1(1)	0.00(5)	70(1)	22	3.3
TINKERS CREEK (19-007-000)																	
Year: 1984																	
23.11	D	9/18/1984	22.0	5(1)	3(3)	0(1)	0(1)	0(1)	0.0(1)	77.8(1)	0.0(5)	13.9(5)	83.3(5)	11.11(1)	12(1)	26	2.4
	D	8/21/1984	22.0	8(1)	3(3)	1(1)	0(1)	1(1)	1.3(1)	54.4(1)	1.3(5)	8.9(5)	89.9(5)	12.66(1)	54(1)	26	4.7
	D	7/11/1984	22.0	11(3)	4(5)	1(1)	0(1)	0(1)	2.5(1)	45.8(3)	7.5(5)	14.2(5)	78.3(5)	3.33(1)	98(1)	32	6.2
22.07	D	9/25/1984	41.0	10(3)	5(5)	1(1)	0(1)	0(1)	1.8(1)	42.9(3)	10.7(5)	8.9(5)	78.6(5)	23.21(1)	48(1)	32	5.0
	D	9/6/1984	41.0	9(1)	5(5)	0(1)	0(1)	0(1)	0.0(1)	68.4(1)	17.5(5)	12.3(5)	70.2(5)	26.32(1)	27(1)	28	4.0
	D	7/11/1984	41.0	11(3)	5(5)	0(1)	0(1)	0(1)	0.0(1)	59.6(1)	16.2(5)	20.2(5)	63.6(5)	13.13(1)	60(1)	30	5.4
16.67	D	9/18/1984	51.0	7(1)	3(3)	1(1)	0(1)	0(1)	3.5(1)	55.2(1)	20.7(3)	8.6(5)	69.0(5)	10.34(1)	39(1)	24	3.4
	D	8/21/1984	51.0	12(3)	5(5)	1(1)	0(1)	1(1)	4.5(1)	57.3(1)	18.0(5)	9.0(5)	73.0(5)	10.11(1)	57(1)	30	4.4
	D	7/10/1984	51.0	11(3)	5(5)	1(1)	0(1)	1(1)	5.7(1)	37.1(3)	11.4(5)	21.4(5)	67.1(5)	4.29(1)	66(1)	32	5.5
13.80	D	9/20/1984	54.0	12(3)	4(5)	1(1)	0(1)	1(1)	20.0(3)	66.9(1)	23.1(3)	13.1(5)	48.8(3)	13.13(1)	80(1)	28	5.8
	D	8/21/1984	54.0	14(3)	4(5)	1(1)	0(1)	1(1)	27.7(3)	64.1(1)	32.0(3)	8.3(5)	36.4(3)	8.74(1)	111(1)	28	5.9
	D	7/11/1984	54.0	12(3)	5(5)	1(1)	0(1)	0(1)	27.6(3)	73.7(1)	32.9(3)	7.2(5)	52.0(3)	7.24(1)	60(1)	28	4.6
12.80	D	9/24/1984	58.0	12(3)	4(5)	1(1)	0(1)	1(1)	20.6(3)	63.9(1)	27.3(3)	9.8(5)	32.5(3)	8.76(1)	105(1)	28	6.2
	D	8/22/1984	58.0	11(3)	4(5)	1(1)	0(1)	0(1)	25.8(3)	73.2(1)	32.1(3)	12.1(5)	33.7(3)	5.26(1)	76(1)	28	5.3

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
12.80	D	7/11/1984	58.0	13(3)	5(5)	1(1)	0(1)	1(1)	29.8(3)	71.1(1)	33.1(3)	4.1(3)	36.4(3)	6.61(1)	52(1)	26	4.9
10.67	D	9/19/1984	61.0	12(3)	5(5)	1(1)	0(1)	0(1)	10.5(1)	74.6(1)	32.8(3)	6.0(5)	43.3(3)	20.90(1)	26(1)	26	4.0
	D	8/21/1984	61.0	10(1)	4(5)	1(1)	0(1)	1(1)	4.4(1)	84.8(1)	27.2(3)	5.4(5)	42.4(3)	2.17(3)	21(1)	26	4.1
	D	7/12/1984	61.0	8(1)	3(3)	1(1)	0(1)	0(1)	19.6(3)	88.2(1)	31.4(3)	7.8(5)	58.8(5)	25.49(1)	9(1)	26	3.0
10.60	D	9/19/1984	67.0	8(1)	2(3)	1(1)	0(1)	0(1)	5.3(1)	87.7(1)	7.0(5)	7.0(5)	57.9(5)	12.28(1)	10(1)	26	2.5
	D	8/21/1984	67.0	10(1)	5(5)	1(1)	0(1)	0(1)	15.4(1)	83.3(1)	19.2(3)	7.7(5)	65.4(5)	3.85(1)	20(1)	26	4.3
	D	7/12/1984	67.0	9(1)	3(3)	1(1)	0(1)	0(1)	20.0(3)	82.9(1)	22.9(3)	11.4(5)	57.1(5)	31.43(1)	9(1)	26	3.1
8.65	D	10/3/1984	69.0	10(1)	2(3)	1(1)	0(1)	1(1)	4.1(1)	82.5(1)	13.4(5)	1.0(3)	18.6(1)	5.15(1)	26(1)	20	4.0
	D	8/22/1984	69.0	5(1)	1(1)	0(1)	0(1)	0(1)	0.0(1)	88.6(1)	11.4(5)	0.0(1)	20.0(1)	0.00(5)	6(1)	20	1.8
	D	7/12/1984	69.0	7(1)	3(3)	1(1)	0(1)	0(1)	29.2(1)	83.3(1)	41.7(1)	4.2(1)	41.7(1)	0.00(1)	6(1)	14	1.9
7.20	D	10/3/1984	77.0	12(3)	3(3)	1(1)	0(1)	1(1)	7.0(1)	88.8(1)	48.8(1)	0.4(1)	9.3(1)	1.94(1)	44(1)	16	3.3
	D	8/22/1984	77.0	12(3)	3(3)	1(1)	0(1)	1(1)	11.1(1)	84.4(1)	15.6(5)	1.1(3)	32.2(3)	6.67(1)	21(1)	24	3.4
	D	7/16/1984	77.0	11(3)	2(3)	1(1)	0(1)	0(1)	13.5(1)	84.9(1)	27.8(3)	3.2(3)	9.5(1)	4.76(1)	28(1)	20	4.0
2.50	D	9/19/1984	91.0	7(1)	1(1)	1(1)	0(1)	0(1)	4.9(1)	78.1(1)	39.0(1)	0.0(1)	39.0(3)	7.32(1)	14(1)	14	3.7
	D	8/22/1984	91.0	6(1)	1(1)	1(1)	0(1)	0(1)	1.3(1)	76.0(1)	13.3(5)	0.0(1)	12.0(1)	6.67(1)	27(1)	16	3.4
	D	7/16/1984	91.0	10(1)	4(5)	1(1)	0(1)	0(1)	1.5(1)	86.6(1)	46.3(1)	1.5(3)	26.9(3)	2.99(3)	14(1)	22	3.6
2.18	D	9/19/1984	94.0	6(1)	1(1)	1(1)	0(1)	0(1)	5.6(1)	44.4(1)	16.7(1)	0.0(1)	33.3(1)	11.11(1)	15(1)	12	3.8
	D	8/22/1984	94.0	4(1)	2(3)	0(1)	0(1)	0(1)	0.0(1)	87.5(1)	6.3(1)	0.0(1)	62.5(1)	25.00(1)	3(1)	14	2.0
	D	7/10/1984	94.0	8(1)	1(1)	1(1)	0(1)	0(1)	2.4(1)	82.9(1)	36.6(1)	2.4(3)	26.8(3)	9.76(1)	10(1)	16	3.1
0.10	D	9/19/1984	96.0	10(1)	3(3)	1(1)	0(1)	0(1)	14.8(1)	83.3(1)	35.2(1)	1.9(3)	42.6(3)	9.26(1)	14(1)	18	3.8
	D	8/23/1984	96.0	14(3)	5(5)	1(1)	0(1)	0(1)	14.3(1)	62.5(1)	35.7(1)	3.6(3)	51.8(3)	32.14(1)	32(1)	22	5.9
	D	7/16/1984	96.0	12(3)	3(3)	1(1)	0(1)	0(1)	37.7(5)	78.3(1)	56.5(1)	2.9(3)	26.1(1)	13.04(1)	22(1)	22	5.3
BRANDYWINE CREEK (19-010-000)																	
Year: 1984																	
3.70	D	9/5/1984	23.0	12(3)	4(5)	1(1)	0(1)	0(1)	65.6(5)	90.1(1)	60.3(1)	0.7(1)	15.9(1)	0.33(5)	45(1)	26	2.5
	D	8/15/1984	23.0	9(3)	1(1)	1(1)	0(1)	0(1)	46.1(5)	95.5(1)	45.1(1)	0.5(1)	10.0(1)	0.00(5)	28(1)	22	1.5
	D	7/23/1984	23.0	7(1)	3(3)	1(1)	0(1)	0(1)	40.7(5)	98.4(1)	40.7(1)	0.0(1)	10.1(1)	1.06(3)	4(1)	20	0.6
1.95	E	9/5/1984	24.0	6(1)	2(3)	1(1)	0(1)	0(1)	39.1(5)	87.4(1)	40.2(1)	0.0(1)	5.8(1)	18.39(1)	18(1)	18	1.8
	E	8/15/1984	24.0	7(1)	3(3)	1(1)	0(1)	0(1)	29.2(3)	76.9(1)	27.7(3)	0.0(1)	13.9(1)	0.00(5)	50(1)	22	3.0
	E	8/1/1984	24.0	6(1)	1(1)	1(1)	0(1)	0(1)	26.6(3)	82.7(1)	22.3(3)	0.0(1)	5.8(1)	0.00(5)	45(1)	20	2.6

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
0.26	D	9/6/1984	27.0	12(3)	3(3)	1(1)	0(1)	0(1)	2.1(1)	60.3(1)	12.7(5)	0.5(1)	9.0(1)	0.53(5)	132(1)	24	5.4
	D	8/15/1984	27.0	10(3)	3(3)	1(1)	0(1)	0(1)	14.9(1)	69.1(1)	6.3(5)	1.1(3)	22.9(1)	0.00(5)	95(1)	26	5.7
	D	8/1/1984	27.0	16(3)	5(5)	1(1)	0(1)	0(1)	9.4(1)	55.2(1)	2.9(5)	0.7(1)	21.4(1)	0.00(5)	244(3)	28	6.8
0.24	D	9/6/1984	27.0	10(3)	3(3)	1(1)	0(1)	0(1)	12.9(1)	86.4(1)	15.9(5)	0.0(1)	4.0(1)	9.13(1)	87(1)	20	4.4
	D	8/15/1984	27.0	12(3)	3(3)	1(1)	0(1)	0(1)	6.4(1)	62.7(1)	8.3(5)	0.3(1)	3.5(1)	0.32(5)	176(1)	24	5.7
	D	8/1/1984	27.0	14(3)	3(3)	1(1)	0(1)	0(1)	11.3(1)	76.4(1)	11.5(5)	0.0(1)	8.9(1)	0.24(5)	147(1)	24	5.4
FURNACE RUN (19-020-000)																	
Year: 1984																	
0.27	E	9/11/1984	20.0	15(3)	1(1)	2(3)	1(1)	3(3)	10.9(1)	37.1(3)	6.2(5)	0.0(1)	14.6(1)	0.00(5)	750(3)	30	7.0
YELLOW CREEK (19-021-000)																	
Year: 1984																	
0.14	E	9/11/1984	31.0	12(3)	1(1)	2(3)	2(3)	1(1)	21.6(3)	23.4(5)	2.8(5)	0.0(1)	37.2(3)	0.46(5)	334(3)	36	6.9
BREAKNECK CREEK (19-028-000)																	
Year: 1984																	
7.00	D	9/10/1984	56.0	19(3)	3(3)	2(3)	1(1)	5(5)	30.7(3)	36.1(3)	22.4(3)	16.6(5)	61.0(5)	0.83(3)	220(3)	40	8.2
	D	8/13/1984	56.0	16(3)	3(3)	2(3)	1(1)	4(3)	24.7(3)	43.0(3)	33.3(3)	17.2(5)	49.1(3)	0.00(5)	237(3)	38	7.5
	D	7/30/1984	56.0	18(3)	5(5)	1(1)	1(1)	4(3)	24.2(3)	27.8(3)	12.8(5)	26.9(5)	59.9(5)	0.44(5)	234(3)	42	8.1
4.00	D	9/10/1984	60.0	13(3)	2(3)	2(3)	1(1)	2(1)	38.4(5)	28.8(3)	19.2(3)	17.8(5)	60.3(5)	0.00(5)	78(1)	38	6.3
	D	8/14/1984	60.0	12(3)	2(3)	1(1)	1(1)	2(1)	35.7(3)	25.0(5)	7.1(5)	19.6(5)	73.2(5)	0.00(5)	63(1)	38	5.2
	D	7/31/1984	60.0	12(3)	3(3)	1(1)	1(1)	2(1)	40.0(5)	23.1(5)	10.8(5)	18.5(5)	70.8(5)	1.54(5)	75(1)	40	5.8
3.08	D	9/10/1984	61.0	14(3)	4(5)	3(3)	1(1)	2(1)	29.3(3)	65.9(1)	17.1(5)	6.1(5)	75.6(5)	1.22(5)	40(1)	38	5.8
	D	8/14/1984	61.0	18(3)	3(3)	2(3)	1(1)	3(3)	26.2(3)	54.1(1)	20.5(3)	18.0(5)	59.8(5)	3.28(1)	84(1)	32	7.1
	D	7/31/1984	61.0	12(3)	3(3)	2(3)	1(1)	1(1)	10.3(1)	67.7(1)	10.3(5)	14.7(5)	75.0(5)	1.47(5)	31(1)	34	6.0
1.70	D	9/10/1984	73.0	13(3)	4(5)	2(3)	0(1)	2(1)	16.6(1)	77.5(1)	12.6(5)	17.2(5)	70.2(5)	1.32(3)	51(1)	34	5.8
	D	8/14/1984	73.0	15(3)	4(5)	3(3)	1(1)	2(1)	10.4(1)	58.4(1)	6.5(5)	26.0(5)	63.6(5)	2.60(3)	48(1)	34	6.4
	D	7/31/1984	73.0	12(3)	3(3)	2(3)	1(1)	1(1)	12.5(1)	58.7(1)	9.6(5)	30.8(5)	56.7(5)	2.88(1)	64(1)	30	6.1

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CONGRESS LAKE OUTLET (FEEDER CANAL) (19-028-004)																	
Year: 1984																	
9.12	D	10/2/1984	39.0	0(1)	0()	0()	0(1)	0()	0.0(1)	0.0(1)	0.0(1)	0.0()	0.0(1)	0.00(1)	0(1)	12	
	D	9/20/1984	39.0	2(1)	0()	0()	0()	0()	0.0(1)	62.5(1)	0.0(1)	37.5()	62.5(1)	0.00(1)	6(1)	12	
	D	8/9/1984	39.0	2(1)	0()	0()	0()	0()	0.0(1)	88.9(1)	0.0(5)	11.1()	88.9(5)	0.00(5)	4(1)	28	
LITTLE CUYAHOGA RIVER (19-030-000)																	
Year: 1984																	
0.30	D	9/11/1984	62.0	12(3)	2(3)	1(1)	1(1)	0(1)	17.7(1)	29.3(3)	17.4(5)	0.2(1)	29.9(3)	0.68(3)	624(3)	28	7.5
	D	9/4/1984	62.0	11(3)	1(1)	1(1)	0(1)	0(1)	6.9(1)	53.5(1)	37.7(1)	0.1(1)	13.1(1)	0.00(5)	567(3)	20	7.2
	D	8/13/1984	62.0	11(3)	2(3)	1(1)	0(1)	0(1)	6.7(1)	35.7(3)	22.5(3)	0.4(1)	14.0(1)	0.00(5)	834(5)	28	7.2

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 1984																	
64.30	A	8/21/1984	178.0	15(3)	3(3)	3(3)	2(3)	17.6(1)	52.8(5)	5.6(5)	5.6(5)	6.4(3)	88.0(5)	1.60(3)	236(3)	42	7.8
	A	7/17/1984	178.0	16(3)	3(3)	2(1)	1(1)	16.8(1)	68.0(5)	4.6(5)	3.6(5)	16.8(5)	78.2(5)	1.02(3)	376(3)	40	8.2
	A	6/26/1984	178.0	19(3)	4(5)	4(3)	1(1)	14.5(1)	50.2(5)	5.8(5)	5.8(5)	22.2(5)	70.5(5)	1.93(3)	390(3)	44	8.9
57.67	A	8/21/1984	208.0	15(3)	5(5)	2(1)	0(1)	2.3(1)	8.1(1)	10.5(5)	66.3(1)	4.7(1)	27.9(3)	1.16(5)	154(1)	28	6.9
	A	7/18/1984	208.0	12(3)	4(5)	2(1)	0(1)	1.7(1)	3.3(1)	2.5(5)	72.3(1)	2.9(1)	19.0(1)	0.00(5)	472(5)	30	7.3
	A	6/25/1984	208.0	13(3)	3(3)	3(3)	0(1)	3.7(1)	15.9(1)	12.2(5)	32.9(1)	11.0(5)	43.9(3)	1.22(5)	144(1)	32	8.4
56.20	A	8/21/1984	290.0	23(5)	7(5)	3(3)	0(1)	6.3(1)	16.7(1)	29.3(1)	32.8(1)	13.2(5)	53.5(3)	1.15(3)	246(3)	32	9.4
	A	7/18/1984	290.0	19(3)	5(5)	3(3)	0(1)	2.2(1)	8.8(1)	18.1(3)	46.2(1)	13.2(5)	38.5(3)	6.59(1)	298(3)	30	8.7
	A	6/25/1984	290.0	18(3)	6(5)	3(3)	0(1)	6.2(1)	12.3(1)	13.7(5)	44.5(1)	17.8(5)	36.3(3)	0.68(5)	252(3)	36	9.0
54.32	A	8/21/1984	293.0	17(3)	4(5)	3(3)	0(1)	25.8(3)	43.2(3)	19.7(3)	29.6(1)	18.2(5)	51.5(3)	3.03(1)	212(3)	34	8.5
	A	7/18/1984	293.0	10(3)	4(5)	2(1)	0(1)	13.8(1)	21.3(1)	13.8(5)	22.5(3)	22.5(5)	53.8(3)	3.75(1)	138(1)	30	7.8
	A	6/26/1984	293.0	12(3)	3(3)	2(1)	0(1)	10.7(1)	64.3(5)	54.5(1)	57.1(1)	11.6(5)	30.4(3)	4.46(1)	102(1)	26	6.4
52.63	A	8/21/1984	309.0	13(3)	4(5)	1(1)	0(1)	0.0(1)	4.8(1)	26.7(3)	40.0(1)	21.9(5)	37.1(3)	3.81(1)	154(1)	26	7.6
	A	7/18/1984	309.0	13(3)	5(5)	1(1)	0(1)	0.0(1)	3.7(1)	11.9(5)	24.8(3)	18.4(5)	56.9(5)	0.92(5)	192(1)	36	8.2
	A	6/27/1984	309.0	12(3)	4(5)	2(1)	0(1)	1.3(1)	5.0(1)	11.3(5)	35.0(1)	18.8(5)	46.3(3)	0.00(5)	142(1)	32	7.4
51.00	A	8/20/1984	323.0	12(3)	4(5)	1(1)	0(1)	0.0(1)	4.3(1)	24.3(3)	58.6(1)	7.9(3)	33.6(3)	2.86(1)	212(3)	26	8.0
	A	7/18/1984	323.0	7(1)	3(3)	1(1)	0(1)	0.0(1)	1.3(1)	13.8(5)	82.2(1)	2.0(1)	15.8(1)	2.63(1)	262(3)	20	6.8
	A	6/27/1984	323.0	11(3)	3(3)	2(1)	0(1)	0.8(1)	10.3(1)	22.2(3)	60.3(1)	4.0(1)	34.9(3)	8.73(1)	196(1)	20	7.5
48.70	A	8/20/1984	331.0	14(3)	4(5)	1(1)	0(1)	0.0(1)	3.1(1)	28.9(1)	22.7(3)	13.4(5)	39.2(3)	5.15(1)	138(1)	26	7.9
	A	7/18/1984	331.0	13(3)	5(5)	1(1)	0(1)	0.0(1)	4.0(1)	30.9(1)	19.1(3)	13.8(5)	47.4(3)	2.63(1)	210(3)	28	7.0
47.60	A	8/20/1984	334.0	14(3)	5(5)	1(1)	0(1)	0.0(1)	9.6(1)	42.6(1)	23.4(3)	7.5(3)	59.6(5)	7.45(1)	108(1)	26	7.3
	A	7/19/1984	334.0	12(3)	5(5)	1(1)	0(1)	0.0(1)	12.5(1)	44.3(1)	20.5(3)	5.7(3)	58.0(5)	10.23(1)	98(1)	26	7.1
	A	7/9/1984	334.0	11(3)	4(5)	1(1)	0(1)	0.0(1)	8.0(1)	14.8(5)	11.4(5)	11.4(5)	55.7(5)	6.82(1)	150(1)	34	7.3
47.20	A	8/20/1984	335.0	11(3)	4(5)	1(1)	0(1)	0.0(1)	18.3(1)	63.3(1)	50.0(1)	5.0(3)	35.0(3)	13.33(1)	44(1)	22	6.4
	A	7/19/1984	335.0	10(3)	5(5)	1(1)	0(1)	0.0(1)	24.6(1)	52.5(1)	49.2(1)	3.3(1)	37.7(3)	8.20(1)	58(1)	20	5.7
	A	7/9/1984	335.0	12(3)	4(5)	1(1)	0(1)	0.0(1)	15.7(1)	49.0(1)	33.3(1)	4.9(1)	55.9(5)	9.80(1)	104(1)	22	7.1
45.50	A	8/22/1984	336.0	7(1)	3(3)	0(1)	0(1)	0.0(1)	0.0(1)	6.0(5)	10.5(5)	3.7(1)	78.4(5)	0.75(5)	252(3)	32	6.2
	A	7/19/1984	336.0	9(1)	6(5)	0(1)	0(1)	0.0(1)	0.0(1)	9.2(5)	38.5(1)	10.1(5)	46.8(3)	0.00(5)	198(1)	30	6.9
	A	6/28/1984	336.0	7(1)	3(3)	0(1)	0(1)	0.0(1)	0.0(1)	4.3(5)	13.0(5)	5.8(3)	77.0(5)	0.00(5)	266(3)	34	7.1

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
45.10	A	8/22/1984	337.0	6(1)	4(5)	0(1)	0(1)	0.0(1)	0.0(1)	9.5(5)	17.2(3)	6.9(3)	67.2(5)	1.72(3)	210(3)	32	6.7
	A	7/19/1984	337.0	6(1)	3(3)	0(1)	0(1)	0.0(1)	0.0(1)	7.7(5)	28.2(1)	3.9(1)	65.4(5)	1.28(5)	144(1)	26	6.5
	A	6/28/1984	337.0	10(3)	5(5)	0(1)	0(1)	0.0(1)	0.0(1)	13.3(5)	11.3(5)	13.9(5)	73.5(5)	2.65(1)	262(3)	36	7.8
42.60	A	8/22/1984	340.0	12(3)	2(3)	2(1)	0(1)	1.1(1)	23.4(1)	34.3(1)	35.4(1)	6.3(3)	33.1(3)	5.71(1)	230(3)	22	7.1
	A	8/8/1984	340.0	14(3)	5(5)	1(1)	0(1)	0.0(1)	49.8(3)	20.8(3)	27.1(3)	3.4(1)	65.2(5)	1.93(3)	328(3)	32	7.1
	A	7/12/1984	340.0	13(3)	2(3)	1(1)	0(1)	0.0(1)	36.1(3)	18.4(3)	36.1(1)	3.8(1)	52.5(3)	1.27(3)	258(3)	26	7.9
40.40	A	8/22/1984	403.0	13(3)	3(3)	1(1)	1(1)	0.0(1)	28.3(3)	35.9(1)	23.5(3)	0.7(1)	54.5(5)	4.14(1)	186(1)	24	7.2
	A	8/8/1984	403.0	9(1)	0(1)	1(1)	1(1)	0.0(1)	59.3(5)	35.2(1)	33.0(1)	0.0(1)	56.0(5)	0.00(5)	118(1)	24	6.0
	A	7/12/1984	403.0	11(3)	1(1)	1(1)	1(1)	0.0(1)	23.9(1)	31.8(1)	31.8(1)	1.1(1)	38.6(3)	1.14(5)	120(1)	20	6.2
36.52	A	8/22/1984	476.0	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12	
	A	8/8/1984	476.0	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12	
	A	7/12/1984	476.0	1(1)	1(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	100.0(1)	0.00(1)	2(1)	12	
33.20	A	8/22/1984	480.0	1(1)	0(1)	0(1)	0(1)	0.0(1)	100.0(1)	0.0(1)	0.0(1)	0.0(1)	100.0(1)	0.00(1)	2(1)	12	
	A	8/8/1984	480.0	1(1)	1(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	100.0(1)	0.00(1)	2(1)	12	
	A	7/10/1984	480.0	1(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	100.0 (1)	0.0(1)	0.0(1)	0.00(1)	12(1)	12	0.9
26.50	A	8/27/1984	499.0	1(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	100.0 (1)	0.0(1)	0.0(1)	0.00(1)	2(1)	12	
	A	8/7/1984	499.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	7.7(1)	15.4(1)	100.0 (1)	0.0(1)	0.0(1)	7.69(1)	22(1)	12	2.6
	A	7/17/1984	499.0	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12	
24.10	A	8/27/1984	555.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	41.2(1)	58.8(1)	94.1(1)	0.0(1)	0.0(1)	0.00(1)	14(1)	12	3.1
	A	7/26/1984	555.0	5(1)	1(1)	1(1)	0(1)	0.0(1)	42.9(1)	57.1(1)	57.1(1)	7.1(1)	7.1(1)	28.57(1)	12(1)	12	3.3
	A	7/10/1984	555.0	2(1)	0(1)	1(1)	0(1)	0.0(1)	33.3(1)	33.3(1)	100.0 (1)	0.0(1)	0.0(1)	0.00(1)	4(1)	12	1.0
20.80	A	8/27/1984	583.0	9(1)	2(3)	1(1)	0(1)	0.0(1)	41.0(3)	78.7(1)	63.9(1)	0.0(1)	18.0(1)	3.28(3)	26(1)	18	3.0
	A	7/26/1984	583.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	12.0(1)	52.0(1)	32.0(1)	8.0(1)	8.0(1)	4.00(5)	24(1)	16	5.6
	A	7/10/1984	583.0	5(1)	1(1)	1(1)	0(1)	0.0(1)	11.1(1)	18.5(3)	96.3(1)	0.0(1)	3.7(1)	7.41(3)	44(1)	16	3.7
17.30	A	10/15/1984	597.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	19.1(1)	38.1(1)	95.2(1)	4.8(1)	0.0(1)	0.00(1)	26(1)	12	3.5
	A	8/28/1984	597.0	7(1)	3(3)	0(1)	0(1)	0.0(1)	0.0(1)	45.5(1)	45.5(1)	12.1(5)	36.4(3)	12.12(1)	36(1)	20	5.1
	A	7/26/1984	597.0	5(1)	3(3)	0(1)	0(1)	0.0(1)	0.0(1)	37.1(1)	74.3(1)	0.0(1)	25.7(1)	8.57(1)	44(1)	14	4.5
	A	7/11/1984	597.0	6(1)	2(3)	1(1)	0(1)	0.0(1)	4.9(1)	51.2(1)	73.2(1)	2.4(1)	22.0(1)	17.07(1)	40(1)	14	4.6
15.61	A	10/15/1984	698.0	5(1)	0(1)	1(1)	0(1)	0.0(1)	11.1(1)	18.5(3)	88.9(1)	0.0(1)	3.7(1)	33.33(1)	44(1)	14	4.5

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
15.61	A	8/28/1984	698.0	6(1)	1(1)	1(1)	0(1)	0.0(1)	21.7(1)	56.5(1)	60.9(1)	0.0(1)	26.1(1)	8.70(1)	20(1)	12	3.4
	A	8/8/1984	698.0	3(1)	1(1)	1(1)	0(1)	0.0(1)	14.3(1)	35.7(1)	92.9(1)	0.0(1)	7.1(1)	0.00(5)	36(1)	16	3.7
	A	7/11/1984	698.0	6(1)	2(3)	1(1)	0(1)	0.0(1)	11.1(1)	33.3(1)	66.7(1)	0.0(1)	29.6(1)	3.70(1)	33(1)	14	4.2
13.08	A	10/15/1984	707.0	4(1)	1(1)	1(1)	0(1)	0.0(1)	4.6(1)	16.7(3)	98.5(1)	0.0(1)	1.5(1)	9.09(1)	110(1)	14	4.7
	A	8/28/1984	707.0	6(1)	3(3)	1(1)	0(1)	0.0(1)	14.3(1)	79.1(1)	36.3(1)	0.0(1)	60.4(5)	1.10(5)	38(1)	22	3.9
	A	8/8/1984	707.0	6(1)	2(3)	1(1)	0(1)	0.0(1)	10.8(1)	35.1(1)	81.1(1)	8.1(3)	8.1(1)	8.11(1)	48(1)	16	4.4
	A	7/11/1984	707.0	5(1)	1(1)	1(1)	0(1)	0.0(1)	4.3(1)	55.7(1)	80.0(1)	0.0(1)	14.3(1)	2.86(3)	62(1)	14	3.8
11.33	A	10/15/1984	730.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	36.0(1)	40.0(1)	96.0(1)	0.0(1)	0.0(1)	36.00(1)	30(1)	12	3.4
	A	8/28/1984	730.0	4(1)	1(1)	1(1)	0(1)	0.0(1)	12.0(1)	48.0(1)	72.0(1)	0.0(1)	4.0(1)	40.00(1)	26(1)	12	4.5
	A	8/8/1984	730.0	4(1)	1(1)	1(1)	0(1)	0.0(1)	17.7(1)	41.2(1)	88.2(1)	0.0(1)	5.9(1)	5.88(1)	20(1)	12	4.5
	A	7/11/1984	730.0	4(1)	1(1)	1(1)	0(1)	0.0(1)	12.1(1)	24.2(3)	87.9(1)	0.0(1)	3.0(1)	0.00(5)	50(1)	18	4.4
9.70	A	10/15/1984	744.0	3(1)	1(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	57.1(1)	0.0(1)	14.3(1)	57.14(1)	14(1)	12	3.4
	A	8/28/1984	744.0	4(1)	1(1)	1(1)	0(1)	0.0(1)	29.4(3)	52.9(1)	91.2(1)	0.0(1)	2.9(1)	5.88(3)	32(1)	16	3.9
	A	8/8/1984	744.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	20.8(1)	29.2(1)	95.8(1)	0.0(1)	0.0(1)	0.00(1)	34(1)	12	4.5
	A	7/16/1984	744.0	4(1)	2(3)	1(1)	0(1)	0.0(1)	9.7(1)	35.5(1)	90.3(1)	0.0(1)	9.7(1)	6.45(3)	40(1)	16	3.8
7.30	A	10/16/1984	749.0	2(1)	0(1)	1(1)	0(1)	0.0(1)	3.1(1)	3.1(5)	96.9(1)	0.0(1)	0.0(1)	9.38(1)	62(1)	16	2.8
	A	8/23/1984	749.0	5(1)	1(1)	2(1)	0(1)	0.0(1)	1.7(1)	20.7(3)	94.8(1)	3.5(1)	1.7(1)	3.45(3)	92(1)	16	4.9
	A	7/25/1984	749.0	2(1)	1(1)	0(1)	0(1)	0.0(1)	0.0(1)	16.0(1)	96.0(1)	0.0(1)	4.0(1)	28.00(1)	42(1)	12	3.4
	A	7/5/1984	749.0	7(1)	2(3)	1(1)	0(1)	0.0(1)	22.1(1)	33.8(1)	87.0(1)	1.3(1)	7.8(1)	6.49(1)	102(1)	14	5.6
7.10	A	10/16/1984	786.0	3(1)	1(1)	1(1)	0(1)	0.0(1)	12.2(1)	14.6(5)	97.6(1)	0.0(1)	2.4(1)	31.71(1)	70(1)	16	4.6
	A	8/23/1984	786.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	7.0(1)	30.2(1)	100.0 (1)	0.0(1)	0.0(1)	0.00(5)	60(1)	16	4.5
	A	7/25/1984	786.0	2(1)	1(1)	0(1)	0(1)	0.0(1)	0.0(1)	22.2(3)	97.2(1)	0.0(1)	2.8(1)	11.11(1)	56(1)	14	3.8
	A	7/5/1984	786.0	3(1)	1(1)	1(1)	0(1)	0.0(1)	36.4(3)	75.0(1)	97.7(1)	0.0(1)	2.3(1)	15.91(1)	22(1)	14	3.0

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
BIG CREEK (19-005-000)																	
Year: 1984																	
0.23	A	8/28/1984	37.0	1(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(5)	100.0 (1)	0.0(1)	0.0(1)	0.00(5)	270(3)	22	4.5
	A	8/8/1984	37.0	1(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	90.0(1)	100.0 (1)	0.0(1)	0.0(1)	0.00(1)	3(1)	12	
	A	7/16/1984	37.0	1(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	17.7(3)	100.0 (1)	0.0(1)	0.0(1)	5.88(5)	47(1)	18	3.5
BREAKNECK CREEK (19-028-000)																	
Year: 1984																	
0.05	A	7/18/1984	79.0	13(3)	3(3)	2(1)	1(1)	12.1(1)	22.4(1)	37.9(1)	36.2(1)	17.2(5)	44.8(3)	0.00(5)	120(1)	26	7.8
	A	6/25/1984	79.0	9(1)	2(3)	2(1)	1(1)	2.7(1)	62.2(5)	28.4(1)	25.7(3)	9.5(3)	64.9(5)	2.70(3)	177(1)	28	6.2

1985 Sampling Results

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1985																	
42.60	A	10/2/1985	340.0	18(3)	5(5)	2(1)	0(1)	0.9(1)	18.1(1)	28.0(1)	34.9(1)	17.7(5)	39.7(3)	0.00(5)	334(3)	30	8.5
40.40	A	10/2/1985	403.0	9(1)	0(1)	1(1)	1(1)	0.0(1)	36.0(3)	63.2(1)	49.1(1)	0.0(1)	25.0(1)	0.88(3)	168(1)	16	5.3
	A	8/27/1985	403.0	11(3)	1(1)	2(1)	1(1)	1.4(1)	48.2(3)	51.9(1)	32.3(1)	0.0(1)	35.4(3)	3.37(1)	286(3)	20	7.4
	A	7/31/1985	403.0	10(3)	1(1)	2(1)	1(1)	0.7(1)	55.3(5)	50.0(1)	44.0(1)	0.0(1)	40.7(3)	3.33(1)	150(1)	20	5.8
39.70	A	10/2/1985	433.0	10(3)	1(1)	2(1)	1(1)	1.1(1)	42.2(3)	83.4(1)	70.4(1)	0.0(1)	18.1(1)	1.44(3)	92(1)	18	5.6
	A	8/27/1985	433.0	12(3)	2(3)	1(1)	1(1)	0.0(1)	46.8(3)	69.4(1)	59.0(1)	0.4(1)	29.1(3)	1.44(3)	170(1)	22	6.3
	A	7/31/1985	433.0	8(1)	0(1)	1(1)	1(1)	0.0(1)	50.2(5)	67.8(1)	62.0(1)	0.3(1)	27.5(3)	0.68(3)	190(1)	20	5.6
36.52	A	10/2/1985	476.0	6(1)	0(1)	1(1)	0(1)	0.0(1)	17.9(1)	91.7(1)	17.6(3)	0.0(1)	4.9(1)	1.85(3)	54(1)	16	3.1
	A	8/27/1985	476.0	3(1)	1(1)	1(1)	0(1)	0.0(1)	85.7(1)	85.7(1)	85.7(1)	0.0(1)	7.1(1)	57.14(1)	4(1)	12	
	A	7/31/1985	476.0	3(1)	1(1)	1(1)	0(1)	0.0(1)	89.7(5)	100.0 (1)	89.7(1)	0.0(1)	2.6(1)	48.72(1)	0(1)	16	
33.20	A	10/2/1985	480.0	7(1)	0(1)	2(1)	0(1)	1.0(1)	45.5(3)	56.6(1)	40.4(1)	0.0(1)	40.4(3)	11.11(1)	86(1)	16	4.6
	A	8/27/1985	480.0	9(1)	0(1)	2(1)	0(1)	1.0(1)	75.8(5)	76.8(1)	70.7(1)	0.0(1)	17.2(1)	15.15(1)	46(1)	16	4.5
	A	7/31/1985	480.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	53.3(5)	96.1(1)	80.5(1)	0.0(1)	3.9(1)	57.14(1)	6(1)	16	1.2
26.50	A	10/2/1985	499.0	12(3)	1(1)	1(1)	0(1)	0.0(1)	40.8(3)	82.0(1)	40.3(1)	0.0(1)	10.2(1)	7.77(1)	74(1)	16	4.2
	A	7/31/1985	499.0	5(1)	0(1)	1(1)	0(1)	0.0(1)	56.5(5)	87.0(1)	58.7(1)	0.0(1)	2.2(1)	15.22(1)	12(1)	16	2.7
24.10	A	10/2/1985	555.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	30.8(3)	90.4(1)	52.1(1)	0.0(1)	2.7(1)	6.16(1)	28(1)	14	3.5
	A	8/27/1985	555.0	10(3)	0(1)	1(1)	0(1)	0.0(1)	28.1(3)	65.8(1)	45.2(1)	0.0(1)	4.1(1)	10.27(1)	100(1)	16	5.9
	A	7/31/1985	555.0	6(1)	0(1)	1(1)	0(1)	0.0(1)	50.4(5)	93.5(1)	52.9(1)	0.0(1)	0.8(1)	13.82(1)	16(1)	16	3.0
20.80	A	10/2/1985	583.0	14(3)	2(3)	1(1)	0(1)	0.0(1)	62.1(5)	92.8(1)	72.9(1)	0.0(1)	6.6(1)	11.45(1)	24(1)	20	3.8
	A	8/27/1985	583.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	53.3(5)	72.0(1)	52.0(1)	1.3(1)	16.0(1)	6.67(1)	42(1)	16	3.4
	A	7/31/1985	583.0	7(1)	1(1)	1(1)	0(1)	0.0(1)	61.6(5)	80.6(1)	59.9(1)	0.0(1)	10.6(1)	4.64(1)	92(1)	16	4.2
17.30	A	10/3/1985	597.0	9(1)	0(1)	1(1)	0(1)	0.0(1)	19.8(1)	43.8(1)	82.1(1)	0.0(1)	1.5(1)	0.61(3)	370(3)	16	6.8
15.61	A	10/3/1985	698.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	63.7(5)	90.9(1)	84.1(1)	0.0(1)	0.5(1)	2.02(3)	72(1)	18	4.9
13.08	A	10/3/1985	707.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	13.4(1)	17.3(3)	97.7(1)	0.0(1)	1.1(1)	1.14(3)	582(5)	20	6.5
11.33	A	10/3/1985	730.0	6(1)	0(1)	1(1)	0(1)	0.0(1)	24.6(3)	32.6(1)	91.7(1)	0.0(1)	0.3(1)	4.92(1)	520(5)	18	6.5
9.70	A	10/3/1985	744.0	8(1)	2(3)	1(1)	0(1)	0.0(1)	42.8(3)	75.9(1)	84.9(1)	0.0(1)	1.2(1)	11.45(1)	80(1)	16	5.1
7.30	A	10/3/1985	749.0	2(1)	0(1)	1(1)	0(1)	0.0(1)	48.0(1)	64.0(1)	84.0(1)	0.0(1)	0.0(1)	20.00(1)	18(1)	12	3.4
7.10	A	10/3/1985	786.0	5(1)	1(1)	1(1)	0(1)	0.0(1)	13.2(1)	23.1(3)	81.3(1)	0.0(1)	2.2(1)	1.10(5)	140(1)	18	5.9

1986 Sampling Results

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 1986																	
43.80	E	9/2/1986	338.0	13(3)	3(3)	1(1)	0(1)	1(1)	5.7(1)	5.4(5)	3.0(5)	2.2(3)	8.5(1)	0.00(5)	717(3)	32	6.5
	E	8/6/1986	338.0	13(3)	4(5)	0(1)	1(1)	0(1)	6.4(1)	11.3(5)	12.7(5)	0.8(1)	10.8(1)	0.75(3)	1059(5)	32	7.5
	E	7/16/1986	338.0	10(1)	2(3)	0(1)	0(1)	0(1)	20.4(3)	15.4(5)	2.1(5)	0.4(1)	32.5(3)	0.83(3)	554(3)	30	6.8

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1986																	
42.60	A	9/15/1986	340.0	17(3)	5(5)	1(1)	1(1)	0.0(1)	27.0(3)	46.5(1)	59.6(1)	10.0(3)	23.9(1)	3.04(1)	246(3)	24	7.4
	A	8/19/1986	340.0	21(5)	6(5)	2(1)	0(1)	1.2(1)	27.1(3)	36.0(1)	42.5(1)	4.7(1)	44.8(3)	1.18(3)	434(5)	30	8.1
	A	7/30/1986	340.0	14(3)	3(3)	2(1)	0(1)	0.4(1)	37.1(3)	40.2(1)	43.2(1)	2.6(1)	48.9(3)	0.87(3)	274(3)	24	6.5
40.40	A	9/15/1986	403.0	12(3)	0(1)	1(1)	1(1)	0.0(1)	26.4(3)	42.1(1)	31.0(1)	0.5(1)	34.3(3)	1.39(3)	250(3)	22	6.5
	A	8/19/1986	403.0	12(3)	3(3)	1(1)	1(1)	0.0(1)	31.9(3)	44.8(1)	44.6(1)	0.0(1)	33.4(3)	0.76(3)	436(5)	26	7.1
	A	7/30/1986	403.0	11(3)	1(1)	2(1)	1(1)	1.6(1)	33.7(3)	48.6(1)	38.8(1)	0.0(1)	37.7(3)	3.14(1)	262(3)	20	6.3
39.70	A	9/15/1986	433.0	10(3)	1(1)	1(1)	1(1)	0.0(1)	50.2(5)	74.7(1)	69.2(1)	0.0(1)	17.0(1)	1.38(3)	146(1)	20	5.5
	A	8/19/1986	433.0	14(3)	1(1)	2(1)	1(1)	1.1(1)	27.9(3)	64.5(1)	66.2(1)	0.2(1)	16.8(1)	1.05(3)	338(3)	20	7.0
	A	7/30/1986	433.0	10(3)	1(1)	2(1)	1(1)	3.5(1)	41.4(3)	57.5(1)	47.1(1)	0.0(1)	34.5(3)	3.45(1)	106(1)	18	6.4
36.52	A	9/15/1986	476.0	8(1)	0(1)	2(1)	0(1)	1.4(1)	74.2(5)	88.3(1)	69.0(1)	0.5(1)	7.0(1)	2.35(3)	50(1)	18	3.7
	A	8/19/1986	476.0	10(3)	1(1)	2(1)	0(1)	0.6(1)	56.3(5)	86.9(1)	55.1(1)	0.6(1)	10.2(1)	5.68(1)	46(1)	18	4.3
	A	7/30/1986	476.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	69.3(5)	94.7(1)	68.0(1)	0.7(1)	2.0(1)	20.67(1)	16(1)	16	2.0
33.20	A	9/15/1986	480.0	9(1)	0(1)	1(1)	0(1)	0.0(1)	69.3(5)	92.6(1)	83.3(1)	0.4(1)	3.1(1)	6.61(1)	38(1)	16	3.5
	A	8/19/1986	480.0	10(3)	2(3)	1(1)	0(1)	0.0(1)	77.3(5)	93.3(1)	84.0(1)	1.8(1)	1.3(1)	1.78(3)	30(1)	22	3.9
	A	7/30/1986	480.0	10(3)	1(1)	1(1)	0(1)	0.0(1)	45.3(3)	83.8(1)	78.6(1)	2.6(1)	6.0(1)	6.84(1)	38(1)	16	4.0
26.50	A	9/16/1986	499.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	47.7(3)	70.9(1)	58.3(1)	0.0(1)	4.6(1)	5.30(1)	70(1)	14	4.3
	A	8/20/1986	499.0	9(1)	2(3)	1(1)	0(1)	0.0(1)	33.9(3)	58.9(1)	54.5(1)	0.9(1)	9.8(1)	6.25(1)	73(1)	16	5.6
	A	7/31/1986	499.0	9(1)	2(3)	1(1)	0(1)	0.0(1)	63.6(5)	78.5(1)	63.6(1)	2.5(1)	11.6(1)	34.71(1)	41(1)	18	3.7
24.10	A	9/16/1986	555.0	11(3)	1(1)	1(1)	0(1)	0.0(1)	33.5(3)	68.0(1)	60.8(1)	0.9(1)	1.6(1)	3.45(1)	162(1)	16	5.9
	A	8/20/1986	555.0	12(3)	4(5)	1(1)	0(1)	0.0(1)	41.8(3)	86.5(1)	68.8(1)	3.6(1)	7.8(1)	2.84(1)	30(1)	20	4.3
	A	7/31/1986	555.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	24.1(1)	75.4(1)	61.0(1)	0.5(1)	8.7(1)	11.79(1)	76(1)	12	4.9
20.80	A	9/16/1986	583.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	29.5(3)	71.2(1)	81.3(1)	3.6(1)	7.9(1)	2.88(1)	77(1)	14	5.5
	A	8/20/1986	583.0	11(3)	4(5)	1(1)	0(1)	0.0(1)	21.0(1)	58.1(1)	62.9(1)	9.7(3)	12.9(1)	9.68(1)	50(1)	20	5.7
	A	7/31/1986	583.0	9(1)	3(3)	1(1)	0(1)	0.0(1)	58.8(5)	72.2(1)	66.0(1)	9.3(3)	18.6(1)	6.19(1)	52(1)	20	4.6

1987 Sampling Results

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 1987																	
42.60	A	9/9/1987	340.0	16(3)	5(5)	1(1)	0(1)	0.0(1)	8.2(1)	34.8(1)	38.3(1)	1.1(1)	49.1(3)	0.84(3)	1246(5)	26	7.8
	A	7/28/1987	340.0	18(3)	5(5)	1(1)	0(1)	0.0(1)	23.2(1)	26.1(3)	30.1(1)	2.3(1)	38.3(3)	1.39(3)	848(5)	28	7.9
	A	6/15/1987	340.0	14(3)	3(3)	2(1)	0(1)	1.6(1)	33.0(3)	34.1(1)	29.1(1)	2.3(1)	36.8(3)	1.16(3)	340(3)	24	7.0
40.40	A	9/9/1987	403.0	13(3)	2(3)	2(1)	0(1)	0.3(1)	32.4(3)	66.4(1)	55.9(1)	0.0(1)	39.1(3)	2.86(3)	212(3)	24	6.1
	A	7/28/1987	403.0	11(3)	1(1)	2(1)	0(1)	0.9(1)	49.8(3)	54.5(1)	47.2(1)	0.4(1)	33.6(3)	1.70(3)	214(3)	22	5.7
	A	6/15/1987	403.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	38.1(3)	63.2(1)	45.2(1)	0.0(1)	27.1(3)	0.00(5)	114(1)	20	5.5
39.70	A	9/9/1987	433.0	11(3)	0(1)	2(1)	0(1)	0.3(1)	30.5(3)	57.9(1)	44.2(1)	0.0(1)	35.5(3)	1.05(3)	320(3)	22	5.9
	A	7/28/1987	433.0	12(3)	1(1)	1(1)	1(1)	0.0(1)	41.7(3)	59.2(1)	54.3(1)	0.5(1)	31.4(3)	1.79(3)	182(1)	20	6.1
	A	6/15/1987	433.0	13(3)	1(1)	2(1)	1(1)	0.4(1)	54.2(5)	72.4(1)	67.6(1)	0.0(1)	21.8(1)	0.00(5)	124(1)	22	5.9
36.52	A	9/9/1987	476.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	40.6(3)	79.7(1)	39.1(1)	0.0(1)	14.4(1)	0.50(5)	82(1)	18	4.1
	A	7/28/1987	476.0	9(1)	0(1)	2(1)	0(1)	1.7(1)	43.7(3)	70.6(1)	37.8(1)	0.0(1)	12.6(1)	3.36(1)	70(1)	14	4.7
	A	6/15/1987	476.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	62.7(5)	96.0(1)	70.7(1)	0.0(1)	2.0(1)	3.33(1)	12(1)	16	1.5
33.20	A	9/9/1987	480.0	9(1)	2(3)	1(1)	0(1)	0.0(1)	56.4(5)	75.0(1)	58.1(1)	0.0(1)	13.4(1)	0.00(5)	86(1)	22	4.3
	A	7/28/1987	480.0	12(3)	1(1)	2(1)	1(1)	0.7(1)	71.1(5)	85.9(1)	73.2(1)	0.7(1)	12.7(1)	4.93(1)	40(1)	18	3.6
	A	6/15/1987	480.0	5(1)	0(1)	1(1)	0(1)	0.0(1)	85.9(5)	99.3(1)	86.6(1)	0.0(1)	4.0(1)	6.04(1)	2(1)	16	
26.50	A	9/10/1987	499.0	13(3)	3(3)	1(1)	0(1)	0.0(1)	12.6(1)	68.0(1)	61.2(1)	1.0(1)	19.1(1)	2.27(3)	198(1)	18	6.6
	A	7/29/1987	499.0	13(3)	3(3)	1(1)	0(1)	0.0(1)	19.9(1)	62.0(1)	40.4(1)	0.6(1)	31.6(3)	0.00(5)	260(3)	24	7.0
	A	6/16/1987	499.0	10(3)	1(1)	1(1)	0(1)	0.0(1)	33.0(3)	76.7(1)	53.1(1)	0.0(1)	6.2(1)	1.55(3)	95(1)	18	5.4
24.10	A	9/10/1987	555.0	13(3)	4(5)	1(1)	0(1)	0.0(1)	23.2(1)	62.5(1)	68.0(1)	1.5(1)	20.1(1)	0.30(5)	246(3)	24	6.7
	A	7/29/1987	555.0	13(3)	3(3)	1(1)	0(1)	0.0(1)	41.7(3)	81.9(1)	66.7(1)	3.2(1)	13.4(1)	0.00(5)	78(1)	22	5.5
	A	6/16/1987	555.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	44.0(3)	78.6(1)	79.7(1)	0.0(1)	3.9(1)	2.20(1)	62(1)	14	4.8
20.80	A	9/10/1987	583.0	10(3)	3(3)	1(1)	0(1)	0.0(1)	25.9(3)	49.1(1)	65.2(1)	9.8(3)	22.3(1)	0.00(5)	114(1)	24	6.6
	A	7/29/1987	583.0	9(1)	2(3)	1(1)	0(1)	0.0(1)	23.6(1)	87.5(1)	83.3(1)	2.8(1)	11.1(1)	4.17(1)	18(1)	14	3.8
	A	6/16/1987	583.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	21.5(1)	76.0(1)	83.5(1)	1.3(1)	2.5(1)	20.25(1)	37(1)	12	4.4
17.30	A	9/10/1987	597.0	15(3)	3(3)	1(1)	0(1)	0.0(1)	11.6(1)	47.3(1)	54.1(1)	2.7(1)	30.8(3)	2.74(1)	154(1)	18	6.3
	A	7/29/1987	597.0	15(3)	4(5)	1(1)	0(1)	0.0(1)	14.4(1)	41.1(1)	47.3(1)	3.4(1)	43.8(3)	2.05(1)	172(1)	20	6.6
	A	6/16/1987	597.0	17(3)	5(5)	1(1)	0(1)	0.0(1)	15.3(1)	42.8(1)	50.4(1)	5.3(3)	36.6(3)	3.05(1)	150(1)	22	7.8
15.61	A	9/10/1987	698.0	12(3)	2(3)	1(1)	0(1)	0.0(1)	15.5(1)	28.7(1)	83.7(1)	2.3(1)	10.9(1)	4.65(1)	184(1)	16	6.0
	A	7/29/1987	698.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	19.1(1)	65.1(1)	49.2(1)	0.0(1)	19.1(1)	1.59(5)	44(1)	16	5.1

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
15.61	A	6/16/1987	698.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	22.2(1)	54.4(1)	76.7(1)	6.7(3)	6.7(1)	2.22(3)	82(1)	16	4.8
13.08	A	9/10/1987	707.0	13(3)	2(3)	1(1)	0(1)	0.0(1)	7.2(1)	24.3(3)	82.9(1)	0.6(1)	9.4(1)	1.10(3)	274(3)	22	5.7
	A	7/29/1987	707.0	16(3)	4(5)	1(1)	0(1)	0.0(1)	17.9(1)	68.7(1)	62.7(1)	0.0(1)	28.4(3)	1.49(5)	42(1)	24	5.1
	A	6/16/1987	707.0	11(3)	2(3)	2(1)	0(1)	0.0(1)	10.7(1)	57.1(1)	69.6(1)	1.8(1)	10.7(1)	5.36(1)	48(1)	16	5.4
12.00	A	9/10/1987	709.0	12(3)	2(3)	1(1)	0(1)	0.0(1)	7.6(1)	38.9(1)	71.0(1)	0.8(1)	25.2(1)	3.05(1)	160(1)	16	5.8
	A	7/29/1987	709.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	27.8(3)	70.4(1)	66.7(1)	0.0(1)	33.3(3)	12.96(1)	32(1)	16	3.6
	A	6/16/1987	709.0	12(3)	3(3)	1(1)	0(1)	0.0(1)	15.1(1)	46.6(1)	64.4(1)	8.2(3)	24.7(1)	4.11(1)	78(1)	18	5.4
11.33	A	9/10/1987	730.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	37.9(3)	63.8(1)	62.1(1)	0.0(1)	25.9(1)	5.17(1)	42(1)	14	5.1
	A	7/30/1987	730.0	7(1)	1(1)	1(1)	0(1)	0.0(1)	30.2(3)	90.7(1)	83.7(1)	2.3(1)	4.7(1)	9.30(1)	8(1)	14	2.5
	A	6/16/1987	730.0	8(1)	0(1)	1(1)	0(1)	0.0(1)	23.5(1)	45.9(1)	41.2(1)	1.2(1)	44.7(3)	0.00(5)	92(1)	18	4.2
9.70	A	9/11/1987	744.0	12(3)	2(3)	1(1)	0(1)	0.0(1)	31.3(3)	50.0(1)	60.4(1)	10.4(5)	14.6(1)	25.00(1)	48(1)	22	6.1
	A	7/30/1987	744.0	7(1)	1(1)	1(1)	0(1)	0.0(1)	25.0(3)	75.0(1)	65.6(1)	3.1(1)	15.6(1)	6.25(3)	16(1)	16	3.0
	A	6/17/1987	744.0	9(1)	2(3)	1(1)	0(1)	0.0(1)	22.0(1)	32.5(1)	35.0(1)	1.6(1)	61.8(5)	3.25(1)	166(1)	18	4.6
7.30	A	9/11/1987	749.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	2.0(1)	16.3(3)	95.9(1)	0.0(1)	4.1(1)	0.00(5)	82(1)	18	2.9
	A	7/30/1987	749.0	4(1)	0(1)	1(1)	0(1)	0.0(1)	9.1(1)	95.5(1)	95.5(1)	0.0(1)	0.0(1)	54.55(1)	2(1)	12	1.1
	A	6/17/1987	749.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	0.8(1)	6.1(5)	25.2(3)	1.5(1)	73.3(5)	1.53(3)	246(3)	26	5.5
7.10	A	9/11/1987	786.0	6(1)	1(1)	1(1)	0(1)	0.0(1)	11.5(1)	18.4(3)	95.4(1)	1.2(1)	1.2(1)	5.75(1)	142(1)	14	5.1
	A	7/30/1987	786.0	6(1)	0(1)	1(1)	0(1)	0.0(1)	20.0(1)	75.0(1)	75.0(1)	10.0(1)	10.0(1)	30.00(1)	10(1)	12	3.1
	A	6/17/1987	786.0	8(1)	2(3)	1(1)	0(1)	0.0(1)	5.4(1)	21.5(3)	34.9(1)	4.0(1)	59.7(5)	4.70(1)	234(3)	22	5.0

1988 Sampling Results

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
CHIPPEWA CREEK (19-009-000)																
Year: 1988																
6.03	E	9/22/1988	6.0	5(1)	3(3)	1(1)	0(1)	0(1)	2(1)	54.9(3)	1.5(5)	23.1(5)	0.1(1)	0.42(3)	1278(5)	30
3.72	E	9/16/1988	9.0	5(1)	3(1)	1(1)	0(1)	0(1)	2(1)	52.9(3)	9.3(5)	12.3(5)	0.1(1)	0.11(3)	2652(5)	28

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1988																	
64.30	D	9/1/1988	178.0	19(3)	4(5)	2(1)	1(1)	5(3)	38.1(5)	6.6(5)	1.3(5)	18.6(5)	78.8(5)	0.44(5)	316(3)	46	8.2
42.60	D	9/1/1988	340.0	11(1)	2(3)	1(1)	0(1)	0(1)	11.8(1)	18.3(3)	26.2(3)	0.1(1)	21.0(1)	0.25(3)	1751(5)	24	8.7
YELLOW CREEK (19-021-000)																	
Year: 1988																	
4.08	E	9/1/1988	23.0	15(3)	0(1)	2(3)	2(3)	3(3)	46.0(5)	38.3(3)	5.1(5)	0.0(1)	38.3(3)	0.00(5)	942(5)	40	
1.85	E	9/1/1988	26.0	18(3)	1(1)	2(3)	3(3)	3(3)	25.8(3)	30.4(3)	11.1(5)	0.0(1)	40.8(3)	0.25(5)	825(5)	38	

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 1988																	
42.60	A	9/26/1988	340.0	18(3)	7(5)	1(1)	0(1)	0.0(1)	22.3(1)	43.9(1)	40.5(1)	4.8(1)	42.4(3)	1.49(3)	302(3)	24	7.1
	A	8/29/1988	340.0	20(3)	7(5)	1(1)	0(1)	0.0(1)	12.6(1)	40.9(1)	40.5(1)	4.1(1)	38.8(3)	0.41(5)	582(5)	28	9.0
	A	7/26/1988	340.0	20(3)	6(5)	2(1)	0(1)	0.2(1)	28.2(3)	41.0(1)	40.3(1)	3.0(1)	46.7(3)	1.23(3)	644(5)	28	7.7
41.00	A	9/26/1988	402.0	12(3)	3(3)	1(1)	0(1)	0.0(1)	45.5(3)	70.3(1)	56.4(1)	0.6(1)	37.6(3)	1.21(3)	98(1)	22	6.0
	A	8/29/1988	402.0	15(3)	3(3)	1(1)	0(1)	0.0(1)	28.3(3)	63.1(1)	56.2(1)	2.7(1)	36.4(3)	1.60(1)	138(1)	20	5.5
	A	7/26/1988	402.0	16(3)	4(5)	1(1)	0(1)	0.0(1)	27.6(3)	65.1(1)	58.3(1)	0.0(1)	35.4(3)	2.60(1)	134(1)	22	6.2
40.40	A	9/26/1988	403.0	11(3)	3(3)	1(1)	0(1)	0.0(1)	61.7(5)	84.2(1)	61.7(1)	0.8(1)	23.3(1)	5.83(1)	38(1)	20	4.7
	A	8/29/1988	403.0	11(3)	2(3)	1(1)	0(1)	0.0(1)	54.1(5)	68.6(1)	57.6(1)	0.6(1)	27.9(3)	0.00(5)	108(1)	26	5.2
	A	7/26/1988	403.0	11(3)	2(3)	1(1)	0(1)	0.0(1)	51.0(5)	76.8(1)	52.5(1)	0.0(1)	31.8(3)	1.01(3)	90(1)	24	5.4
39.70	A	9/26/1988	433.0	10(3)	1(1)	2(1)	0(1)	0.5(1)	60.4(5)	82.3(1)	69.8(1)	0.0(1)	12.5(1)	1.04(3)	68(1)	20	5.1
	A	8/29/1988	433.0	10(3)	2(3)	1(1)	0(1)	0.0(1)	22.8(1)	42.1(1)	72.0(1)	0.0(1)	24.8(1)	0.25(5)	390(3)	22	5.9
	A	7/26/1988	433.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	56.9(5)	73.5(1)	68.1(1)	0.0(1)	12.8(1)	0.98(3)	108(1)	18	5.0
36.52	A	9/26/1988	476.0	14(3)	2(3)	2(1)	1(1)	1.6(1)	54.9(5)	89.4(1)	58.1(1)	0.0(1)	12.6(1)	0.81(3)	52(1)	22	4.3
	A	8/29/1988	476.0	13(3)	1(1)	2(1)	0(1)	0.2(1)	51.1(5)	88.8(1)	53.2(1)	0.2(1)	6.7(1)	0.00(5)	126(1)	22	5.5
	A	7/26/1988	476.0	8(1)	0(1)	2(1)	0(1)	0.5(1)	66.1(5)	90.5(1)	66.4(1)	0.0(1)	6.6(1)	0.00(5)	72(1)	20	4.7
33.20	A	8/29/1988	480.0	11(3)	0(1)	1(1)	0(1)	0.0(1)	28.4(3)	85.1(1)	73.0(1)	0.9(1)	13.9(1)	0.00(5)	136(1)	20	5.1
	A	7/27/1988	480.0	8(1)	0(1)	2(1)	0(1)	0.5(1)	72.1(5)	88.6(1)	73.6(1)	0.0(1)	6.0(1)	0.50(5)	46(1)	20	3.3
26.50	A	8/30/1988	499.0	11(3)	2(3)	1(1)	0(1)	0.0(1)	11.3(1)	70.7(1)	66.3(1)	0.4(1)	25.9(1)	0.36(5)	322(3)	22	6.5
24.10	A	9/27/1988	555.0	12(3)	3(3)	1(1)	0(1)	0.0(1)	24.5(1)	84.8(1)	75.9(1)	0.0(1)	11.3(1)	0.39(5)	78(1)	20	5.7
	A	8/30/1988	555.0	12(3)	3(3)	1(1)	0(1)	0.0(1)	15.9(1)	64.9(1)	47.3(1)	0.0(1)	37.2(3)	0.61(3)	230(3)	22	6.5
20.80	A	9/27/1988	583.0	13(3)	6(5)	1(1)	0(1)	0.0(1)	62.5(5)	76.0(1)	75.0(1)	5.7(3)	18.8(1)	0.00(5)	92(1)	28	5.5
17.30	A	9/27/1988	597.0	17(3)	5(5)	1(1)	0(1)	0.0(1)	12.4(1)	43.7(1)	67.5(1)	0.9(1)	26.6(1)	0.93(3)	364(3)	22	7.9
	A	8/30/1988	597.0	19(3)	7(5)	2(1)	0(1)	0.2(1)	7.7(1)	67.4(1)	67.8(1)	0.4(1)	31.2(3)	0.84(3)	312(3)	24	5.7
15.61	A	9/27/1988	698.0	12(3)	3(3)	1(1)	0(1)	0.0(1)	18.0(1)	57.0(1)	68.0(1)	2.0(1)	24.0(1)	2.00(3)	86(1)	18	5.9
	A	8/30/1988	698.0	11(3)	2(3)	1(1)	0(1)	0.0(1)	9.0(1)	44.4(1)	48.4(1)	1.4(1)	45.7(3)	0.90(3)	248(3)	22	6.1
13.08	A	9/27/1988	707.0	13(3)	5(5)	1(1)	0(1)	0.0(1)	14.7(1)	48.4(1)	56.8(1)	5.3(3)	32.6(3)	1.05(5)	98(1)	26	6.4
	A	8/30/1988	707.0	16(3)	4(5)	1(1)	0(1)	0.0(1)	3.9(1)	55.3(1)	61.2(1)	0.5(1)	34.5(3)	0.49(5)	184(1)	24	5.7
12.00	A	9/27/1988	709.0	6(1)	0(1)	1(1)	0(1)	0.0(1)	26.0(3)	63.5(1)	85.4(1)	0.0(1)	13.5(1)	4.17(1)	70(1)	14	4.8
	A	8/30/1988	709.0	11(3)	3(3)	1(1)	0(1)	0.0(1)	2.9(1)	17.1(3)	72.4(1)	0.2(1)	26.4(1)	0.48(5)	690(5)	26	6.2

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
11.33	A	9/28/1988	730.0	11(3)	3(3)	1(1)	0(1)	0.0(1)	36.4(3)	60.2(1)	69.3(1)	0.0(1)	28.4(3)	2.27(3)	70(1)	22	5.7
	A	8/31/1988	730.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	7.5(1)	14.8(5)	91.0(1)	0.0(1)	9.0(1)	0.87(3)	700(5)	22	6.2
9.70	A	9/28/1988	744.0	13(3)	3(3)	1(1)	0(1)	0.0(1)	25.4(3)	61.0(1)	63.6(1)	0.9(1)	33.1(3)	2.54(1)	92(1)	20	5.6
	A	8/31/1988	744.0	15(3)	2(3)	1(1)	0(1)	0.0(1)	11.7(1)	49.3(1)	79.3(1)	0.0(1)	13.4(1)	0.42(5)	484(5)	24	6.8
7.30	A	9/28/1988	749.0	8(1)	3(3)	1(1)	0(1)	0.0(1)	11.1(1)	38.9(1)	85.2(1)	5.6(3)	9.3(1)	1.85(5)	66(1)	20	4.5
	A	8/31/1988	749.0	7(1)	1(1)	1(1)	0(1)	0.0(1)	1.5(1)	8.2(5)	97.8(1)	0.0(1)	2.2(1)	0.00(5)	248(3)	22	4.8
	A	7/27/1988	749.0	8(1)	2(3)	1(1)	0(1)	0.0(1)	3.2(1)	34.9(1)	76.2(1)	6.4(3)	17.5(1)	4.76(1)	82(1)	16	5.0
7.10	A	9/28/1988	786.0	7(1)	0(1)	1(1)	0(1)	0.0(1)	15.4(1)	35.4(1)	90.8(1)	4.6(1)	3.1(1)	3.08(3)	84(1)	14	5.7
	A	8/31/1988	786.0	11(3)	2(3)	1(1)	0(1)	0.0(1)	1.9(1)	19.3(3)	91.3(1)	0.0(1)	7.5(1)	2.48(1)	260(3)	20	5.0
	A	7/27/1988	786.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	6.4(1)	24.4(3)	83.3(1)	3.9(1)	10.3(1)	1.28(5)	116(1)	18	5.4

OHIO CANAL (ADJACENT TO CUYAHOGA R.) (19-001-007)

Year: 1988

17.20	A	9/30/1988	597.0	11(3)	3(3)	1(1)	0(1)	0.0(1)	5.9(1)	52.9(1)	52.0(1)	10.8(5)	34.3(3)	3.92(1)	92(1)	22	6.8

1991 Sampling Results

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
MILL CREEK (19-006-000)																
Year: 1991																
0.12	E	8/7/1991	19.0	13(3)	7(5)	1(1)	0(1)	0(1)	3(1)	78.3(1)	67.7(1)	13.0(5)	13.7(1)	1.86(1)	105(1)	22
TINKERS CREEK (19-007-000)																
Year: 1991																
28.80	E	9/17/1991	4.0	9(3)	1(1)	0(1)	0(1)	0(1)	1(1)	49.5(3)	33.0(1)	11.9(5)	51.4(5)	0.92(5)	165(3)	30
28.30	E	8/8/1991	4.0	12(5)	3(3)	0(1)	0(1)	1(1)	1(1)	80.9(1)	33.0(1)	37.1(3)	27.3(3)	2.58(1)	74(1)	22
25.05	D	9/17/1991	19.0	7(1)	2(1)	0(1)	0(1)	1(1)	1(1)	69.3(1)	52.5(1)	55.5(1)	38.6(3)	2.97(1)	46(1)	14
	D	8/8/1991	19.0	9(3)	2(1)	0(1)	0(1)	1(1)	1(1)	59.8(1)	35.9(1)	53.5(3)	52.2(5)	0.00(5)	96(1)	24
HAWTHORN CREEK (19-007-008)																
Year: 1991																
0.75	D	8/9/1991	7.0	8(3)	5(3)	1(1)	0(1)	0(1)	2(1)	78.6(1)	4.6(5)	31.5(3)	0.1(1)	0.00(5)	352(3)	28
BEAVER MEADOW RUN (19-007-010)																
Year: 1991																
0.11	D	8/7/1991	6.0	9(3)	5(3)	1(1)	0(1)	1(1)	2(1)	89.0(1)	24.9(3)	68.2(1)	7.6(1)	0.73(3)	68(1)	20
POND BROOK (19-008-000)																
Year: 1991																
3.70	E	7/26/1991	2.0	6(3)	2(1)	0(1)	0(1)	0(1)	1(1)	93.5(1)	54.2(1)	38.3(3)	22.4(3)	0.47(5)	42(3)	24
3.40	D	8/9/1991	5.0	10(3)	2(1)	0(1)	0(1)	0(1)	1(1)	35.0(3)	12.1(5)	22.1(5)	75.0(5)	0.71(5)	136(3)	34
1.41	D	7/26/1991	16.0	9(3)	1(1)	0(1)	1(1)	0(1)	1(1)	29.1(5)	14.0(5)	5.8(5)	69.8(5)	2.33(3)	108(1)	32
NORTH FORK YELLOW CREEK (19-022-000)																
Year: 1991																
0.30	E	7/15/1991	10.0	13(3)	8(5)	2(3)	2(1)	2(3)	5(3)	40.0(3)	11.2(5)	15.9(5)	17.1(1)	0.00(5)	918(5)	42

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
FISH CREEK (19-026-000)																
Year: 1991																
0.38	E	8/21/1991	11.0	17(5)	7(5)	1(1)	3(3)	2(3)	4(3)	57.4(1)	28.3(3)	53.8(3)	35.4(3)	0.90(3)	190(1)	34
TARE CREEK (19-038-000)																
Year: 1991																
3.10	E	7/23/1991	5.0	9(3)	5(3)	1(1)	0(1)	1(1)	3(3)	63.0(1)	45.6(1)	66.3(1)	24.0(3)	0.18(3)	1028(5)	26

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1991																	
89.41	D	8/14/1991	20.0	19(5)	5(5)	2(3)	0(1)	3(3)	18.6(3)	63.2(1)	52.5(1)	8.9(5)	37.5(3)	1.07(3)	172(1)	34	6.4
75.83	D	8/14/1991	151.0	20(3)	3(3)	3(3)	2(1)	4(3)	55.4(5)	32.1(3)	20.1(3)	3.2(3)	75.8(5)	3.79(1)	350(3)	36	8.7
	D	7/23/1991	151.0	18(3)	3(3)	2(1)	3(3)	3(3)	55.2(5)	25.1(3)	15.8(5)	9.7(5)	73.8(5)	2.32(1)	291(3)	40	8.6
64.30	D	8/14/1991	178.0	22(3)	4(5)	3(3)	2(1)	5(3)	40.3(5)	6.7(5)	2.1(5)	20.8(5)	74.0(5)	0.00(5)	579(3)	48	9.2
	D	7/12/1991	178.0	18(3)	2(3)	2(1)	2(1)	4(3)	35.2(3)	7.5(5)	4.2(5)	25.8(5)	67.1(5)	0.94(3)	257(3)	40	8.3
54.32	D	8/16/1991	293.0	21(3)	4(5)	2(1)	2(1)	4(3)	50.1(5)	24.1(3)	23.2(3)	4.0(3)	70.7(5)	0.19(3)	1184(5)	40	9.3
	D	7/12/1991	293.0	20(3)	3(3)	2(1)	2(1)	3(3)	67.0(5)	12.9(5)	10.1(5)	2.2(3)	85.9(5)	0.94(3)	416(3)	40	8.3
44.50	E	9/10/1991	338.0	11(1)	1(1)	0(1)	0(1)	2(1)	11.6(1)	4.8(5)	0.2(5)	1.5(3)	18.1(1)	0.17(5)	1232(5)	30	6.5
	E	7/24/1991	338.0	12(3)	0(1)	2(1)	0(1)	2(1)	12.8(1)	12.3(5)	0.9(5)	2.2(3)	18.7(1)	0.20(3)	1845(5)	30	7.4
BIG CREEK (19-005-000)																	
Year: 1991																	
0.23	E	8/29/1991	37.0	8(1)	2(3)	1(1)	0(1)	0(1)	4.6(1)	93.1(1)	37.9(1)	0.0(1)	58.6(5)	0.00(5)	18(1)	22	
TINKERS CREEK (19-007-000)																	
Year: 1991																	
22.07	D	9/19/1991	41.0	7(1)	3(3)	0(1)	0(1)	0(1)	0.0(1)	90.6(1)	88.1(1)	2.0(3)	9.5(1)	0.44(3)	64(1)	18	4.2
	D	8/9/1991	41.0	9(1)	3(3)	0(1)	0(1)	1(1)	0.0(1)	83.7(1)	80.6(1)	1.5(3)	17.8(1)	0.17(5)	147(1)	20	5.5
13.80	D	9/17/1991	54.0	13(3)	4(5)	1(1)	0(1)	1(1)	5.4(1)	75.2(1)	51.4(1)	0.1(1)	16.1(1)	0.14(3)	528(3)	22	6.9
	D	8/8/1991	54.0	12(3)	3(3)	1(1)	0(1)	1(1)	24.9(3)	80.3(1)	54.0(1)	0.3(1)	13.8(1)	0.43(3)	206(3)	22	6.0
11.24	D	9/17/1991	61.0	11(3)	4(5)	1(1)	0(1)	1(1)	15.6(1)	87.3(1)	53.8(1)	0.9(1)	32.6(3)	2.83(1)	40(1)	20	4.8
	D	8/8/1991	61.0	13(3)	3(3)	1(1)	0(1)	1(1)	11.9(1)	90.8(1)	64.3(1)	0.7(1)	11.9(1)	0.99(3)	56(1)	18	3.6
10.60	D	9/17/1991	67.0	7(1)	2(3)	1(1)	0(1)	0(1)	10.1(1)	87.6(1)	56.6(1)	0.0(1)	28.7(3)	3.10(1)	24(1)	16	3.1
	D	8/7/1991	67.0	8(1)	3(3)	1(1)	0(1)	1(1)	16.4(1)	92.6(1)	63.1(1)	1.6(3)	31.2(3)	4.10(1)	14(1)	18	4.2
8.65	D	9/16/1991	69.0	7(1)	2(3)	1(1)	0(1)	0(1)	15.7(1)	88.0(1)	54.2(1)	0.0(1)	16.9(1)	0.00(5)	15(1)	18	3.4
	D	9/6/1991	69.0	7(1)	2(3)	1(1)	0(1)	0(1)	15.7(1)	88.0(1)	54.2(1)	0.0(1)	16.9(1)	0.00(5)	15(1)	18	3.4
	D	8/7/1991	69.0	10(1)	2(3)	1(1)	0(1)	1(1)	25.3(3)	84.3(1)	41.0(1)	0.0(1)	3.3(1)	1.31(1)	72(1)	16	5.1
7.20	E	9/6/1991	77.0	10(1)	3(3)	1(1)	0(1)	0(1)	25.9(3)	61.7(1)	43.2(1)	2.5(3)	6.2(1)	1.23(5)	52(1)	22	5.0
	D	8/7/1991	77.0	11(3)	2(3)	1(1)	0(1)	1(1)	41.3(5)	93.7(1)	53.2(1)	0.4(1)	1.5(1)	0.19(5)	47(1)	24	5.0

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
2.18	E	9/6/1991	94.0	11(1)	2(3)	1(1)	0(1)	0(1)	8.3(1)	70.6(1)	61.6(1)	0.0(1)	23.6(1)	0.75(3)	176(1)	16	5.8
	D	8/7/1991	94.0	10(1)	0(1)	1(1)	0(1)	1(1)	27.4(3)	82.6(1)	54.3(1)	0.2(1)	12.5(1)	0.00(5)	112(1)	18	5.4
0.10	E	9/16/1991	96.0	10(1)	1(1)	1(1)	0(1)	1(1)	5.1(1)	27.4(3)	22.3(3)	0.0(1)	34.9(3)	1.14(3)	190(1)	20	5.9
	D	8/6/1991	96.0	16(3)	1(1)	3(3)	0(1)	1(1)	27.1(3)	49.4(1)	42.6(1)	0.6(1)	16.3(1)	0.73(3)	416(3)	22	7.9
BRANDYWINE CREEK (19-010-000)																	
Year: 1991																	
0.26	E	7/18/1991	27.0	11(3)	2(3)	1(1)	0(1)	1(1)	12.1(1)	33.3(3)	14.7(5)	0.0(1)	6.5(1)	0.82(3)	1707(5)	28	
FURNACE RUN (19-020-000)																	
Year: 1991																	
0.90	E	8/1/1991	20.0	14(3)	1()	2()	2()	3()	22.5(3)	30.0(5)	7.3(5)	0.0()	23.4(1)	0.24(3)	1992(5)	44	
YELLOW CREEK (19-021-000)																	
Year: 1991																	
4.08	E	8/8/1991	23.0	13(3)	0(1)	2(3)	1(1)	2(3)	33.3(3)	39.5(3)	11.4(5)	1.8(3)	29.7(3)	0.67(3)	813(5)	36	
1.85	E	7/25/1991	26.0	18(3)	3(3)	2(3)	1(1)	3(3)	32.8(3)	29.7(3)	10.1(5)	2.4(3)	34.5(3)	0.16(5)	1344(5)	40	
LITTLE CUYAHOGA RIVER (19-030-000)																	
Year: 1991																	
10.95	E	8/29/1991	25.0	10(3)	3()	1()	0()	0()	46.5(1)	75.2(1)	41.9(1)	2.3()	36.4(3)	0.00(5)	96(1)	26	
	E	7/24/1991	25.0	8(1)	3()	1()	0()	0()	53.5(1)	70.7(1)	48.5(1)	8.1()	36.4(3)	1.01(5)	87(1)	22	
2.14	E	8/29/1991	54.0	8(1)	0(1)	2(3)	0(1)	1(1)	35.4(3)	37.9(3)	22.7(3)	1.0(3)	8.6(1)	0.00(5)	246(3)	28	5.9
	E	7/24/1991	54.0	8(1)	0(1)	2(3)	0(1)	1(1)	34.4(3)	57.8(1)	26.2(3)	0.0(1)	4.8(1)	0.00(5)	248(3)	24	5.9
0.30	D	8/29/1991	62.0	13(3)	1(1)	1(1)	0(1)	2(1)	26.1(3)	71.1(1)	28.0(3)	0.9(1)	16.1(1)	0.91(3)	190(1)	20	6.0
	D	7/24/1991	62.0	12(3)	1(1)	2(3)	0(1)	1(1)	12.5(1)	28.3(3)	10.6(5)	0.6(1)	10.8(1)	1.67(1)	516(3)	24	5.9

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1991																	
87.26	A	9/9/1991	38.0	15(3)	4(5)	2(1)	0(1)	10.3(1)	33.0(3)	38.7(1)	27.3(3)	8.8(3)	61.9(5)	2.06(1)	238(3)	30	8.1
	A	8/6/1991	38.0	18(3)	3(3)	2(1)	0(1)	8.9(1)	41.9(3)	42.5(1)	36.9(1)	8.4(3)	50.8(3)	2.79(1)	206(3)	24	8.1
	A	7/10/1991	38.0	15(3)	4(5)	2(1)	0(1)	19.4(3)	38.8(3)	51.0(1)	20.4(3)	10.2(5)	65.3(5)	2.04(3)	91(1)	34	7.3
80.51	A	9/9/1991	129.0	20(3)	5(5)	3(3)	0(1)	21.2(3)	28.1(3)	14.2(5)	13.1(5)	10.2(5)	75.9(5)	1.09(3)	346(3)	44	8.9
	A	8/6/1991	129.0	20(3)	5(5)	4(3)	0(1)	17.0(1)	28.7(3)	17.2(3)	21.0(3)	13.2(5)	64.9(5)	0.29(5)	424(5)	42	9.3
	A	7/10/1991	129.0	22(5)	5(5)	4(3)	0(1)	21.7(3)	37.1(3)	24.0(3)	22.9(3)	11.6(5)	64.8(5)	0.37(5)	299(3)	44	8.7
71.70	A	8/6/1991	157.0	27(5)	5(5)	4(3)	3(3)	5.5(1)	44.3(3)	12.4(5)	9.9(5)	17.8(5)	71.5(5)	0.27(5)	1296(5)	50	10.2
	A	7/11/1991	157.0	25(5)	5(5)	4(3)	3(3)	7.8(1)	55.1(5)	9.8(5)	8.0(5)	15.6(5)	76.3(5)	0.56(3)	972(5)	50	10.0
67.56	A	9/9/1991	168.0	20(3)	5(5)	4(3)	2(3)	36.6(3)	53.0(5)	12.5(5)	10.3(5)	19.8(5)	67.2(5)	0.00(5)	508(5)	52	9.7
	A	8/7/1991	168.0	21(5)	4(5)	4(3)	1(1)	23.1(3)	64.6(5)	15.1(3)	14.9(5)	11.9(5)	72.8(5)	0.00(5)	756(5)	50	9.0
	A	7/11/1991	168.0	23(5)	6(5)	4(3)	0(1)	15.9(1)	66.3(5)	12.5(5)	11.4(5)	14.8(5)	72.4(5)	1.14(3)	444(5)	48	8.1
49.78	A	9/10/1991	328.0	18(3)	6(5)	2(1)	1(1)	6.2(1)	48.1(3)	14.9(5)	13.8(5)	16.0(5)	66.8(5)	0.54(3)	938(5)	42	8.9
	A	8/7/1991	328.0	19(3)	5(5)	2(1)	1(1)	4.5(1)	49.0(3)	27.8(1)	26.5(3)	8.4(3)	64.0(5)	0.56(3)	1102(5)	34	9.0
	A	7/11/1991	328.0	19(3)	5(5)	2(1)	1(1)	4.9(1)	35.1(3)	37.8(1)	37.0(1)	7.9(3)	51.4(3)	0.82(3)	458(5)	30	8.1
42.60	A	9/10/1991	340.0	22(5)	6(5)	2(1)	0(1)	5.9(1)	25.3(3)	28.1(1)	30.7(1)	11.2(5)	29.3(3)	2.16(3)	691(5)	34	8.7
	A	8/8/1991	340.0	22(5)	6(5)	2(1)	1(1)	6.4(1)	33.0(3)	22.6(3)	23.2(3)	6.4(3)	34.2(3)	0.90(3)	977(5)	36	7.9
	A	7/16/1991	340.0	21(5)	4(5)	1(1)	0(1)	0.0(1)	25.7(3)	33.3(1)	29.6(1)	3.5(1)	36.6(3)	1.16(3)	806(5)	30	7.8
39.70	A	9/11/1991	433.0	19(3)	3(3)	2(1)	1(1)	3.2(1)	24.9(1)	64.6(1)	60.5(1)	0.9(1)	20.0(1)	0.45(5)	468(5)	24	7.1
	A	8/8/1991	433.0	19(3)	3(3)	2(1)	1(1)	3.9(1)	33.0(3)	53.4(1)	47.2(1)	1.9(1)	24.5(1)	0.62(3)	452(5)	24	7.3
	A	7/16/1991	433.0	18(3)	3(3)	2(1)	1(1)	3.3(1)	56.0(5)	65.8(1)	60.1(1)	0.5(1)	22.6(1)	1.36(3)	252(3)	24	6.3
37.40	A	9/11/1991	443.0	10(3)	1(1)	2(1)	0(1)	6.0(1)	76.3(5)	19.8(3)	11.0(5)	0.0(1)	79.5(5)	0.00(5)	2270(5)	36	8.3
	A	8/8/1991	443.0	8(1)	0(1)	2(1)	0(1)	2.7(1)	81.5(5)	17.2(3)	6.6(5)	0.0(1)	85.4(5)	2.65(1)	1250(5)	30	7.6
	A	7/15/1991	443.0	8(1)	0(1)	2(1)	0(1)	0.8(1)	86.6(5)	74.0(1)	64.7(1)	0.0(1)	26.9(1)	2.52(1)	310(3)	18	5.1
37.22	A	9/11/1991	443.0	16(3)	1(1)	2(1)	1(1)	8.3(1)	46.2(3)	41.3(1)	22.4(3)	0.0(1)	31.3(3)	0.73(3)	808(5)	26	7.9
	A	8/8/1991	443.0	13(3)	1(1)	2(1)	2(3)	10.4(1)	58.6(5)	67.1(1)	43.2(1)	0.0(1)	33.3(3)	1.80(3)	146(1)	24	6.6
	A	7/16/1991	443.0	14(3)	1(1)	2(1)	1(1)	10.5(1)	60.5(5)	63.8(1)	42.8(1)	0.0(1)	27.6(3)	2.63(1)	110(1)	20	6.3
35.31	A	9/11/1991	477.0	14(3)	2(3)	2(1)	0(1)	5.3(1)	43.9(3)	51.7(1)	37.5(1)	0.0(1)	28.1(3)	0.71(3)	515(5)	26	7.7
	A	8/8/1991	477.0	14(3)	2(3)	2(1)	1(1)	5.7(1)	54.2(5)	72.6(1)	49.8(1)	0.7(1)	22.1(1)	2.68(3)	164(1)	22	6.4
	A	7/16/1991	477.0	10(3)	0(1)	2(1)	0(1)	1.1(1)	44.7(3)	65.8(1)	47.4(1)	0.0(1)	15.3(1)	1.05(3)	162(1)	18	5.6

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
26.50	A	9/10/1991	499.0	12(3)	1(1)	2(1)	0(1)	0.2(1)	12.4(1)	51.2(1)	51.7(1)	0.2(1)	38.1(3)	0.36(5)	670(5)	24	7.6
	A	8/7/1991	499.0	14(3)	3(3)	2(1)	0(1)	0.6(1)	22.0(1)	68.4(1)	71.2(1)	1.7(1)	22.0(1)	0.00(5)	140(1)	20	6.4
	A	7/15/1991	499.0	17(3)	5(5)	2(1)	0(1)	1.1(1)	35.0(3)	71.2(1)	70.8(1)	1.1(1)	21.2(1)	1.46(3)	198(1)	22	7.0
15.61	A	9/11/1991	698.0	18(3)	2(3)	2(1)	0(1)	0.4(1)	9.0(1)	23.2(3)	54.7(1)	2.1(1)	24.9(1)	2.08(3)	444(5)	24	7.5
	A	8/16/1991	698.0	20(3)	4(5)	2(1)	0(1)	0.0(1)	16.1(1)	53.7(1)	57.2(1)	1.7(1)	18.3(1)	0.50(5)	374(3)	24	7.2
	A	7/17/1991	698.0	23(5)	4(5)	4(3)	1(1)	0.8(1)	27.6(3)	63.6(1)	59.6(1)	3.6(1)	23.2(1)	3.60(1)	182(1)	24	7.2
11.33	A	9/12/1991	730.0	20(3)	3(3)	2(1)	0(1)	0.3(1)	17.7(1)	46.1(1)	69.1(1)	1.6(1)	15.5(1)	3.15(1)	342(3)	18	7.3
	A	8/13/1991	730.0	15(3)	1(1)	1(1)	0(1)	0.0(1)	22.3(1)	52.1(1)	57.1(1)	0.8(1)	10.5(1)	2.10(3)	228(3)	18	6.9
	A	7/17/1991	730.0	17(3)	3(3)	2(1)	0(1)	0.0(1)	30.5(3)	55.7(1)	62.3(1)	1.8(1)	13.2(1)	1.80(1)	148(1)	18	6.0
10.56	A	9/12/1991	744.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	14.3(1)	33.9(1)	32.1(1)	5.4(3)	58.9(5)	1.79(5)	370(3)	24	6.0
	A	8/13/1991	744.0	8(1)	2(3)	1(1)	0(1)	0.0(1)	73.0(5)	93.2(1)	74.3(1)	0.0(1)	6.8(1)	2.70(3)	50(1)	20	3.2
	A	7/17/1991	744.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	82.8(5)	96.6(1)	96.6(1)	0.0(1)	3.5(1)	0.00(5)	10(1)	20	1.0
10.30	A	9/12/1991	744.0	16(3)	3(3)	2(1)	0(1)	0.5(1)	12.2(1)	31.9(1)	58.0(1)	3.7(1)	34.6(3)	5.32(1)	256(3)	20	6.4
	A	8/13/1991	744.0	14(3)	2(3)	2(1)	0(1)	0.0(1)	12.7(1)	33.5(1)	49.7(1)	2.3(1)	45.7(3)	2.89(1)	230(3)	20	6.2
	A	7/17/1991	744.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	17.7(1)	28.2(1)	50.6(1)	2.4(1)	45.9(3)	5.88(1)	122(1)	14	5.7
8.90	A	9/18/1991	745.0	18(3)	3(3)	3(3)	0(1)	1.1(1)	8.0(1)	42.8(1)	54.0(1)	2.7(1)	42.3(3)	7.49(1)	214(3)	22	6.4
	A	8/15/1991	745.0	12(3)	1(1)	1(1)	0(1)	0.0(1)	8.9(1)	28.8(1)	34.9(1)	4.1(1)	52.1(3)	2.74(1)	208(3)	18	5.4
	A	7/18/1991	745.0	12(3)	1(1)	1(1)	0(1)	0.0(1)	14.8(1)	36.5(1)	49.6(1)	5.2(3)	40.0(3)	6.09(1)	146(1)	18	5.7
8.30	A	9/18/1991	746.0	11(3)	2(3)	1(1)	0(1)	0.0(1)	9.2(1)	31.9(1)	58.0(1)	1.7(1)	39.5(3)	6.72(1)	162(1)	18	5.8
	A	8/15/1991	746.0	17(3)	3(3)	2(1)	0(1)	0.0(1)	8.7(1)	34.7(1)	51.2(1)	6.3(3)	32.3(3)	3.15(1)	166(1)	20	6.2
	A	7/18/1991	746.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	9.3(1)	32.6(1)	81.4(1)	1.6(1)	15.5(1)	1.55(3)	174(1)	14	5.5
7.30	A	9/18/1991	749.0	10(3)	2(3)	1(1)	0(1)	0.0(1)	3.5(1)	14.2(5)	69.0(1)	1.8(1)	27.4(3)	7.96(1)	194(1)	22	6.5
	A	8/15/1991	749.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	2.0(1)	24.2(3)	83.2(1)	0.7(1)	14.8(1)	4.03(1)	226(3)	16	6.0
	A	7/18/1991	749.0	10(3)	1(1)	1(1)	0(1)	0.0(1)	1.9(1)	12.4(5)	82.6(1)	0.6(1)	14.3(1)	3.73(1)	282(3)	20	6.4
7.10	A	9/18/1991	786.0	13(3)	2(3)	3(3)	0(1)	0.6(1)	8.5(1)	12.4(5)	72.3(1)	2.8(1)	22.0(1)	2.82(1)	310(3)	24	7.4
	A	8/15/1991	786.0	12(3)	2(3)	1(1)	0(1)	0.0(1)	4.6(1)	20.4(3)	76.0(1)	1.5(1)	18.4(1)	1.53(1)	312(3)	20	7.0
	A	7/18/1991	786.0	9(1)	1(1)	1(1)	0(1)	0.0(1)	10.0(1)	17.5(3)	85.0(1)	2.5(1)	10.8(1)	2.50(1)	198(1)	14	6.2

1996 Sampling Results

Headwater Sites				Number of						Percent of Individuals						
River Mile	Type	Date	DA (sq mi)	Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
CUYAHOGA RIVER (19-001-000)																
Year: 1996																
90.86	D	7/31/1996	19.0	15(3)	4(3)	0(1)	1(1)	2(1)	4(3)	46.4(3)	26.5(3)	16.9(5)	50.6(5)	0.60(5)	134(1)	34
SAND RUN (19-001-014)																
Year: 1996																
0.13	E	7/10/1996	3.0	5(1)	3(3)	1(1)	0(1)	1(1)	1(1)	97.2(1)	0.0(5)	22.7(5)	1.4(1)	0.00(5)	8(1)	26
TRIB. TO CUYAHOGA R. (RM 93.65) (19-001-028)																
Year: 1996																
0.60	E	10/30/1996	2.0	6(3)	3(3)	2(3)	0(1)	2(5)	2(3)	65.0(1)	8.0(5)	60.0(1)	12.0(1)	0.00(5)	105(3)	34
BIG CREEK (19-005-000)																
Year: 1996																
7.80	E	8/5/1996	11.0	7(1)	5(3)	1(1)	0(1)	0(1)	2(1)	43.6(3)	3.5(5)	30.7(3)	0.2(1)	0.00(5)	610(3)	28
MILL CREEK (19-006-000)																
Year: 1996																
4.20	E	7/25/1996	13.0	3(1)	3(1)	1(1)	0(1)	0(1)	1(1)	100.0(1)	5.6(5)	91.7(1)	0.0(1)	0.00(5)	0(1)	20
0.12	E	7/25/1996	19.0	7(1)	5(3)	0(1)	2(1)	0(1)	3(1)	65.7(1)	48.5(1)	36.4(3)	5.1(1)	1.01(5)	54(1)	20
CHIPPEWA CREEK (19-009-000)																
Year: 1996																
6.03	E	8/5/1996	6.0	7(3)	3(3)	1(1)	0(1)	0(1)	2(1)	45.9(3)	1.8(5)	14.2(5)	1.7(1)	0.00(5)	780(5)	34
3.72	E	8/5/1996	9.0	6(1)	3(1)	1(1)	0(1)	0(1)	2(1)	91.6(1)	1.7(5)	79.9(1)	7.8(1)	0.00(5)	45(1)	20
0.36	E	8/26/1996	18.0	18(5)	7(5)	2(3)	2(1)	3(3)	5(3)	26.8(5)	11.7(5)	19.6(5)	37.5(3)	0.32(3)	1695(5)	46
BRANDYWINE CREEK (19-010-000)																
Year: 1996																
7.02	D	8/2/1996	9.0	12(3)	4(3)	1(1)	0(1)	0(1)	2(1)	51.8(3)	17.3(3)	29.1(5)	30.9(3)	0.00(5)	106(1)	30

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
TRIB. TO FURNACE RUN (RM 7.90) (19-020-001)																
Year: 1996																
0.20	E	7/2/1996	1.0	8(5)	5(5)	3(3)	2(5)	3(5)	3(5)	80.3(1)	2.6(5)	48.5(3)	19.3(3)	0.00(5)	54(3)	48
POTTER CREEK (19-028-005)																
Year: 1996																
1.47	E	7/11/1996	3.0	11(5)	3(3)	1(1)	0(1)	1(1)	1(1)	83.8(1)	75.1(1)	88.4(1)	19.7(3)	0.00(5)	56(1)	24
LITTLE CUYAHOGA RIVER (19-030-000)																
Year: 1996																
11.20	D	8/13/1996	17.0	12(3)	4(3)	0(1)	0(1)	0(1)	2(1)	60.2(1)	36.7(1)	13.1(5)	45.3(3)	0.90(3)	176(1)	24
	D	7/2/1996	17.0	9(3)	2(1)	0(1)	0(1)	0(1)	2(1)	54.9(1)	46.9(1)	9.7(5)	27.4(3)	1.77(3)	102(1)	22
CAMP BROOK (19-030-004)																
Year: 1996																
1.00	E	7/9/1996	4.0	5(1)	2(1)	2(3)	0(1)	0(1)	2(1)	98.1(1)	6.4(5)	36.9(3)	1.9(1)	0.00(5)	6(1)	24
0.05	E	7/3/1996	5.0	3(1)	2(1)	1(1)	0(1)	0(1)	2(1)	100.0(1)	41.4(1)	19.6(5)	0.0(1)	0.00(5)	0(1)	20
TRIB. TO L. CUYAHOGA R. (RM 11.59) (19-030-006)																
Year: 1996																
1.33	E	8/27/1996	2.0	10(5)	4(3)	1(1)	0(1)	0(1)	2(3)	94.3(1)	15.2(3)	32.7(3)	19.1(3)	0.00(5)	36(1)	30
SPRINGFIELD LAKE OUTLET (19-031-000)																
Year: 1996																
0.01	E	7/3/1996	13.0	6(1)	4(3)	1(1)	0(1)	0(1)	3(1)	91.5(1)	11.1(5)	23.3(5)	10.6(1)	1.06(3)	32(1)	24
WINGFOOT LAKE OUTLET (19-032-000)																
Year: 1996																
1.30	E	8/27/1996	6.0	8(3)	2(1)	2(3)	0(1)	1(1)	2(1)	82.9(1)	52.7(1)	24.8(5)	16.3(1)	0.00(5)	160(3)	26
0.05	E	7/2/1996	7.0	10(3)	5(3)	1(1)	0(1)	0(1)	3(3)	88.4(1)	19.0(3)	42.1(3)	9.5(1)	0.00(5)	22(1)	26

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
BLACK BROOK (19-033-000)																
Year: 1996																
1.78	D	8/1/1996	12.0	15(5)	3(1)	1(1)	4(3)	4(3)	6(3)	51.7(3)	20.7(3)	15.5(5)	59.5(5)	0.00(5)	84(1)	38
BRIDGE CREEK (19-035-000)																
Year: 1996																
11.22	D	8/1/1996	5.0	9(3)	1(1)	0(1)	0(1)	1(1)	1(1)	51.8(3)	5.5(5)	22.7(5)	33.6(3)	0.91(5)	106(1)	30
8.46	D	8/1/1996	14.0	19(5)	5(3)	2(3)	5(3)	5(5)	7(5)	17.9(5)	6.7(5)	13.6(5)	14.7(1)	0.00(5)	908(5)	50

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1996																	
75.83	D	8/14/1996	151.0	15(3)	3(3)	3(3)	0(1)	3(3)	58.1(5)	25.0(3)	22.1(3)	14.0(5)	64.0(5)	2.21(1)	153(1)	36	7.8
	D	7/15/1996	151.0	14(3)	4(5)	2(1)	0(1)	2(1)	39.8(5)	34.9(3)	13.3(5)	15.7(5)	71.1(5)	0.00(5)	81(1)	40	7.4
64.30	D	8/14/1996	178.0	14(3)	1(1)	2(1)	1(1)	3(3)	40.9(5)	4.6(5)	2.7(5)	11.8(5)	82.7(5)	0.91(5)	158(1)	40	7.3
	D	7/15/1996	178.0	17(3)	3(3)	2(1)	1(1)	4(3)	51.4(5)	6.3(5)	3.6(5)	13.5(5)	78.4(5)	0.00(5)	156(1)	42	7.6
57.67	D	8/14/1996	208.0	8(1)	3(3)	0(1)	0(1)	1(1)	20.0(3)	45.7(1)	0.0(5)	22.9(5)	71.4(5)	2.86(5)	28(1)	32	4.0
	D	7/15/1996	208.0	14(3)	5(5)	2(1)	0(1)	3(3)	38.4(5)	41.1(1)	1.4(5)	13.7(5)	82.2(5)	2.74(3)	64(1)	38	6.8
56.20	D	8/14/1996	290.0	12(3)	4(5)	0(1)	0(1)	2(1)	6.5(1)	23.9(3)	0.0(5)	23.9(5)	56.5(5)	4.35(3)	52(1)	34	6.4
	D	7/16/1996	290.0	12(3)	5(5)	1(1)	0(1)	1(1)	15.5(1)	31.0(3)	6.9(5)	29.3(5)	55.2(5)	0.00(5)	60(1)	36	6.9
44.50	E	8/27/1996	338.0	12(3)	0(1)	2(1)	0(1)	3(1)	47.7(5)	14.6(5)	10.8(5)	6.9(5)	53.9(3)	0.00(5)	222(3)	38	7.5
	D	7/23/1996	338.0	14(3)	1(1)	2(1)	0(1)	2(1)	15.5(1)	4.3(5)	4.3(5)	1.2(3)	15.2(1)	0.00(5)	1484(5)	32	7.7
42.60	D	8/27/1996	340.0	13(3)	1(1)	2(1)	0(1)	4(3)	67.6(5)	7.4(5)	3.2(5)	0.5(1)	69.4(5)	0.00(5)	300(3)	38	6.3
	D	7/30/1996	340.0	15(3)	1(1)	2(1)	0(1)	4(3)	36.5(5)	4.0(5)	2.9(5)	0.3(1)	37.4(3)	0.00(5)	1682(5)	38	7.4
BIG CREEK (19-005-000)																	
Year: 1996																	
3.10	E	8/8/1996	33.0	7(1)	0(1)	1(1)	0(1)	0(1)	0.9(1)	12.8(5)	3.3(5)	0.0(1)	0.2(1)	0.00(5)	701(3)	26	5.1

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
0.23	E	7/25/1996	37.0	7(1)	2(3)	1(1)	0(1)	0(1)	3.1(1)	9.6(5)	4.9(5)	0.3(1)	3.1(1)	0.00(5)	732(3)	28	5.4
TINKERS CREEK (19-007-000)																	
Year: 1996																	
0.10	D	8/5/1996	96.0	15(3)	1(1)	3(3)	0(1)	2(1)	27.8(3)	33.0(3)	23.5(3)	0.9(1)	32.2(3)	4.35(1)	116(1)	24	7.0
FURNACE RUN (19-020-000)																	
Year: 1996																	
0.90	E	7/10/1996	20.0	17(5)	3()	2()	2()	3()	27.3(3)	29.5(5)	2.4(5)	0.2()	27.3(3)	0.00(5)	495(3)	48	
YELLOW CREEK (19-021-000)																	
Year: 1996																	
0.14	E	7/10/1996	31.0	14(3)	1(1)	2(3)	2(3)	4(3)	23.8(3)	17.0(5)	4.5(5)	0.0(1)	23.2(1)	0.00(5)	1172(5)	38	7.9
MUD BROOK (19-024-000)																	
Year: 1996																	
0.18	E	8/12/1996	29.0	17(3)	3(3)	2(3)	2(3)	2(3)	35.3(3)	41.2(3)	11.0(5)	0.3(1)	25.3(1)	0.00(5)	480(3)	36	8.0
BREAKNECK CREEK (19-028-000)																	
Year: 1996																	
9.50	D	8/1/1996	55.0	19(3)	3(3)	2(3)	1(1)	5(5)	42.5(5)	29.5(3)	13.6(5)	20.4(5)	65.7(5)	0.28(5)	374(3)	46	8.3
7.00	D	8/1/1996	56.0	13(3)	5(5)	1(1)	1(1)	2(1)	12.3(1)	15.8(5)	3.5(5)	64.9(5)	31.6(3)	1.75(5)	72(1)	36	6.4
5.19	D	10/9/1996	57.0	10(1)	0(1)	2(3)	0(1)	5(5)	71.8(5)	9.4(5)	8.2(5)	1.2(3)	89.4(5)	1.18(5)	116(1)	40	5.1
	D	8/1/1996	57.0	14(3)	4(5)	1(1)	2(1)	4(3)	51.8(5)	0.7(5)	0.0(5)	14.0(5)	86.0(5)	0.70(5)	213(3)	46	6.8
3.08	D	10/9/1996	61.0	10(1)	2(3)	2(3)	0(1)	3(3)	18.3(3)	64.8(1)	1.4(5)	7.0(5)	90.1(5)	1.41(5)	38(1)	36	4.3
	D	8/1/1996	61.0	14(3)	3(3)	2(3)	0(1)	4(3)	28.6(3)	38.8(3)	14.3(5)	32.7(5)	51.0(3)	0.00(5)	45(1)	38	5.4
1.70	D	10/9/1996	73.0	6(1)	2(3)	1(1)	0(1)	1(1)	12.9(1)	45.2(1)	0.0(1)	41.9(1)	58.1(1)	0.00(1)	26(1)	14	4.2
	D	8/1/1996	73.0	8(1)	2(3)	1(1)	0(1)	2(1)	31.3(1)	65.6(1)	28.1(1)	28.1(1)	43.8(1)	3.13(1)	16(1)	14	5.0
0.05	D	10/9/1996	79.0	15(3)	2(3)	2(3)	1(1)	5(5)	60.9(5)	16.1(5)	9.2(5)	12.6(5)	78.2(5)	0.00(5)	110(1)	46	6.9
	D	8/2/1996	79.0	15(3)	2(3)	2(3)	2(1)	4(3)	35.6(3)	8.2(5)	2.7(5)	28.8(5)	61.6(5)	0.00(5)	100(1)	42	7.4

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
LITTLE CUYAHOGA RIVER (19-030-000)																	
Year: 1996																	
10.95	D	8/13/1996	25.0	10(3)	2()	1()	0()	0()	65.2(1)	81.7(1)	54.8(1)	5.2()	26.1(3)	0.00(5)	35(1)	26	
	D	7/11/1996	25.0	8(1)	1()	1()	0()	0()	56.6(1)	86.8(1)	56.6(1)	6.6()	17.9(1)	3.77(1)	23(1)	16	
9.67	D	8/13/1996	26.0	8(1)	0(1)	1(1)	0(1)	1(1)	38.5(5)	94.2(1)	61.5(1)	0.6(1)	6.5(1)	0.00(5)	28(1)	20	3.0
	D	7/2/1996	26.0	9(3)	0(1)	1(1)	0(1)	1(1)	53.7(5)	91.4(1)	53.0(1)	0.3(1)	9.5(1)	0.63(3)	40(1)	20	4.6
8.40	E	8/13/1996	30.0	7(1)	0(1)	1(1)	0(1)	1(1)	71.5(5)	95.1(1)	13.7(5)	1.1(3)	3.9(1)	0.35(5)	28(1)	26	2.7
	E	7/2/1996	30.0	8(1)	0(1)	1(1)	0(1)	1(1)	83.0(5)	91.1(1)	18.3(5)	0.9(1)	8.1(1)	0.85(3)	42(1)	22	4.0
7.15	D	8/13/1996	31.0	7(1)	1(1)	1(1)	0(1)	0(1)	66.1(5)	93.7(1)	23.6(3)	0.8(1)	7.1(1)	1.57(3)	16(1)	20	3.1
	D	7/3/1996	31.0	10(3)	2(3)	1(1)	0(1)	1(1)	59.6(5)	90.7(1)	31.1(3)	1.0(3)	10.4(1)	3.63(1)	36(1)	24	5.4
6.70	D	8/13/1996	44.0	10(3)	2(3)	1(1)	0(1)	1(1)	62.5(5)	83.9(1)	38.7(1)	1.2(3)	17.3(1)	0.60(5)	40(1)	26	4.4
	D	7/3/1996	44.0	8(1)	1(1)	1(1)	0(1)	0(1)	52.1(5)	91.5(1)	47.0(1)	0.4(1)	14.0(1)	1.69(1)	30(1)	16	4.4
5.11	D	8/13/1996	47.0	9(1)	2(3)	1(1)	0(1)	0(1)	38.8(5)	90.7(1)	52.3(1)	0.5(1)	11.7(1)	3.27(1)	40(1)	18	4.4
	D	7/9/1996	47.0	11(3)	3(3)	1(1)	0(1)	0(1)	31.3(3)	90.0(1)	34.0(3)	1.3(3)	16.0(1)	6.67(1)	25(1)	22	4.2
4.20	D	8/14/1996	48.0	8(1)	1(1)	1(1)	0(1)	0(1)	42.6(5)	99.3(1)	57.8(1)	0.4(1)	0.7(1)	0.00(5)	3(1)	20	1.6
	D	7/9/1996	48.0	8(1)	1(1)	1(1)	0(1)	0(1)	67.8(5)	98.9(1)	67.8(1)	0.0(1)	1.4(1)	0.54(3)	6(1)	18	1.7
4.08	D	8/14/1996	54.0	6(1)	0(1)	1(1)	0(1)	0(1)	60.7(5)	100.0 (1)	53.9(1)	0.0(1)	0.9(1)	0.00(5)	0(1)	20	
	D	7/9/1996	54.0	4(1)	0(1)	1(1)	0(1)	0(1)	53.4(5)	100.0 (1)	29.8(3)	0.0(1)	0.0(1)	0.62(5)	0(1)	22	
2.14	E	8/14/1996	54.0	8(1)	0(1)	2(3)	0(1)	0(1)	35.3(3)	54.6(1)	16.0(5)	0.0(1)	16.0(1)	0.84(5)	108(1)	24	6.4
	E	7/10/1996	54.0	8(1)	0(1)	2(3)	0(1)	0(1)	34.6(3)	53.1(1)	19.0(3)	0.0(1)	13.3(1)	0.47(5)	156(1)	22	6.6
1.85	E	8/14/1996	59.0	10(1)	2(3)	1(1)	0(1)	0(1)	18.8(3)	20.8(5)	62.5(1)	2.1(3)	27.1(3)	8.33(1)	76(1)	24	4.4
	E	7/10/1996	59.0	14(3)	5(5)	2(3)	0(1)	1(1)	11.0(1)	59.3(1)	21.2(3)	2.5(3)	51.7(3)	3.39(1)	96(1)	26	6.0
0.30	E	8/13/1996	62.0	14(3)	1(1)	2(3)	0(1)	2(1)	33.3(3)	55.3(1)	32.9(3)	0.0(1)	33.8(3)	2.19(1)	180(1)	22	7.2
	E	7/9/1996	62.0	14(3)	3(3)	2(3)	0(1)	1(1)	29.4(3)	70.6(1)	16.7(5)	0.0(1)	44.3(3)	1.75(1)	112(1)	26	5.7
BRIDGE CREEK (19-035-000)																	
Year: 1996																	
1.32	E	8/8/1996	31.0	11(3)	3(3)	1(1)	0(1)	2(1)	17.9(1)	44.6(3)	33.9(3)	3.6(3)	60.7(5)	0.00(5)	62(1)	30	5.9

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
WEST BRANCH CUYAHOGA RIVER (19-036-000)																	
Year: 1996																	
0.87	D	8/2/1996	35.0	17(3)	2(3)	3(3)	1(1)	5(5)	75.6(5)	6.9(5)	5.3(5)	9.4(5)	84.6(5)	0.00(5)	458(3)	48	7.0

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Number of: Sunfish Species	Number of: Sucker Species	Number of: Intolerant Species	Percent of Individuals: Rnd Body Sucker	Percent of Individuals: Simple Lithophils	Percent of Individuals: Tolerant Fishes	Percent of Individuals: Omni-vores	Percent of Individuals: Top Carni-vores	Percent of Individuals: Insect-ivores	Percent of Individuals: DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 1996																	
87.26	A	8/26/1996	38.0	15(3)	4(5)	2(1)	0(1)	16.4(1)	61.2(5)	59.7(1)	46.3(1)	6.0(3)	47.8(3)	1.49(5)	54(1)	30	6.3
	A	7/31/1996	38.0	10(3)	2(3)	2(1)	0(1)	28.4(3)	76.5(5)	50.6(1)	46.9(1)	4.9(1)	45.7(3)	0.00(5)	80(1)	28	6.4
83.80	A	8/24/1996	82.0	16(3)	5(5)	3(3)	0(1)	23.2(3)	63.4(5)	37.5(1)	38.4(1)	4.5(1)	56.3(5)	4.46(1)	140(1)	30	7.7
	A	7/31/1996	82.0	15(3)	3(3)	5(3)	0(1)	14.1(1)	59.5(5)	39.3(1)	36.8(1)	4.3(1)	57.7(5)	2.45(1)	198(1)	26	7.6
80.51	A	8/26/1996	129.0	15(3)	2(3)	3(3)	0(1)	38.4(5)	58.6(5)	22.2(3)	19.2(3)	20.2(5)	58.6(5)	5.05(1)	154(1)	38	7.5
	A	7/17/1996	129.0	10(3)	2(3)	2(1)	0(1)	46.9(5)	67.4(5)	18.4(3)	14.3(5)	16.3(5)	67.4(5)	2.04(5)	80(1)	42	6.5
71.70	A	8/26/1996	157.0	14(3)	1(1)	4(3)	2(3)	25.0(3)	58.1(5)	15.7(3)	14.5(5)	21.5(5)	62.8(5)	0.00(5)	290(3)	44	8.7
	A	7/17/1996	157.0	15(3)	3(3)	3(3)	2(3)	37.4(3)	55.0(5)	15.3(3)	13.7(5)	23.7(5)	60.3(5)	1.53(3)	222(3)	44	8.5
67.56	A	8/27/1996	168.0	15(3)	3(3)	4(3)	0(1)	45.5(5)	59.1(5)	9.1(5)	9.1(5)	21.8(5)	64.6(5)	0.00(5)	200(3)	48	8.5
	A	8/1/1996	168.0	18(3)	4(5)	4(3)	1(1)	58.4(5)	68.1(5)	10.2(5)	8.4(5)	11.5(5)	75.9(5)	1.20(3)	213(3)	48	7.7
54.32	A	8/15/1996	293.0	15(3)	6(5)	3(3)	0(1)	12.9(1)	43.9(3)	41.7(1)	40.9(1)	11.4(5)	35.6(3)	6.06(1)	154(1)	28	7.6
	A	7/16/1996	293.0	17(3)	5(5)	3(3)	1(1)	19.0(3)	57.0(5)	43.8(1)	43.0(1)	5.0(1)	33.9(3)	4.13(1)	136(1)	28	7.5
53.40	A	8/15/1996	307.0	13(3)	4(5)	2(1)	0(1)	1.2(1)	13.4(1)	25.6(3)	23.2(3)	13.4(5)	46.3(3)	2.44(3)	122(1)	30	6.7
	A	7/16/1996	307.0	13(3)	5(5)	2(1)	0(1)	0.9(1)	6.3(1)	17.9(3)	14.3(5)	19.6(5)	46.4(3)	2.68(1)	184(1)	30	6.7
52.00	A	8/15/1996	319.0	12(3)	5(5)	2(1)	0(1)	2.7(1)	7.2(1)	15.3(3)	14.4(5)	28.8(5)	45.1(3)	3.60(1)	188(1)	30	7.6
	A	7/23/1996	319.0	14(3)	6(5)	1(1)	0(1)	0.0(1)	4.6(1)	16.4(3)	13.6(5)	36.4(5)	40.9(3)	4.55(1)	184(1)	30	7.3
51.00	A	8/15/1996	323.0	8(1)	4(5)	1(1)	0(1)	0.0(1)	2.9(1)	11.4(5)	11.4(5)	15.7(5)	41.4(3)	2.86(3)	124(1)	32	6.1
	A	7/16/1996	323.0	10(3)	5(5)	1(1)	0(1)	0.0(1)	10.5(1)	23.9(3)	20.9(3)	14.9(5)	52.2(3)	11.94(1)	102(1)	28	6.3
49.78	A	8/15/1996	328.0	15(3)	5(5)	2(1)	0(1)	3.4(1)	13.5(1)	38.2(1)	36.0(1)	18.0(5)	46.1(3)	0.00(5)	110(1)	28	7.1
	A	7/16/1996	328.0	14(3)	5(5)	2(1)	0(1)	3.8(1)	8.4(1)	34.4(1)	33.6(1)	15.3(5)	48.1(3)	4.58(1)	172(1)	24	7.1
48.00	A	8/15/1996	334.0	14(3)	5(5)	2(1)	0(1)	2.3(1)	11.2(1)	31.5(1)	31.5(1)	15.7(5)	48.3(3)	3.37(1)	122(1)	24	6.9
	A	7/23/1996	334.0	11(3)	4(5)	1(1)	0(1)	0.0(1)	13.7(1)	41.1(1)	40.0(1)	16.8(5)	40.0(3)	3.16(1)	110(1)	24	6.4
46.25	A	9/5/1996	336.0	13(3)	7(5)	1(1)	0(1)	0.0(1)	15.0(1)	33.1(1)	31.3(1)	24.4(5)	27.5(3)	1.88(1)	214(3)	26	6.5
41.71	A	9/3/1996	402.0	11(3)	2(3)	2(1)	0(1)	18.9(1)	65.9(5)	32.9(1)	29.3(1)	4.3(1)	52.4(3)	3.66(1)	220(3)	24	7.0
	A	8/6/1996	402.0	11(3)	3(3)	2(1)	0(1)	25.2(3)	56.5(5)	34.7(1)	25.9(3)	3.4(1)	51.7(3)	1.36(3)	192(1)	28	6.7
37.97	A	9/3/1996	439.0	9(1)	1(1)	2(1)	1(1)	25.5(3)	76.6(5)	45.7(1)	39.4(1)	0.0(1)	53.2(3)	4.26(1)	102(1)	20	6.1
	A	8/6/1996	439.0	10(3)	3(3)	2(1)	0(1)	49.1(5)	74.6(5)	25.5(3)	23.6(3)	0.0(1)	67.3(5)	5.45(1)	82(1)	32	6.0
37.40	A	9/3/1996	443.0	7(1)	1(1)	2(1)	0(1)	10.5(1)	65.8(5)	81.6(1)	57.9(1)	0.0(1)	26.3(1)	10.53(1)	70(1)	16	5.5
	A	8/6/1996	443.0	6(1)	1(1)	2(1)	0(1)	5.6(1)	61.1(5)	61.1(1)	44.4(1)	0.0(1)	33.3(3)	0.00(5)	70(1)	22	4.7

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Number of: Sunfish Species	Number of: Sucker Species	Number of: Intolerant Species	Percent of Individuals: Rnd Body Sucker	Percent of Individuals: Simple Lithophils	Percent of Individuals: Tolerant Fishes	Percent of Individuals: Omni-vores	Percent of Individuals: Top Carni-vores	Percent of Individuals: Insect-ivores	Percent of Individuals: DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
37.22	A	9/3/1996	443.0	9(1)	0(1)	2(1)	1(1)	30.3(3)	67.4(5)	57.3(1)	43.8(1)	1.1(1)	36.0(3)	8.99(1)	76(1)	20	5.5
	A	8/6/1996	443.0	8(1)	1(1)	2(1)	0(1)	41.5(5)	75.6(5)	46.3(1)	34.2(1)	2.4(1)	48.8(3)	4.88(3)	44(1)	24	5.5
35.31	A	9/3/1996	477.0	13(3)	2(3)	2(1)	0(1)	18.8(1)	63.3(5)	48.4(1)	43.0(1)	2.3(1)	33.6(3)	1.56(3)	132(1)	24	6.5
	A	8/6/1996	477.0	8(1)	0(1)	2(1)	0(1)	5.8(1)	58.0(5)	76.8(1)	58.0(1)	0.0(1)	21.7(1)	7.25(1)	32(1)	16	4.7
33.20	A	9/4/1996	480.0	7(1)	1(1)	1(1)	0(1)	0.0(1)	77.0(5)	77.0(1)	68.9(1)	5.4(3)	20.3(1)	1.35(5)	34(1)	22	4.6
	A	8/7/1996	480.0	8(1)	1(1)	1(1)	0(1)	0.0(1)	37.5(3)	49.0(1)	42.7(1)	0.0(1)	24.0(1)	5.21(1)	98(1)	14	4.5
26.50	A	9/4/1996	499.0	13(3)	2(3)	2(1)	0(1)	9.0(1)	76.7(5)	73.1(1)	72.5(1)	0.0(1)	19.2(1)	3.59(1)	90(1)	20	5.4
	A	8/7/1996	499.0	11(3)	2(3)	2(1)	0(1)	5.7(1)	62.5(5)	62.5(1)	61.4(1)	0.0(1)	31.8(3)	1.14(5)	66(1)	26	5.4
20.80	A	9/3/1996	583.0	3(1)	0(1)	1(1)	0(1)	0.0(1)	67.5(5)	80.0(1)	80.0(1)	2.5(1)	17.5(1)	2.50(5)	16(1)	20	4.0
	A	8/7/1996	583.0	9(1)	3(3)	1(1)	0(1)	0.0(1)	30.3(3)	69.7(1)	66.7(1)	3.0(1)	30.3(3)	0.00(5)	20(1)	22	3.1
17.30	A	9/4/1996	597.0	7(1)	0(1)	2(1)	0(1)	5.6(1)	36.1(3)	50.0(1)	63.9(1)	13.9(5)	19.4(1)	11.11(1)	36(1)	18	5.6
	A	8/8/1996	597.0	10(3)	2(3)	3(3)	0(1)	9.7(1)	22.6(1)	41.9(1)	58.1(1)	6.5(3)	25.8(1)	19.35(1)	36(1)	20	5.7
15.61	A	9/5/1996	698.0	14(3)	3(3)	3(3)	0(1)	12.3(1)	26.2(3)	36.9(1)	55.4(1)	7.7(3)	33.9(3)	7.69(1)	82(1)	24	7.0
	A	8/8/1996	698.0	12(3)	4(5)	3(3)	0(1)	2.5(1)	7.5(1)	42.5(1)	55.0(1)	25.0(5)	15.0(1)	12.50(1)	46(1)	24	5.7
10.95	A	10/8/1996	743.0	7(1)	0(1)	2(1)	0(1)	9.4(1)	26.4(3)	28.3(1)	35.9(1)	0.0(1)	15.1(1)	5.66(1)	76(1)	14	5.5
	A	7/24/1996	743.0	18(3)	2(3)	3(3)	0(1)	15.5(1)	40.8(3)	53.4(1)	61.2(1)	2.9(1)	31.1(3)	4.85(1)	96(1)	22	7.0
10.56	A	10/8/1996	744.0	4(1)	0(1)	1(1)	0(1)	2.7(1)	2.7(1)	8.1(5)	8.1(5)	0.0(1)	91.9(5)	0.00(5)	340(3)	30	4.6
	A	7/24/1996	744.0	3(1)	1(1)	1(1)	0(1)	86.7(5)	86.7(5)	0.0(5)	6.7(5)	0.0(1)	93.3(5)	20.00(1)	150(1)	32	4.5
9.70	A	10/8/1996	744.0	6(1)	0(1)	2(1)	0(1)	7.9(1)	26.3(3)	57.9(1)	52.6(1)	5.3(3)	39.5(3)	5.26(3)	32(1)	20	4.4
	A	7/24/1996	744.0	9(1)	1(1)	2(1)	0(1)	13.0(1)	43.5(3)	69.6(1)	58.7(1)	0.0(1)	37.0(3)	34.78(1)	28(1)	16	4.9
8.30	A	10/8/1996	746.0	11(3)	1(1)	2(1)	0(1)	1.8(1)	21.1(1)	56.1(1)	59.7(1)	1.8(1)	38.6(3)	5.26(1)	50(1)	16	5.1
	A	8/12/1996	746.0	11(3)	0(1)	2(1)	0(1)	4.9(1)	25.9(3)	40.7(1)	69.1(1)	1.2(1)	24.7(1)	7.41(1)	96(1)	16	6.0
7.10	A	10/8/1996	786.0	6(1)	1(1)	2(1)	0(1)	1.8(1)	14.0(1)	15.8(3)	91.2(1)	0.6(1)	8.2(1)	0.00(5)	960(5)	22	6.4
	A	8/12/1996	786.0	7(1)	0(1)	2(1)	0(1)	3.1(1)	8.3(1)	24.0(3)	90.6(1)	1.0(1)	8.3(1)	10.42(1)	146(1)	14	4.0

2000 Sampling Results

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
CUYAHOGA RIVER (19-001-000)																
Year: 2000																
97.70	E	8/2/2000	3.0	14(5)	3(3)	0(1)	1(1)	2(3)	2(3)	23.1(5)	4.8(5)	13.9(5)	80.2(5)	0.00(5)	315(5)	46
96.20	E	7/11/2000	6.0	7(3)	1(1)	0(1)	0(1)	0(1)	1(1)	37.9(3)	10.3(5)	20.7(5)	69.0(5)	0.00(5)	36(1)	32
90.86	D	7/11/2000	19.0	15(3)	3(1)	0(1)	3(1)	3(3)	5(3)	68.1(1)	47.8(1)	47.1(3)	46.4(3)	1.45(3)	66(1)	24
WEST CREEK (19-001-004)																
Year: 2000																
5.30	E	8/16/2000	4.0	4(1)	3(3)	1(1)	0(1)	0(1)	2(1)	40.9(3)	1.4(5)	15.2(5)	0.0(1)	0.00(5)	2792(5)	32
3.70	E	8/16/2000	5.0	4(1)	3(3)	1(1)	0(1)	0(1)	2(1)	45.3(3)	1.1(5)	10.1(5)	0.0(1)	0.00(5)	918(5)	32
0.19	E	8/16/2000	13.0	10(3)	6(3)	1(1)	2(1)	1(1)	4(3)	23.6(5)	2.7(5)	4.3(5)	1.5(1)	0.00(5)	1784(5)	38
TRIB. TO CUYAHOGA R. (RM 14.33) (19-001-008)																
Year: 2000																
0.10	E	8/24/2000	3.0	11(5)	5(5)	1(1)	0(1)	1(1)	3(3)	28.2(5)	5.3(5)	12.6(5)	2.8(1)	0.00(5)	1132(5)	42
TRIB. TO CUYAHOGA R. (RM 15.11) (19-001-009)																
Year: 2000																
0.10	E	8/24/2000	3.0	5(3)	4(3)	1(1)	0(1)	0(1)	2(3)	90.6(1)	4.3(5)	39.5(3)	0.0(1)	0.00(5)	44(1)	28
TRIB. TO CUYAHOGA R. (RM 16.24) (19-001-010)																
Year: 2000																
0.03	E	8/9/2000	3.0	16(5)	9(5)	3(3)	1(1)	0(1)	4(3)	54.9(3)	11.5(5)	22.7(5)	6.1(1)	0.00(5)	668(5)	42
SAGAMORE CREEK (19-001-011)																
Year: 2000																
2.92	E	8/9/2000	3.0	12(5)	4(3)	2(3)	0(1)	1(1)	2(1)	43.7(3)	24.2(1)	31.2(3)	5.4(1)	0.00(5)	2322(5)	32
0.20	E	7/13/2000	6.0	16(5)	5(3)	2(3)	3(3)	4(5)	6(5)	57.4(1)	11.6(5)	24.6(5)	9.2(1)	0.00(5)	646(5)	46

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
ECKERT DITCH (19-001-018)																
Year: 2000																
1.70	E	8/22/2000	3.0	13(5)	3(3)	1(1)	3(3)	4(5)	5(5)	39.8(3)	7.0(5)	48.5(3)	70.8(5)	0.00(5)	206(3)	46
1.09	D	8/22/2000	8.0	13(3)	1(1)	0(1)	0(1)	0(1)	1(1)	24.9(5)	7.2(5)	0.0(5)	72.7(5)	0.00(5)	236(3)	36
TRIB. TO ECKERT DITCH (RM 0.92) (19-001-019)																
Year: 2000																
0.20	E	8/27/2000	3.0	10(5)	2(1)	0(1)	0(1)	0(1)	1(1)	38.0(3)	1.0(5)	1.0(5)	68.7(5)	0.00(5)	242(3)	36
HARPER DITCH (19-001-020)																
Year: 2000																
0.20	E	8/21/2000	5.0	18(5)	4(3)	1(1)	4(5)	4(5)	6(5)	38.3(3)	31.6(1)	12.1(5)	49.3(5)	0.00(5)	438(3)	46
TRIB. TO HARPER DITCH (RM 0.61) (19-001-021)																
Year: 2000																
0.30	E	8/21/2000	3.0	12(5)	2(1)	1(1)	2(3)	3(5)	3(3)	63.8(1)	33.0(1)	48.0(3)	25.5(3)	0.00(5)	202(3)	34
TRIB. TO CUYAHOGA R. (RM 65.19) (19-001-023)																
Year: 2000																
0.30	E	8/21/2000	3.0	8(3)	2(1)	0(1)	0(1)	0(1)	1(1)	64.6(1)	4.6(5)	27.7(5)	67.7(5)	0.00(5)	46(1)	30
TRIB. TO CUYAHOGA R. (RM 69.43) (19-001-024)																
Year: 2000																
0.20	E	8/18/2000	4.0	10(3)	0(1)	1(1)	1(1)	2(3)	2(1)	15.6(5)	6.5(5)	16.9(5)	32.5(3)	0.00(5)	130(3)	36
TRIB. TO CUYAHOGA R. (RM 84.60) (19-001-025)																
Year: 2000																
0.70	E	8/18/2000	3.0	11(5)	3(3)	2(3)	1(1)	3(5)	3(3)	74.8(1)	15.1(3)	46.8(3)	33.1(5)	0.00(5)	70(1)	38

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
TRIB. TO CUYAHOGA R. (RM 88.02) (19-001-026)																
Year: 2000																
1.60	E	8/17/2000	5.0	12(5)	5(3)	0(1)	1(1)	1(1)	1(1)	86.5(1)	50.9(1)	51.0(3)	26.5(3)	0.10(5)	272(3)	28
TRIB. TO CUYAHOGA R. (RM 93.65) (19-001-028)																
Year: 2000																
0.10	E	8/2/2000	4.0	15(5)	3(3)	1(1)	2(3)	4(5)	3(3)	42.9(3)	20.1(3)	30.5(3)	41.4(5)	0.00(5)	450(5)	44
TRIB. TO CUYAHOGA R. (63.82) (19-001-041)																
Year: 2000																
0.10	E	8/21/2000	4.0	14(5)	4(3)	1(1)	1(1)	3(5)	3(3)	41.1(3)	7.7(5)	36.6(3)	27.7(3)	0.00(5)	1058(5)	42
MILL CREEK (19-006-000)																
Year: 2000																
0.12	E	8/16/2000	19.0	13(3)	9(5)	1(1)	3(1)	1(1)	5(3)	41.2(3)	35.5(1)	27.5(5)	10.7(1)	0.00(5)	495(3)	32
TINKERS CREEK (19-007-000)																
Year: 2000																
28.80	E	8/22/2000	4.0	10(3)	2(1)	0(1)	0(1)	1(1)	1(1)	38.7(3)	18.2(3)	19.9(5)	73.8(5)	1.49(1)	412(5)	30
25.05	D	9/14/2000	19.0	11(3)	1(1)	0(1)	0(1)	1(1)	1(1)	59.8(1)	11.3(5)	51.6(3)	82.5(5)	1.03(5)	58(1)	28
	D	8/15/2000	19.0	13(3)	2(1)	0(1)	0(1)	1(1)	1(1)	57.1(1)	25.9(3)	36.6(3)	67.9(5)	3.57(1)	72(1)	22
WOOD CREEK (19-007-001)																
Year: 2000																
0.15	D	7/13/2000	3.0	2(1)	2(1)	0(1)	0(1)	0(1)	0(1)	98.3(1)	0.0(5)	98.3(1)	0.0(1)	0.00(5)	2(1)	20
DEER LICK RUN (19-007-002)																
Year: 2000																
0.76	E	7/13/2000	1.0	0(1)	0(1)	0(1)	0(1)	0(1)	0(1)	0.0(1)	0.0(1)	0.0(1)	0.0(1)	0.00(1)	0(1)	12

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
BEAR CREEK (19-007-007)																
Year: 2000																
0.20	E	7/13/2000	5.0	7(3)	4(3)	1(1)	0(1)	1(1)	2(1)	44.0(3)	3.7(5)	32.5(3)	1.1(1)	0.14(5)	792(5)	32
HAWTHORN CREEK (19-007-008)																
Year: 2000																
0.75	E	7/13/2000	7.0	8(3)	6(5)	1(1)	0(1)	0(1)	2(1)	67.1(1)	3.8(5)	15.8(5)	0.7(1)	0.00(5)	579(3)	32
BEAVER MEADOW RUN (19-007-010)																
Year: 2000																
1.20	E	8/16/2000	4.0	5(1)	3(3)	1(1)	0(1)	0(1)	2(1)	35.9(3)	0.8(5)	4.0(5)	0.0(1)	0.20(5)	484(5)	32
0.11	E	8/16/2000	6.0	13(5)	6(5)	1(1)	0(1)	1(1)	2(1)	44.9(3)	7.5(5)	17.9(5)	5.2(1)	0.00(5)	478(3)	36
TRIB. TO TINKERS CREEK (RM 25.44/0.18) (19-007-020)																
Year: 2000																
0.58	E	8/15/2000	3.0	9(5)	3(3)	0(1)	0(1)	1(1)	1(1)	67.1(1)	16.6(3)	70.7(1)	20.0(3)	0.00(5)	566(5)	30
TRIB. TO TINKERS CREEK (RM 27.72) (19-007-021)																
Year: 2000																
0.79	E	9/27/2000	4.0	9(3)	2(1)	0(1)	0(1)	0(1)	1(1)	81.2(1)	24.7(1)	43.5(3)	38.8(5)	0.00(5)	32(1)	24
POND BROOK (19-008-000)																
Year: 2000																
3.70	E	9/27/2000	2.0	7(3)	0(1)	0(1)	0(1)	0(1)	0(1)	6.2(5)	0.0(5)	0.0(5)	81.5(5)	0.00(5)	122(3)	36
BRANDYWINE CREEK (19-010-000)																
Year: 2000																
10.00	E	8/15/2000	4.0	8(3)	3(3)	1(1)	0(1)	0(1)	2(1)	79.7(1)	18.4(3)	53.1(3)	20.3(3)	1.33(1)	152(3)	24
7.02	E	8/15/2000	9.0	14(5)	5(3)	0(1)	0(1)	0(1)	2(1)	65.7(1)	32.1(1)	45.3(3)	56.6(5)	0.43(3)	360(3)	28

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
INDIAN CREEK (19-010-001)																
Year: 2000																
0.90	E	8/15/2000	5.0	10(3)	7(5)	2(3)	0(1)	0(1)	3(3)	55.6(3)	8.5(5)	31.2(3)	9.7(1)	0.07(5)	1268(5)	38
0.01	E	8/14/2000	7.0	10(3)	6(5)	2(3)	0(1)	0(1)	3(3)	73.9(1)	8.6(5)	25.9(5)	12.0(1)	0.00(5)	170(3)	36
STANFORD RUN (19-011-000)																
Year: 2000																
0.90	E	8/14/2000	2.0	10(5)	6(5)	4(5)	1(1)	1(3)	4(5)	63.1(1)	6.8(5)	43.5(3)	36.3(5)	0.00(5)	388(5)	48
SLIPPER RUN (19-012-000)																
Year: 2000																
0.16	E	8/4/2000	1.0	8(5)	5(5)	4(5)	1(3)	1(3)	4(5)	93.9(1)	1.2(5)	47.7(3)	3.4(1)	0.00(5)	32(1)	42
BOSTON RUN (19-013-000)																
Year: 2000																
0.22	E	8/4/2000	3.0	16(5)	9(5)	4(5)	2(3)	2(3)	5(5)	49.2(3)	19.1(3)	32.6(3)	27.6(3)	0.00(5)	1112(5)	48
HASKELL RUN (19-014-000)																
Year: 2000																
0.20	E	8/4/2000	2.0	17(5)	6(5)	4(5)	2(3)	2(3)	4(5)	80.3(1)	28.0(1)	46.7(3)	16.3(3)	0.00(5)	288(5)	44
SALT RUN (19-016-000)																
Year: 2000																
0.30	E	8/4/2000	3.0	17(5)	9(5)	6(5)	2(3)	2(3)	5(5)	60.9(1)	29.4(1)	29.1(5)	10.7(1)	0.00(5)	506(5)	44
DICKERSON RUN (19-017-000)																
Year: 2000																
0.60	E	8/4/2000	2.0	14(5)	5(5)	3(3)	1(1)	2(3)	2(3)	71.9(1)	30.3(1)	47.5(3)	24.4(3)	0.00(5)	286(5)	38

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
LANGES RUN (19-018-000)																
Year: 2000																
0.66	E	8/8/2000	1.0	15(5)	7(5)	5(5)	1(3)	1(3)	4(5)	67.4(1)	6.5(5)	35.4(3)	21.5(3)	0.00(5)	374(5)	48
ROBINSON RUN (19-019-000)																
Year: 2000																
0.10	E	8/8/2000	1.0	12(5)	5(5)	3(3)	0(1)	2(5)	2(5)	66.1(1)	10.3(3)	21.2(5)	8.8(1)	0.00(5)	224(5)	44
YELLOW CREEK (19-021-000)																
Year: 2000																
5.30	E	8/9/2000	11.0	13(3)	7(5)	3(3)	3(3)	2(3)	5(3)	58.7(1)	28.3(3)	48.2(3)	43.0(3)	0.09(5)	702(3)	38
NORTH FORK YELLOW CREEK (19-022-000)																
Year: 2000																
0.10	E	8/9/2000	10.0	18(5)	9(5)	3(3)	4(3)	3(3)	6(5)	38.7(3)	10.2(5)	8.9(5)	31.7(3)	0.00(5)	1295(5)	50
WOODWARD CREEK (19-023-000)																
Year: 2000																
0.60	E	8/8/2000	3.0	17(5)	9(5)	3(3)	2(3)	1(1)	5(5)	76.1(1)	17.4(3)	36.6(3)	16.8(3)	0.00(5)	316(5)	42
MUD BROOK (19-024-000)																
Year: 2000																
8.34	E	8/23/2000	15.0	12(3)	3(1)	0(1)	0(1)	1(1)	1(1)	63.7(1)	18.0(3)	84.1(1)	59.3(5)	0.00(5)	208(3)	26
TRIB. TO MUD BROOK (RM 5.48) (19-024-001)																
Year: 2000																
0.40	E	8/24/2000	3.0	13(5)	5(5)	1(1)	0(1)	1(1)	1(1)	70.8(1)	14.1(3)	69.5(1)	41.1(5)	0.00(5)	364(5)	34

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
FISH CREEK (19-026-000)																
Year: 2000																
1.73	E	8/23/2000	8.0	11(3)	3(3)	1(1)	0(1)	1(1)	2(1)	66.4(1)	25.8(3)	68.1(1)	33.6(3)	0.00(5)	148(1)	24
0.38	E	8/23/2000	11.0	13(3)	3(1)	1(1)	1(1)	2(3)	4(3)	88.4(1)	49.1(1)	38.2(3)	28.5(3)	0.37(5)	46(1)	26
PLUM CREEK (19-027-000)																
Year: 2000																
3.70	E	8/23/2000	4.0	10(3)	2(1)	2(3)	1(1)	3(5)	3(3)	54.6(3)	11.8(5)	52.0(3)	48.7(5)	0.00(5)	552(5)	42
0.15	E	8/22/2000	13.0	19(5)	7(5)	0(1)	4(3)	2(1)	4(3)	49.0(3)	23.0(3)	44.4(3)	63.6(5)	0.00(5)	448(3)	40
POTTER CREEK (19-028-005)																
Year: 2000																
1.47	E	9/28/2000	3.0	10(3)	2(1)	1(1)	0(1)	2(3)	1(1)	54.7(3)	9.4(5)	63.1(1)	68.0(5)	0.00(5)	145(3)	32
	E	8/24/2000	3.0	10(3)	2(1)	0(1)	0(1)	2(3)	1(1)	50.7(3)	7.0(5)	62.8(1)	59.1(5)	0.00(5)	212(3)	32
SAWYER BROOK (19-034-000)																
Year: 2000																
0.30	E	8/18/2000	3.0	12(5)	3(3)	0(1)	1(1)	2(3)	2(3)	52.2(3)	34.1(1)	42.3(3)	42.3(5)	0.55(5)	174(3)	36
TRIB. TO BRIDGE CREEK (RM 0.52) (19-035-001)																
Year: 2000																
0.01	D	8/17/2000	8.0	13(3)	1(1)	0(1)	0(1)	1(1)	2(1)	69.7(1)	8.5(5)	1.9(5)	70.6(5)	0.00(5)	128(1)	30
WEST BRANCH CUYAHOGA RIVER (19-036-000)																
Year: 2000																
12.30	E	8/3/2000	7.0	15(5)	4(3)	1(1)	0(1)	3(3)	3(3)	42.7(3)	18.9(3)	42.9(3)	56.4(5)	0.00(5)	447(3)	38
10.20	D	8/2/2000	13.0	10(3)	1(1)	0(1)	0(1)	0(1)	0(1)	24.5(5)	0.0(5)	0.0(5)	58.8(5)	0.00(5)	136(1)	34

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
DIEDRICH CREEK (19-036-001)																
Year: 2000																
0.60	E	8/3/2000	5.0	19(5)	5(3)	1(1)	3(3)	4(5)	5(5)	40.3(3)	15.9(3)	45.3(3)	47.4(5)	0.21(5)	556(5)	46
BUTTERNUT CREEK (19-037-000)																
Year: 2000																
0.80	D	8/2/2000	4.0	14(5)	2(1)	1(1)	0(1)	2(3)	1(1)	21.5(5)	6.9(5)	3.7(5)	56.6(5)	0.00(5)	322(3)	40
TARE CREEK (19-038-000)																
Year: 2000																
3.10	E	8/16/2000	5.0	10(3)	5(3)	1(1)	0(1)	1(1)	3(3)	41.6(3)	29.9(1)	80.4(1)	55.8(5)	0.08(5)	1380(5)	32
1.59	D	8/17/2000	6.0	15(5)	2(1)	0(1)	0(1)	0(1)	2(1)	45.3(3)	18.5(3)	7.3(5)	62.5(5)	0.43(5)	190(3)	34
DOAN BROOK (19-039-000)																
Year: 2000																
6.64	E	8/29/2000	1.0	4(3)	3(3)	1(1)	0(1)	0(1)	1(1)	99.2(1)	0.3(5)	97.2(1)	59.1(5)	0.15(5)	10(1)	28
3.10	E	8/29/2000	8.0	1(1)	0(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	0.0(1)	100.0(1)	100.0(1)	0.00(1)	0(1)	12
1.30	E	8/29/2000	9.0	2(1)	1(1)	0(1)	0(1)	0(1)	0(1)	100.0(1)	20.5(3)	83.1(1)	79.5(5)	1.95(1)	0(1)	18
EUCLID CREEK (19-041-000)																
Year: 2000																
7.10	E	8/28/2000	3.0	5(1)	4(3)	1(1)	0(1)	0(1)	1(1)	53.2(3)	0.5(5)	47.8(3)	0.4(1)	0.00(5)	1050(5)	30
3.30	E	8/28/2000	9.0	5(1)	3(1)	1(1)	0(1)	0(1)	2(1)	45.7(3)	0.8(5)	29.9(5)	0.3(1)	0.00(5)	544(3)	28
EAST BRANCH EUCLID CREEK (19-041-001)																
Year: 2000																
0.10	E	8/25/2000	13.0	6(1)	4(3)	1(1)	0(1)	0(1)	1(1)	50.8(3)	0.6(5)	18.1(5)	1.1(1)	0.00(5)	489(3)	30

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 2000																	
87.26	D	9/14/2000	38.0	18(3)	5(5)	2(3)	0(1)	3(3)	25.7(3)	51.0(1)	30.1(3)	4.8(3)	64.2(5)	0.24(5)	185(1)	36	6.9
	D	8/3/2000	38.0	18(3)	4(5)	1(1)	0(1)	4(3)	18.1(3)	61.3(1)	30.7(3)	7.7(5)	58.5(5)	0.00(5)	202(3)	38	6.9
64.30	D	9/13/2000	178.0	21(3)	4(5)	5(5)	1(1)	5(3)	36.9(5)	8.5(5)	3.0(5)	16.5(5)	78.8(5)	0.00(5)	324(3)	50	8.8
	D	8/18/2000	178.0	19(3)	3(3)	3(3)	1(1)	4(3)	37.8(5)	4.5(5)	1.3(5)	14.1(5)	82.7(5)	0.32(5)	406(3)	46	8.8
42.60	D	8/30/2000	340.0	15(3)	3(3)	2(1)	0(1)	3(1)	47.5(5)	9.8(5)	6.8(5)	10.6(5)	67.0(5)	0.42(5)	320(3)	42	8.2
	D	8/1/2000	340.0	14(3)	4(5)	2(1)	0(1)	2(1)	60.3(5)	7.9(5)	6.2(5)	7.2(5)	64.7(5)	0.34(5)	404(3)	44	8.1
TINKERS CREEK (19-007-000)																	
Year: 2000																	
18.00	D	9/14/2000	48.0	14(3)	5(5)	2(3)	0(1)	1(1)	23.3(3)	76.7(1)	65.5(1)	2.0(3)	31.1(3)	1.35(1)	104(1)	26	5.7
	D	7/14/2000	48.0	10(3)	3(3)	1(1)	0(1)	1(1)	27.1(3)	83.3(1)	62.6(1)	3.5(3)	30.5(3)	0.49(5)	51(1)	26	4.6
13.80	D	10/3/2000	54.0	12(3)	4(5)	1(1)	0(1)	1(1)	19.0(3)	71.7(1)	41.6(1)	4.8(3)	43.1(3)	0.30(5)	141(1)	28	6.8
	D	7/14/2000	54.0	13(3)	4(5)	2(3)	0(1)	1(1)	21.6(3)	79.9(1)	60.7(1)	4.4(3)	29.6(3)	1.18(3)	102(1)	28	5.9
8.65	D	10/3/2000	69.0	11(3)	4(5)	1(1)	0(1)	1(1)	29.2(3)	68.2(1)	46.9(1)	2.1(3)	14.1(1)	3.13(1)	92(1)	22	5.7
	D	7/12/2000	69.0	11(3)	3(3)	1(1)	0(1)	1(1)	19.4(3)	67.2(1)	46.8(1)	0.3(1)	9.0(1)	0.67(3)	147(1)	20	5.5
7.20	D	10/3/2000	77.0	7(1)	0(1)	1(1)	0(1)	1(1)	20.7(3)	31.6(3)	14.1(5)	0.0(1)	6.6(1)	0.09(5)	1146(5)	28	7.5
0.10	D	7/12/2000	96.0	13(3)	1(1)	2(3)	0(1)	2(1)	21.3(3)	16.1(5)	11.6(5)	1.3(3)	38.7(3)	0.65(5)	126(1)	34	6.1
BRANDYWINE CREEK (19-010-000)																	
Year: 2000																	
0.26	E	9/28/2000	27.0	21(5)	4(5)	2(3)	0(1)	4(5)	16.0(1)	34.9(3)	19.6(3)	0.2(1)	23.7(1)	0.12(3)	1569(5)	36	8.7
	E	8/14/2000	27.0	21(5)	4(5)	2(3)	0(1)	4(5)	14.0(1)	18.8(5)	8.3(5)	0.2(1)	13.1(1)	0.02(5)	5298(5)	42	8.8
YELLOW CREEK (19-021-000)																	
Year: 2000																	
3.00	E	9/13/2000	26.0	15(3)	1(1)	2(3)	1(1)	3(3)	55.2(5)	36.1(3)	6.3(5)	0.0(1)	41.3(3)	0.00(5)	1302(5)	38	8.7
	D	8/8/2000	26.0	18(5)	2(3)	2(3)	2(3)	3(3)	43.2(5)	36.3(3)	10.2(5)	0.0(1)	38.8(3)	0.23(3)	1373(5)	42	9.0
0.14	D	8/30/2000	31.0	18(3)	2(3)	2(3)	2(3)	4(3)	30.0(3)	26.1(5)	9.1(5)	0.0(1)	24.7(1)	0.00(5)	2224(5)	40	8.6

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
0.14	D	8/9/2000	31.0	20(5)	4(5)	2(3)	1(1)	4(3)	34.9(3)	28.9(3)	9.4(5)	0.2(1)	23.5(1)	0.09(5)	1246(5)	40	8.2
MUD BROOK (19-024-000)																	
Year: 2000																	
0.18	E	8/24/2000	29.0	18(3)	2(3)	2(3)	0(1)	4(3)	22.4(3)	19.7(5)	11.0(5)	0.1(1)	18.9(1)	0.36(3)	2238(5)	36	8.4
BREAKNECK CREEK (19-028-000)																	
Year: 2000																	
14.60	E	9/27/2000	42.0	7(1)	3(3)	0(1)	0(1)	0(1)	0.0(1)	34.8(3)	34.8(1)	54.4(5)	10.9(1)	0.00(5)	47(1)	24	4.4
7.00	D	8/30/2000	56.0	18(3)	5(5)	1(1)	0(1)	5(5)	31.4(3)	19.4(5)	5.2(5)	28.8(5)	66.0(5)	0.52(5)	231(3)	46	8.3
LITTLE CUYAHOGA RIVER (19-030-000)																	
Year: 2000																	
0.30	D	9/13/2000	62.0	17(3)	2(3)	2(3)	0(1)	3(3)	34.6(3)	40.7(3)	17.0(5)	0.1(1)	29.0(3)	0.27(3)	999(5)	36	8.8
	D	8/1/2000	62.0	16(3)	2(3)	2(3)	0(1)	2(1)	61.3(5)	25.8(3)	15.2(5)	0.7(1)	54.8(5)	0.30(3)	1104(5)	38	8.5
WEST BRANCH CUYAHOGA RIVER (19-036-000)																	
Year: 2000																	
5.60	D	9/14/2000	25.0	23(5)	4(5)	3(5)	0(1)	6(5)	21.5(3)	56.3(1)	49.6(1)	8.6(5)	39.8(3)	0.00(5)	222(3)	42	8.0
	D	8/3/2000	25.0	24(5)	4(5)	3(5)	0(1)	6(5)	37.1(5)	42.2(3)	35.7(1)	9.4(5)	52.7(5)	0.00(5)	306(3)	48	8.5
EUCLID CREEK (19-041-000)																	
Year: 2000																	
1.61	D	9/28/2000	22.0	8(1)	1(1)	1(1)	0(1)	0(1)	7.1(1)	32.1(3)	4.8(5)	0.0(1)	0.9(1)	0.00(5)	344(3)	24	5.8
	D	8/29/2000	22.0	7(1)	1(1)	1(1)	0(1)	0(1)	8.7(1)	34.2(3)	3.6(5)	0.0(1)	2.2(1)	0.36(5)	272(3)	24	5.6
0.66	D	9/28/2000	23.0	13(3)	3(3)	2(3)	1(1)	0(1)	6.2(1)	64.4(1)	38.0(1)	1.0(3)	7.4(1)	0.21(3)	512(3)	24	7.6
	D	8/29/2000	23.0	13(3)	4(5)	1(1)	0(1)	0(1)	5.2(1)	46.6(3)	27.1(3)	0.8(1)	17.1(1)	1.90(1)	296(3)	24	6.1

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 2000																	
83.80	A	7/11/2000	82.0	17(3)	6(5)	3(3)	0(1)	17.4(1)	25.2(3)	39.4(1)	35.5(1)	16.8(5)	46.5(3)	2.58(1)	188(1)	28	7.7
55.80	A	7/11/2000	292.0	20(3)	7(5)	3(3)	0(1)	9.1(1)	30.5(3)	36.4(1)	33.1(1)	18.8(5)	42.9(3)	6.49(1)	196(1)	28	8.2
49.78	A	9/13/2000	328.0	17(3)	6(5)	2(1)	0(1)	13.6(1)	18.9(1)	32.0(1)	30.3(1)	22.4(5)	45.2(3)	0.00(5)	310(3)	30	8.5
	A	7/5/2000	328.0	19(3)	5(5)	2(1)	0(1)	4.4(1)	21.0(1)	52.2(1)	51.6(1)	12.5(5)	34.7(3)	0.29(5)	328(3)	30	8.3
39.70	A	9/13/2000	433.0	17(3)	4(5)	2(1)	0(1)	19.3(3)	53.1(5)	36.0(1)	33.3(1)	21.9(5)	44.3(3)	0.88(3)	292(3)	34	8.1
	A	7/6/2000	433.0	15(3)	4(5)	2(1)	0(1)	13.7(1)	47.4(3)	30.5(1)	27.4(3)	17.7(5)	48.2(3)	0.88(3)	314(3)	32	8.4
33.20	A	9/13/2000	480.0	15(3)	1(1)	2(1)	0(1)	11.8(1)	48.2(3)	46.8(1)	38.9(1)	2.5(1)	48.6(3)	3.93(1)	298(3)	20	8.0
	A	7/6/2000	480.0	15(3)	2(3)	2(1)	1(1)	5.9(1)	57.1(5)	56.5(1)	52.7(1)	2.7(1)	37.9(3)	0.59(3)	294(3)	26	7.4
26.50	A	9/29/2000	499.0	15(3)	4(5)	2(1)	0(1)	9.5(1)	28.7(3)	36.5(1)	34.3(1)	2.8(1)	44.9(3)	0.28(5)	456(5)	30	7.7
	A	7/11/2000	499.0	18(3)	5(5)	2(1)	0(1)	8.1(1)	45.1(3)	39.9(1)	38.5(1)	5.0(1)	50.8(3)	0.24(5)	506(5)	30	8.1
15.61	A	7/12/2000	698.0	21(5)	4(5)	5(3)	0(1)	18.4(1)	34.6(3)	25.4(3)	27.2(3)	8.3(3)	54.4(5)	3.06(1)	488(5)	38	8.9
10.95	A	7/7/2000	743.0	17(3)	3(3)	4(3)	0(1)	14.7(1)	22.6(1)	33.3(1)	39.2(1)	9.8(3)	47.1(3)	2.94(1)	136(1)	22	6.7
8.30	A	7/7/2000	746.0	15(3)	2(3)	3(3)	0(1)	16.1(1)	22.9(1)	19.1(3)	18.2(3)	0.9(1)	72.5(5)	3.39(1)	382(3)	28	8.0
7.10	A	7/7/2000	786.0	17(3)	3(3)	3(3)	0(1)	5.6(1)	13.5(1)	17.5(3)	42.1(1)	5.6(3)	42.9(3)	3.97(1)	208(3)	26	7.5

2003 Sampling Results

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2003																	
54.32	D	7/3/2003	293.0	18(3)	5(5)	2(1)	2(1)	3(3)	61.0(5)	3.4(5)	2.9(5)	5.0(3)	90.1(5)	1.13(3)	644(3)	42	8.8
49.78	D	7/3/2003	328.0	16(3)	5(5)	2(1)	1(1)	2(1)	21.3(3)	51.9(1)	48.5(1)	7.8(5)	38.4(3)	0.75(3)	168(1)	28	7.5

No Boating Sites

2004 Sampling Results

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Number of: Sunfish Species	Number of: Sucker Species	Number of: Intolerant Species	Number of: Darter Species	Percent of Individuals: Simple Lithophils	Percent of Individuals: Tolerant Fishes	Percent of Individuals: Omni-vores	Percent of Individuals: Top Carni-vores	Percent of Individuals: Insect-ivores	Percent of Individuals: DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2004																	
55.80	D	10/6/2004	292.0	19(3)	4(5)	2(1)	1(1)	3(3)	48.1(5)	11.4(5)	15.2(5)	19.0(5)	63.3(5)	0.00(5)	105(1)	44	8.9

No Boating Sites

2005 Sampling Results

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2005																	
55.80	D	7/6/2005	292.0	15(3)	5(5)	1(1)	1(1)	2(1)	37.0(5)	19.0(3)	16.0(5)	14.0(5)	61.0(5)	0.00(5)	162(1)	40	8.3
54.88	D	7/6/2005	293.0	13(3)	3(3)	2(1)	1(1)	2(1)	47.5(5)	17.5(3)	11.3(5)	32.5(5)	55.0(5)	0.00(5)	141(1)	38	7.4
54.32	D	7/6/2005	293.0	20(3)	5(5)	2(1)	2(1)	3(3)	60.8(5)	19.1(3)	17.7(5)	5.4(5)	73.5(5)	0.00(5)	330(3)	44	8.9
49.78	E	7/6/2005	328.0	15(3)	2(3)	2(1)	1(1)	3(1)	59.7(5)	16.9(3)	14.3(5)	13.6(5)	71.4(5)	0.00(5)	256(3)	40	7.7

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2005																	
53.70	A	7/5/2005	294.0	17(3)	6(5)	3(3)	0(1)	4.2(1)	17.5(1)	19.2(3)	17.5(3)	22.5(5)	52.5(3)	0.00(5)	194(1)	34	8.8
50.00	A	7/5/2005	326.0	11(3)	4(5)	2(1)	0(1)	1.4(1)	20.4(1)	28.9(1)	21.8(3)	14.8(5)	63.4(5)	0.70(5)	202(3)	34	7.6

2006 Sampling Results

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	IBI
FURNACE RUN (19-020-000)																
Year: 2006																
7.95	E	8/17/2006	3.0	8(3)	3(3)	2(3)	1(1)	3(5)	3(3)	14.5(5)	3.2(5)	8.1(5)	32.5(5)	0.00(5)	1906(5)	48
	E	7/6/2006	3.0	10(5)	3(3)	2(3)	1(1)	3(5)	3(3)	13.8(5)	1.9(5)	3.9(5)	40.6(5)	0.00(5)	1474(5)	50
7.76	E	8/17/2006	5.0	16(5)	6(5)	3(3)	2(1)	3(3)	4(3)	5.6(5)	0.8(5)	4.4(5)	31.8(3)	0.00(5)	5366(5)	48
	E	7/5/2006	5.0	15(5)	6(5)	3(3)	2(1)	3(3)	4(3)	4.8(5)	0.8(5)	3.0(5)	33.6(3)	0.00(5)	3940(5)	48
7.25	E	8/18/2006	6.0	10(3)	4(3)	3(3)	2(1)	3(3)	4(3)	26.5(5)	7.6(5)	13.8(5)	43.0(5)	0.00(5)	1116(5)	46
	E	7/6/2006	6.0	12(3)	6(5)	3(3)	2(1)	3(3)	4(3)	46.4(3)	7.3(5)	16.8(5)	40.1(5)	0.00(5)	428(3)	44
6.50	E	8/18/2006	8.0	19(5)	7(5)	3(3)	4(3)	4(5)	6(5)	16.5(5)	1.4(5)	8.8(5)	23.1(3)	0.00(5)	2552(5)	54
	E	7/6/2006	8.0	14(5)	7(5)	3(3)	3(3)	3(3)	5(3)	22.7(5)	3.1(5)	14.0(5)	36.1(3)	0.00(5)	1285(5)	50
4.75	E	8/18/2006	11.0	10(3)	4(3)	1(1)	2(1)	1(1)	4(3)	16.1(5)	1.0(5)	10.6(5)	21.5(3)	0.00(5)	2692(5)	40
	E	7/6/2006	11.0	12(3)	5(3)	3(3)	3(3)	3(3)	5(3)	11.3(5)	0.2(5)	9.3(5)	20.4(1)	0.00(5)	2212(5)	44
ROCK CREEK (19-020-002)																
Year: 2006																
0.20	E	8/17/2006	1.0	11(5)	3(3)	2(3)	1(3)	3(5)	3(5)	45.6(3)	5.0(5)	27.8(5)	11.8(3)	0.00(5)	340(5)	50
	E	7/5/2006	1.0	11(5)	5(5)	3(3)	2(5)	2(5)	4(5)	62.3(1)	4.3(5)	42.3(3)	8.9(1)	0.00(5)	198(5)	48

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
FURNACE RUN (19-020-000)																	
Year: 2006																	
0.27	D	8/23/2006	20.0	15(3)	3(3)	2(3)	0(1)	2(3)	31.1(3)	35.3(3)	4.3(5)	0.0(1)	21.5(1)	0.00(5)	1108(5)	36	7.8

No Boating Sites

2007 Sampling Results

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	IBI	MIwb
CUYAHOGA RIVER (19-001-000)																	
Year: 2007																	
55.80	E	6/20/2007	292.0	15(3)	4(5)	3(3)	1(1)	2(1)	47.0(5)	11.6(5)	9.8(5)	9.2(5)	61.6(5)	0.00(5)	218(3)	46	8.3
54.88	E	9/21/2007	293.0	13(3)	4(5)	2(1)	1(1)	2(1)	38.7(5)	14.9(5)	11.9(5)	29.3(5)	57.3(5)	0.00(5)	514(3)	44	9.0
	E	6/20/2007	293.0	12(3)	4(5)	2(1)	1(1)	2(1)	40.0(5)	6.3(5)	2.1(5)	46.3(5)	51.6(3)	0.00(5)	134(1)	40	7.4
54.32	D	9/21/2007	293.0	15(3)	3(3)	2(1)	1(1)	3(3)	70.6(5)	25.6(3)	25.4(3)	2.1(3)	72.4(5)	0.00(5)	1440(5)	40	8.6
	D	6/22/2007	293.0	15(3)	5(5)	3(3)	1(1)	2(1)	69.0(5)	9.4(5)	6.4(5)	7.1(5)	86.6(5)	0.76(3)	536(3)	44	8.4
52.00	D	9/18/2007	319.0	18(3)	6(5)	2(1)	0(1)	3(3)	22.9(3)	65.1(1)	58.8(1)	3.3(3)	37.7(3)	0.00(5)	350(3)	32	7.3
	D	7/16/2007	319.0	17(3)	3(3)	2(1)	1(1)	3(3)	46.1(5)	44.2(1)	43.3(1)	2.8(3)	33.8(3)	0.00(5)	387(3)	32	7.8
50.00	D	9/18/2007	326.0	17(3)	2(3)	2(1)	1(1)	3(1)	51.3(5)	34.7(1)	28.9(3)	4.0(3)	51.5(3)	0.00(5)	460(3)	32	8.9
	D	7/16/2007	326.0	20(3)	4(5)	2(1)	1(1)	3(1)	59.0(5)	48.5(1)	47.6(1)	3.6(3)	44.4(3)	0.24(5)	318(3)	32	8.5

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Number of: Sunfish Species	Number of: Sucker Species	Number of: Intolerant Species	Percent of Individuals: Rnd Body Sucker	Percent of Individuals: Simple Lithophils	Percent of Individuals: Tolerant Fishes	Percent of Individuals: Omni-vores	Percent of Individuals: Top Carni-vores	Percent of Individuals: Insect-ivores	Percent of Individuals: DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2007																	
51.00	A	6/24/2007	323.0	16(3)	6(5)	2(1)	1(1)	11.9(1)	35.8(3)	23.9(3)	19.4(3)	26.9(5)	53.7(3)	2.99(3)	170(1)	32	8.4
48.70	A	9/27/2007	331.0	12(3)	4(5)	2(1)	0(1)	4.2(1)	9.9(1)	42.3(1)	39.4(1)	12.7(5)	46.5(3)	1.41(5)	137(1)	28	6.6
	A	6/24/2007	331.0	9(1)	3(3)	2(1)	0(1)	13.2(1)	16.2(1)	41.2(1)	32.4(1)	10.3(5)	44.1(3)	2.94(3)	133(1)	22	6.3

2008 Sampling Results

Wading Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Darter Species	Percent of Individuals: Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (0.3km)	**IBI**	**MIwb**
TINKERS CREEK (19-007-000)																	
Year: 2008																	
0.10	D	9/23/2008	96.0	20(3)	3(3)	3(3)	0(1)	3(3)	34.0(3)	26.8(3)	38.9(1)	1.7(3)	43.4(3)	0.39(3)	855(5)	34	9.3
	D	8/19/2008	96.0	18(3)	2(3)	3(3)	0(1)	3(3)	54.5(5)	23.3(3)	22.2(3)	2.5(3)	57.6(5)	0.16(5)	730(3)	40	9.1

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Sunfish Species	Sucker Species	Intolerant Species	Percent of Individuals: Rnd Body Sucker	Simple Lithophils	Tolerant Fishes	Omni-vores	Top Carni-vores	Insect-ivores	DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
CUYAHOGA RIVER (19-001-000)																	
Year: 2008																	
57.67	A	8/5/2008	208.0	21(5)	6(5)	3(3)	1(1)	8.8(1)	39.6(3)	21.5(3)	19.1(3)	8.1(3)	57.7(5)	0.24(5)	642(5)	42	9.6
42.60	A	8/5/2008	340.0	12(3)	2(3)	2(1)	1(1)	26.4(3)	62.1(5)	11.5(5)	9.2(5)	19.9(5)	65.5(5)	0.38(5)	544(5)	46	8.5
39.70	A	8/5/2008	433.0	16(3)	4(5)	2(1)	0(1)	22.8(3)	43.7(3)	30.0(1)	20.8(3)	21.3(5)	44.7(3)	0.51(5)	276(3)	36	8.4
33.20	A	8/7/2008	480.0	13(3)	3(3)	2(1)	0(1)	29.1(3)	72.1(5)	15.5(3)	13.0(5)	9.1(3)	75.8(5)	0.00(5)	558(5)	42	8.3
26.50	A	8/6/2008	499.0	16(3)	5(5)	2(1)	0(1)	25.3(3)	60.6(5)	29.5(1)	27.4(3)	6.2(3)	64.7(5)	1.66(3)	340(3)	36	8.1
24.10	A	8/6/2008	555.0	17(3)	2(3)	2(1)	0(1)	13.6(1)	43.9(3)	24.1(3)	23.7(3)	3.0(1)	63.7(5)	0.00(5)	806(5)	34	8.8
22.40	A	8/6/2008	559.0	19(3)	3(3)	2(1)	0(1)	8.5(1)	44.5(3)	20.1(3)	17.4(3)	1.8(1)	59.6(5)	0.23(5)	700(5)	34	8.2
20.80	A	8/6/2008	583.0	10(3)	3(3)	2(1)	0(1)	3.5(1)	58.1(5)	56.3(1)	52.9(1)	2.9(1)	42.0(3)	0.00(5)	152(1)	26	5.9
20.67	A	8/13/2008	583.0	23(5)	2(3)	4(3)	0(1)	20.8(3)	57.6(5)	11.8(5)	13.8(5)	5.9(3)	72.5(5)	0.56(3)	785(5)	46	10.6
17.30	A	8/20/2008	597.0	23(5)	4(5)	4(3)	0(1)	32.2(3)	52.6(5)	9.2(5)	10.5(5)	2.7(1)	79.3(5)	0.25(5)	728(5)	48	8.6
15.61	A	8/20/2008	698.0	25(5)	5(5)	6(5)	0(1)	24.9(3)	38.2(3)	14.1(5)	17.5(3)	10.3(5)	67.0(5)	1.39(3)	620(5)	48	10.0
	A	8/20/2008	698.0	23(5)	3(3)	6(5)	0(1)	31.3(3)	51.7(5)	6.0(5)	6.5(5)	4.6(1)	66.8(5)	0.24(5)	786(5)	48	9.7
	A	7/18/2008	698.0	20(3)	3(3)	7(5)	0(1)	29.1(3)	42.6(3)	17.3(3)	21.5(3)	16.0(5)	55.7(5)	1.69(3)	392(3)	40	9.7
12.00	A	7/22/2008	709.0	16(3)	3(3)	4(3)	0(1)	29.5(3)	41.7(3)	18.1(3)	16.6(3)	4.8(1)	74.9(5)	1.11(3)	444(5)	36	8.2
11.33	A	10/15/2008	730.0	18(3)	2(3)	4(3)	0(1)	20.0(3)	26.8(3)	8.9(5)	47.5(1)	10.7(5)	35.4(3)	1.43(3)	510(5)	38	9.2
	A	9/24/2008	730.0	18(3)	3(3)	4(3)	0(1)	17.9(1)	22.1(1)	9.4(5)	58.2(1)	7.3(3)	30.4(3)	0.26(5)	698(5)	34	8.8
	A	7/22/2008	730.0	17(3)	1(1)	6(5)	0(1)	32.8(3)	42.3(3)	9.5(5)	13.8(5)	15.9(5)	63.0(5)	2.12(1)	342(3)	40	9.1
10.95	A	9/23/2008	743.0	15(3)	1(1)	4(3)	0(1)	24.5(3)	36.7(3)	18.0(3)	29.7(1)	2.1(1)	40.2(3)	1.17(3)	702(5)	30	9.3
	A	8/14/2008	743.0	21(5)	3(3)	5(3)	0(1)	33.0(3)	42.5(3)	11.9(5)	9.2(5)	5.4(3)	65.1(5)	0.00(5)	383(3)	44	8.5
	A	7/21/2008	743.0	18(3)	2(3)	5(3)	0(1)	41.6(5)	56.3(5)	22.5(3)	19.9(3)	5.6(3)	64.9(5)	3.03(1)	358(3)	38	9.0
10.30	A	10/7/2008	744.0	17(3)	1(1)	3(3)	0(1)	16.2(1)	21.8(1)	16.8(3)	23.4(3)	4.7(1)	61.7(5)	1.25(3)	534(5)	30	9.5
	A	9/4/2008	744.0	25(5)	3(3)	5(3)	1(1)	15.8(1)	20.9(1)	12.8(5)	37.7(1)	5.4(3)	47.0(3)	1.48(3)	708(5)	34	9.9
	A	7/21/2008	744.0	21(5)	3(3)	4(3)	0(1)	21.5(3)	34.4(3)	21.5(3)	13.4(5)	12.4(5)	65.6(5)	0.54(5)	292(3)	44	8.6
8.90	A	8/19/2008	745.0	19(3)	2(3)	4(3)	0(1)	27.8(3)	37.5(3)	10.4(5)	6.8(5)	3.2(1)	67.0(5)	1.62(3)	554(5)	40	9.1
8.30	A	9/23/2008	746.0	16(3)	1(1)	4(3)	1(1)	16.5(1)	20.8(1)	7.9(5)	39.4(1)	9.0(3)	46.6(3)	1.08(3)	514(5)	30	9.0
	A	8/14/2008	746.0	20(3)	4(5)	4(3)	0(1)	7.8(1)	11.7(1)	8.4(5)	45.8(1)	3.9(1)	36.3(3)	0.56(3)	656(5)	32	8.9
	A	7/21/2008	746.0	17(3)	2(3)	5(3)	0(1)	12.3(1)	21.0(1)	22.5(3)	21.0(3)	13.8(5)	62.3(5)	2.17(1)	214(3)	32	7.5
7.10	A	9/23/2008	786.0	14(3)	1(1)	4(3)	0(1)	4.9(1)	7.5(1)	2.6(5)	81.0(1)	4.0(1)	10.7(1)	0.29(5)	676(5)	28	7.8

Boating Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Number of: Sunfish Species	Number of: Sucker Species	Number of: Intolerant Species	Percent of Individuals: Rnd Body Sucker	Percent of Individuals: Simple Lithophils	Percent of Individuals: Tolerant Fishes	Percent of Individuals: Omni-vores	Percent of Individuals: Top Carni-vores	Percent of Individuals: Insect-ivores	Percent of Individuals: DELT Anomalies	Rel. No. minus tolerants/ (1.0 km)	**IBI**	**MIwb**
7.10	A	8/14/2008	786.0	18(3)	2(3)	4(3)	0(1)	11.2(1)	13.7(1)	4.2(5)	51.6(1)	3.7(1)	30.2(3)	0.00(5)	922(5)	32	9.0
	A	7/21/2008	786.0	12(3)	0(1)	4(3)	0(1)	47.6(5)	57.1(5)	6.7(5)	17.1(3)	12.4(5)	64.8(5)	0.95(5)	196(1)	42	8.6

2009 Sampling Results

Headwater Sites

River Mile	Type	Date	DA (sq mi)	Number of: Total Species	Minnow Species	Headwater Species	Sensitive Species	Darter & Sculpin Species	Simple Lithophils	Percent of Individuals: Tolerant Fishes	Omni-vores	Pioneering	Insect-ivores	DELT Anomalies	Rel No. minus tolerants/ (0.3km)	**IBI**
WAHOO DITCH (19-028-002)																
Year: 2009																
2.60	E	7/14/2009	2.0	3(1)	1(1)	1(1)	0(1)	0(1)	0(1)	84.0(1)	0.0(5)	84.0(1)	36.0(5)	0.00(5)	10(1)	24
2.50	E	7/14/2009	2.0	3(1)	2(1)	2(3)	0(1)	0(1)	1(1)	93.2(1)	0.0(5)	88.4(1)	6.9(1)	0.00(5)	25(1)	22
2.20	E	7/14/2009	2.0	5(3)	3(3)	1(1)	0(1)	0(1)	2(3)	100.0(1)	1.8(5)	82.4(1)	2.2(1)	0.00(5)	0(1)	26

No Wading

No Boating Sites

Appendix I – Qualitative Habitat Evaluation Index Scores and Attributes

Key QHEI Components					WWH Attributes											MWH Attributes																				
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Tare Creek (19-038-000)																																				
Year:	2018																																			
F01G04	2.5	4.5	**52.0**	5.75	X				X				X		3				X		1		X			X				X	X	X		5	0.50	1.75
Butternut Creek (19-037-000)																																				
Year:	2018																																			
F01G07	0.8	4.2	**61.0**	11.49	X	X			X	X			X		5						0		X			X	X		X	X	X	X		7	0.17	1.50
Diedrich Creek (19-036-001)																																				
Year:	2018																																			
F01G08	0.6	4.9	**68.3**	18.87		X		X		X					3					X	1	X				X	X			X	X	X		6	0.75	1.75
West Branch Cuyahoga River (19-036-000)																																				
Year:	2018																																			
F01G05	12.3	7.2	**75.8**	4.33	X	X		X	X	X	X		X		7						0		X			X					X	X		4	0.13	0.75
F01G44	5.6	25.4	**73.0**	3.58	X	X			X	X	X		X		6						0					X					X	X		3	0.14	0.71
F01W76	1.7	34.4	**82.5**	4.60	X	X		X	X	X	X	X	X	X	9						0		X		X	X								3	0.10	0.40
Trib. To Bridge Ck. (8.85) @ Auburn Rd (19-035-003)																																				
Year:	2018																																			
303968	1.4	3.1	**62.0**	7.19	X	X				X		X	X		5						0		X			X	X		X	X		X		6	0.17	1.33
Trib. To Bridge Creek (Rm 0.52) (19-035-001)																																				
Year:	2018																																			
F01G10	0.0	8.2	**59.0**	4.00	X				X	X			X		4						0		X			X			X	X	X	X		6	0.20	1.60
Bridge Creek (19-035-000)																																				
Year:	2018																																			
F01W74	8.2	14.1	**81.5**	18.51	X	X		X	X	X	X	X	X	X	9						0						X							1	0.10	0.20
F01W75	1.3	31.0	**62.3**	4.02	X				X	X		X	X		5		X				1		X			X	X			X		X		5	0.33	1.00
Sawyer Brook (19-034-000)																																				
Year:	2018																																			
F01G12	0.3	2.5	**67.5**	15.00	X			X	X	X			X		5						0		X		X	X				X	X	X	X	7	0.17	1.50
Black Brook (19-033-000)																																				
Year:	2018																																			
F01W72	1.8	11.7	**67.8**	11.76	X	X		X	X	X			X		6						0		X			X	X		X	X	X	X		7	0.14	1.14
Wingfoot Lake Outlet (19-032-000)																																				
Year:	2018																																			
F01S94	0.1	7.2	**50.3**	62.50		X		X		X	X		X		5	X			X		2	X	X			X	X		X		X	X		7	0.50	1.33
Springfield Lake Outlet (19-031-000)																																				
Year:	2018																																			
F01S92	0.0	12.5	**65.3**	27.03		X		X	X	X	X		X		6						0	X					X		X		X	X		5	0.29	0.86

Key QHEI Components					WWH Attributes											MWH Attributes																				
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Little Cuyahoga River (19-030-000)																																				
Year:	2018																																			
F01S88	11.1	17.4	**62.8**	22.20		X		X	X	X	X		X		6	X					1	X	X		X				X		X	X		6	0.29	1.00
200116	8.9	28.0	**76.0**	14.28	X	X		X	X	X	X		X	X	8						0	X	X		X	X					X	X		6	0.22	0.78
F01S84	7.1	31.0	**69.3**	17.24		X		X	X	X	X		X		6	X					1	X	X				X		X		X	X		6	0.29	1.00
F01S82	5.1	47.0	**53.8**	45.45		X		X	X	X	X		X		6	X					1	X					X				X	X		4	0.29	0.71
F01S99	2.2	54.0	**70.8**	40.00	X	X		X	X	X	X		X		7						0										X	X		2	0.13	0.38
502180	0.3	61.7	**75.3**	10.53	X	X		X	X	X	X		X		7						0	X	X			X	X				X	X		6	0.25	0.88
Potter Creek (19-028-005)																																				
Year:	2018																																			
F01W71	1.5	3.2	**64.3**	10.00	X				X	X			X	X	5						0		X			X	X			X	X	X		6	0.17	1.33
Congress Lake Outlet (Feeder Canal) (19-028-004)																																				
Year:	2018																																			
F01T02	11.7	25.6	**71.5**	5.05	X	X			X	X			X		5						0		X			X				X	X	X		5	0.17	1.00
F01A19	5.6	43.7	**27.5**	2.63									X		1	X	X	X	X		4		X			X			X	X	X	X		6	2.50	3.50
Wahoo Ditch (19-028-002)																																				
Year:	2018																																			
F01S53	1.2	3.9	**58.3**	9.70	X	X		X		X			X		5						0	X	X			X	X			X	X	X	X	8	0.33	1.67
F01P32	0.4	5.5	**48.3**	11.49								X	X		2	X	X		X		3	X	X			X	X		X	X		X		7	1.33	3.00
Brimfield Ditch (19-028-001)																																				
Year:	2018																																			
200113	0.8	4.7	**49.8**	5.00	X				X	X		X	X		5		X				1		X			X	X			X			X	5	0.33	1.17
Breakneck Creek (19-028-000)																																				
Year:	2018																																			
303969	18.7	33.9	**68.8**	7.30	X	X		X	X	X			X		6						0		X		X	X	X			X	X	X		7	0.14	1.29
F01A31	14.6	42.3	**67.5**	1.58	X				X	X	X		X	X	6						0		X		X	X					X			4	0.14	0.86
F01S03	7.0	56.2	**70.3**	1.27	X	X			X	X		X	X	X	7						0		X		X	X				X	X	X		6	0.13	1.00
F01S51	3.3	24.4	**71.0**	3.08	X	X		X	X	X			X	X	7						0		X			X				X	X	X		5	0.13	0.88
F01W83	0.3	78.7	**73.5**	3.48	X	X		X	X	X	X	X	X		8	X					1					X					X	X		3	0.22	0.44
Trib. To Plum Ck.(2.77)@ Sunnybrook Rd (19-027-001)																																				
Year:	2018																																			
303963	0.4	4.2	**68.3**	66.60	X	X		X	X	X		X		X	7					X	1		X							X			X	3	0.25	0.50
Plum Creek (19-027-000)																																				
Year:	2018																																			
F01G23	3.7	4.2	**63.5**	21.28	X	X				X			X		4						0					X	X		X	X	X	X		6	0.20	1.60
F01P34	0.2	13.1	**71.8**	6.25		X				X			X	X	4						0	X				X	X			X	X	X		6	0.40	1.60

Key QHEI Components					WWH Attributes											MWH Attributes																				
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Fish Creek (19-026-000)																																				
Year:	2018																																			
F01W37	0.4	11.4	**72.8**	16.90	X	X				X			X		4						0				X	X	X			X	X	X		6	0.20	1.60
Powers Brook (19-025-000)																																				
Year:	2018																																			
F01S46	0.7	7.0	**64.5**	12.98	X	X		X	X	X	X		X		7						0	X	X			X					X	X		5	0.25	0.88
Mud Brook (19-024-000)																																				
Year:	2018																																			
F01P25	8.3	14.9	**57.0**	3.44	X	X				X			X		4			X			1		X			X				X	X	X		5	0.40	1.40
F01P24	0.2	29.3	**63.8**	37.04	X	X					X		X		4				X		1					X	X				X	X		4	0.40	1.20
Woodward Creek (19-023-000)																																				
Year:	2018																																			
F01G26	0.6	2.9	**75.5**	25.00	X	X		X	X	X		X	X	X	8	X					1									X				1	0.22	0.22
Year:	2019																																			
F01G26	0.6	2.9	**70.5**	25.00	X	X		X	X	X	X		X		7						0					X			X		X	X		4	0.13	0.75
North Fork Yellow Creek (19-022-000)																																				
Year:	2018																																			
F01P21	0.1	9.8	**77.3**	27.78	X	X		X	X	X			X		6						0					X				X	X	X		4	0.14	0.86
Yellow Creek (19-021-000)																																				
Year:	2018																																			
F01G46	5.3	10.6	**81.3**	24.10	X	X		X	X	X	X	X	X	X	9						0													0	0.10	0.10
F01P16	4.1	22.9	**69.5**	62.50	X	X		X	X	X		X	X		7						0									X	X	X		3	0.13	0.63
F01P15	0.1	31.0	**73.3**	31.25	X	X		X	X	X	X	X	X	X	9						0										X	X		2	0.10	0.30
Trib To Furnace Run (1.20) (19-020-004)																																				
Year:	2019																																			
303970	0.1	1.9	**74.5**	86.90	X	X		X	X	X	X	X	X	X	9						0						X		X					2	0.10	0.30
Riding Run @Wheatley Rd (19-020-003)																																				
Year:	2018																																			
303964	0.1	1.3	**71.8**	100.00	X	X		X	X	X		X	X	X	8						0								X	X				2	0.11	0.33
Year:	2019																																			
303964	0.1	1.3	**72.5**	100.00	X	X		X	X	X	X	X	X	X	9						0								X		X			2	0.10	0.30
Rock Creek (19-020-002)																																				
Year:	2018																																			
300085	0.2	1.4	**76.3**	76.92	X	X		X	X	X		X	X	X	8						0									X				1	0.11	0.22
Trib. To Furnace Run (Rm 7.90) (19-020-001)																																				
Year:	2018																																			
200102	0.2	0.7	**69.5**	125.00	X	X		X	X	X		X	X	X	8						0								X	X				2	0.11	0.33

Key QHEI Components					WWH Attributes											MWH Attributes																		
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Furnace Run (19-020-000)																																		
Year:	2018																																	
300088	7.3	5.6	**76.8**	33.30	X	X		X	X	X			X	X	7						0								X	X			2	0.13	0.38
F01P14	0.3	20.3	**78.0**	22.70	X	X		X	X	X	X		X	X	8						0		X				X				X	X		4	0.11	0.56
Robinson Run (19-019-000)																																		
Year:	2019																																	
F01G27	0.1	1.4	**52.5**	83.33	X	X			X	X					4					X	1		X			X			X	X	X		5	0.40	1.40
Dickerson Run (19-017-000)																																		
Year:	2019																																	
F01G29	0.6	2.0	**70.0**	27.78	X				X	X			X		4						0		X		X	X				X	X	X		6	0.20	1.60
Salt Run (19-016-000)																																		
Year:	2018																																	
F01G30	0.3	2.8	**79.0**	27.03	X	X		X	X	X			X		6						0		X							X	X	X		4	0.14	0.86
Boston Run (19-013-000)																																		
Year:	2018																																	
F01G32	0.2	2.7	**65.8**	33.33	X	X		X	X	X			X		6						0		X						X	X	X	X		5	0.14	1.00
Slipper Run (19-012-000)																																		
Year:	2018																																	
F01G33	0.2	1.4	**59.0**	333.33	X							X	X	X	4				X		1					X	X			X				3	0.40	0.80
Stanford Run (19-011-000)																																		
Year:	2018																																	
F01G34	0.9	1.9	**73.0**	40.00	X	X		X	X	X			X		6						0		X						X	X	X	X		5	0.14	0.86
Indian Creek (19-010-001)																																		
Year:	2018																																	
F01W15	0.0	6.5	**57.5**	9.35		X				X			X		3				X		1	X	X			X	X			X	X	X		7	0.75	2.25
Year:	2019																																	
F01W15	0.4	4.7	**63.5**	9.35	X	X		X		X			X		5						0	X	X				X			X	X	X		6	0.33	1.17
Brandywine Creek (19-010-000)																																		
Year:	2018																																	
F01W11	7.0	8.7	**67.5**	5.88	X	X				X			X		4						0		X		X	X	X			X	X	X		7	0.20	1.80
F01P35	4.0	16.1	**64.5**	5.99	X	X				X			X		4						0					X	X			X	X	X		5	0.20	1.20
F01S49	0.3	27.2	**79.0**	34.48	X	X		X	X	X	X	X	X	X	9						0		X								X			2	0.10	0.30
Trib. To Chippewa Creek (Rm 3.70) (19-009-001)																																		
Year:	2018																																	
302647	0.1	1.2	**69.0**	84.00	X	X		X	X	X			X	X	7						0		X		X				X	X	X			5	0.13	0.75

Key QHEI Components					WWH Attributes											MWH Attributes																						
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Chippewa Creek (19-009-000)																																				
Year:	2018																																			
F01S59	6.0	6.3	**71.0**	27.80	X	X	X	X	X	X		X	X		8						0								X	X	X	X		4	0.11	0.56
F01P13	0.4	17.6	**75.0**	20.93	X	X		X	X	X			X	X	7						0								X	X	X			3	0.13	0.50
Pond Brook (19-008-000)																																				
Year:	2018																																			
F01S40	1.4	15.7	**35.0**	4.52									X		1		X		X		2	X	X			X	X			X	X		X	7	2.00	4.00
Year:	2019																																			
F01W28	2.2	11.6	**51.3**	3.57	X				X	X			X		4		X				1		X			X				X	X		X	5	0.40	1.20
Beaver Meadow Run (19-007-010)																																				
Year:	2018																																			
F01P44	0.1	6.1	**79.5**	7.46	X	X		X	X	X	X		X		7						0		X								X	X		3	0.13	0.50
Hawthorn Creek (19-007-008)																																				
Year:	2018																																			
F01W57	1.1	6.3	**88.0**	22.00	X	X	X	X	X	X	X	X	X	X	10						0													0	0.09	0.09
Bear Creek (19-007-007)																																				
Year:	2018																																			
F01G22	0.2	4.5	**66.8**	66.67	X			X	X	X		X	X	X	7				X		1									X				1	0.25	0.25
Wood Creek (19-007-001)																																				
Year:	2018																																			
F01S36	0.2	3.2	**69.5**	83.30	X	X	X	X	X	X	X	X	X	X	10				X		1						X		X					2	0.18	0.27
Tinkers Creek (19-007-000)																																				
Year:	2018																																			
F99Q10	28.9	3.6	**59.8**	15.00	X	X			X	X			X		5		X				1		X		X	X			X	X	X	X		7	0.33	1.33
200081	18.0	48.0	**52.8**	4.12	X	X			X	X			X		5				X		1		X		X	X				X	X		X	6	0.33	1.33
F01S29	13.8	53.5	**68.5**	3.62		X			X	X	X		X		5						0	X	X			X	X				X	X		6	0.33	1.17
502090	8.8	68.5	**79.8**	5.65	X	X		X	X	X	X		X		7						0		X			X					X	X		4	0.13	0.63
502220	6.4	84.0	**77.3**	23.25	X			X		X	X	X	X	X	7						0						X							1	0.13	0.25
F01S25	2.5	91.0	**64.8**	25.00	X			X			X		X	X	5				X		1						X				X	X		3	0.33	0.67
F01S24	0.2	96.0	**76.3**	5.32	X	X		X	X	X	X		X		7						0						X				X	X		3	0.13	0.50
Mill Creek (19-006-000)																																				
Year:	2018																																			
F01P09	4.2	12.5	**61.5**	42.60	X	X					X		X		4				X		1		X			X	X				X	X		5	0.40	1.20
502110	0.2	18.4	**77.5**	10.42	X	X		X	X	X	X		X		7						0										X	X		2	0.13	0.50
502110	0.1	18.5	**52.5**	45.90		X					X		X		3				X		1	X	X			X	X				X	X		6	0.75	2.00

Key QHEI Components					WWH Attributes											MWH Attributes																				
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Big Creek (19-005-000)																																				
Year:	2018																																			
F01S21	7.4	12.7	**71.0**	22.22	X	X		X		X			X	X	6						0						X			X	X			3	0.14	0.57
301193	4.4	19.3	**60.5**	17.60	X	X	X				X	X	X	X	7	X			X		2					X	X		X					3	0.38	0.50
F01S20	2.4	34.9	**63.3**	22.00						X	X	X	X	X	5	X					1	X				X	X							3	0.33	0.67
502120	0.2	37.1	**64.0**	17.60		X				X			X		3	X					1					X	X			X	X	X		5	0.50	1.75
Trib To Cuyahoga R. (25.41) @ Riverview Rd (19-001-045)																																				
Year:	2018																																			
303971	0.2	2.0	**81.5**	124.00	X	X		X	X	X	X	X	X	X	9						0													0	0.10	0.10
Trib. To Cuyahoga R. (63.82) (19-001-041)																																				
Year:	2018																																			
200064	0.1	3.7	**75.0**	47.60	X	X			X	X		X	X	X	7						0					X				X				2	0.13	0.38
Trib. To Cuyahoga R. (Rm 69.43) (19-001-024)																																				
Year:	2018																																			
F01G13	0.2	3.8	**61.8**	1.61	X				X	X			X	X	5				X		1		X		X	X				X	X			5	0.33	1.17
Trib. To Cuyahoga R. (Rm 65.19) (19-001-023)																																				
Year:	2018																																			
F01P53	0.4	2.6	**61.3**	22.70		X		X	X	X			X	X	6		X				1	X	X			X	X		X	X	X			7	0.43	1.14
Trib. To Cuyahoga R. (63.43) (19-001-022)																																				
Year:	2018																																			
F01G16	0.4	2.3	**60.8**	43.40	X	X		X	X	X		X	X	X	8				X		1		X						X	X		X	X	5	0.22	0.78
Harper Ditch (19-001-020)																																				
Year:	2018																																			
F01G15	0.2	4.7	**73.8**	6.58	X	X		X	X	X		X	X	X	8						0		X							X				2	0.11	0.33
Sand Run (19-001-014)																																				
Year:	2018																																			
F01P23	0.1	3.1	**72.0**	66.70	X	X		X	X	X	X		X	X	8						0		X				X				X			3	0.11	0.44
Spring Creek (19-001-012)																																				
Year:	2018																																			
303997	0.9	1.3	**67.5**	114.00	X	X	X	X		X		X	X	X	8						0						X		X	X				3	0.11	0.44
Year:	2019																																			
304124	0.8	1.3	**68.0**	285.00	X	X		X		X		X		X	6			X	X	X	3									X				1	0.57	0.29
Sagamore Creek (19-001-011)																																				
Year:	2018																																			
F01G37	2.9	3.3	**62.3**	30.30		X		X		X		X	X	X	6						0	X					X		X	X				4	0.29	0.71
F01G38	0.2	6.2	**88.0**	37.04	X	X		X	X	X	X	X	X	X	9						0													0	0.10	0.10

Key QHEI Components					WWH Attributes											MWH Attributes																				
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
West Creek (19-001-004)																																				
Year:	2018																																			
F01G43	3.7	4.8	**61.0**	48.40	X		X	X	X		X	X	X	X	8				X		1							X						1	0.22	0.22
F01P10	0.2	13.2	**53.8**	5.40	X	X		X			X		X		5				X		1				X	X	X	X		X	X		6	0.33	1.17
Cuyahoga River (19-001-000)																																				
Year:	2017																																			
F01G02	96.2	6.3	**53.5**	7.75	X				X	X		X	X		5		X				1		X			X				X			X	4	0.33	0.83
F01P51	90.9	18.6	**70.8**	6.45	X	X				X		X	X		5						0		X			X	X			X			X	5	0.17	1.00
F01A53	87.3	38.0	**62.8**	0.83	X				X	X			X		4						0		X			X				X	X	X		5	0.20	1.40
F01W77	83.8	82.0	**53.0**	0.83	X					X		X	X		4		X				1		X			X	X			X			X	5	0.40	1.20
502030	75.8	151.0	**80.3**	1.69	X	X		X	X	X	X	X	X	X	9						0						X							1	0.10	0.20
F01W22	70.0	159.0	**72.5**	1.61	X	X			X	X	X	X	X		7						0		X			X						X		3	0.13	0.63
F01S19	64.3	178.0	**88.5**	5.62	X	X		X	X	X	X	X	X	X	9						0										X			1	0.10	0.20
F01P29	57.7	208.0	**66.0**	3.00		X				X			X		3				X		1	X	X			X	X			X	X	X		7	0.75	2.25
F01W70	55.6	292.0	**67.0**	4.61	X						X	X	X	X	5	X		X	X		3		X			X	X							3	0.67	0.83
F01S17	54.3	293.0	**88.0**	6.12	X	X		X	X	X	X	X	X	X	9						0		X								X	X		3	0.10	0.50
300518	52.5	307.0	**79.3**	4.76	X	X		X	X	X	X	X	X	X	9						0		X			X								2	0.10	0.40
300574	51.0	323.0	**80.5**	4.76	X	X		X	X	X	X	X	X	X	9						1						X		X					2	0.20	0.40
300516	50.0	326.0	**77.0**	4.76		X	X	X		X	X		X	X	7			X	X		2	X				X	X				X			4	0.50	0.75
200037	48.1	331.0	**72.3**	1.00	X	X		X	X	X	X		X		7						0		X			X	X				X	X		5	0.13	0.88
502150	42.6	340.0	**89.0**	8.62	X	X		X	X	X	X	X	X	X	9						0	X												1	0.20	0.30
200042	38.6	438.0	**81.8**	5.35	X	X		X	X	X	X	X	X	X	9						0	X	X								X	X		4	0.20	0.60
502010	33.6	480.0	**78.3**	4.76	X			X	X	X	X		X	X	7						0	X	X	X		X					X	X		6	0.25	0.88
F01A58	26.5	499.0	**77.8**	8.20	X	X		X	X	X	X	X	X	X	9				X		1											X		1	0.20	0.30
F01S13	24.1	555.0	**82.5**	4.76	X	X		X	X	X	X	X	X		8						0		X									X		2	0.11	0.44
300510	21.8	589.0	**78.5**	3.77	X	X		X	X	X	X		X		7						0		X			X					X	X		4	0.13	0.75
502170	20.8	583.0	**59.0**	3.77	X					X			X		3			X	X		2		X	X		X	X			X	X		X	7	0.75	2.00
300509	19.2	583.0	**84.8**	3.77	X	X		X	X	X	X		X		7						0										X	X		2	0.13	0.50
F01S11	16.2	696.0	**82.0**	3.15	X	X		X		X	X	X	X	X	8						0						X				X			2	0.11	0.44
F99Q03	12.0	709.0	**75.5**	1.75	X	X		X	X	X	X		X		7						0		X			X	X				X	X		5	0.13	0.88
F01S10	11.3	730.0	**60.5**	4.77	X	X		X					X		4				X		1		X			X	X			X	X	X		6	0.40	1.60
F01A25	11.0	743.0	**79.3**	1.75	X	X		X	X	X	X		X		7						0		X				X				X	X		4	0.13	0.75
F99Q02	10.1	744.0	**77.5**	2.03	X	X		X	X	X	X		X	X	8						0		X								X	X		3	0.11	0.56
F01S09	9.8	744.0	**75.5**	2.03	X	X		X	X	X	X	X	X		8						0		X			X	X				X	X		5	0.11	0.78
200025	8.7	745.0	**78.8**	2.03	X	X		X	X	X	X	X	X		8						0		X								X	X		3	0.11	0.56
502130	7.1	786.0	**67.3**	2.03	X	X			X	X			X		5				X		1		X			X	X			X	X	X	X	7	0.33	1.50
F01W43	5.9	788.0	**32.5**	0.10									X		1	X	X		X		3		X			X	X			X	X		X	6	2.00	4.00

Key QHEI Components					WWH Attributes											MWH Attributes																		
Station	River Mile	Drain. Area	QHEI	Grad-ient (ft/mi)	Not Channelized or Recovered	Boulder/Cobble/Gravel Substrates	Silt Free Substrate	Good/Excellent Development	Moderate/High Sinuosity	Extensive/Moderate Cover	Fast Current/Eddies	Low/Normal Embeddedness	Max Depth > 40cm	Low/Normal Riffle Embeddedness	**WWH Attributes**	Channelized/No Recovery	Silt/Muck Substrates	No Sinuosity	Sparse/No Cover	Max Depth < 40cm	**High-Influence Modified Attributes**	Recovering Channel	Heavy/Moderate Substrates	Sand Substrates (Boat)	Hardpan Substrate Origin	Fair/Poor Development	Low Sinuosity	Only 1 or 2 Cover Types	Intermittent/Poor Pools	No Fast Current	High/Moderate Embeddedness	High/Mod. Riffle Embeddedness	No Riffle	**Mod. Influence Modified Attributes**	MWH H.I.+1 / WWH+1 Ratio	MWH M.I. / WWH Ratio
Cuyahoga River (19-001-000)																																		
Year:	2018																																	
F01P51	90.9	18.6	**70.0**	6.45	X	X		X		X			X		5			X			1		X			X	X			X	X	X		6	0.33	1.17
Year:	2019																																	
F01W64	41.4	402.0	**60.5**	8.62		X			X				X		3				X		1	X	X			X	X			X	X		X	7	0.75	2.25

Appendix J – Surface Water Inorganic Chemistry Results

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200005 CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	2.74	806	41.48810	-81.69330	04110002-06-05

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	147			144	132	139
Aluminum ug/L	<200			266	387	731
Ammonia mg/L	.356			.252	.226	.269
Arsenic ug/L	3.16			3.2	2.83	3.33
Barium ug/L	46.9			42.7	41.1	46.2
BOD 5-Day mg/L	2.73			2.73	2.46	2.04
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	63.4			60.3	57.7	64
CBOD20 mg/L						
Chloride mg/L	153			129	150	155
Chlorophyll ug/L	9.65			10.8	7.78	8.65
Chromium ug/L	<2			<2	<2	<2
COD mg/L	21.3			126	26	25.4
Copper ug/L	3.5			3.4	3.65	5.29
DO mg/L	3.61			3.46	4.91	8.19
DOC mg/L	6.17			6.88	6.86	6.81
DOsat percent	43.4			42.9	61	102.4
E. coli		26000	96		187	836
Hardness mg/L	221			209	200	226
Iron ug/L	330			653	866	1830
Lead ug/L	<2			<2	<2	2.82
Magnesium mg/L	15.2			14.1	13.5	16
Manganese ug/L	102			82.4	103	110
Nickel ug/L	4.75			4.16	4.53	6.22
Nitrate, nitrite mg/L	5.1			3.66	4.35	5.06
Nitrite mg/L	.0488			.0206	.0346	.0652
Ortho-P mg/L	.0453			.056	.0675	.112
pH su	7.56			7.69	7.75	7.56
Pheophytin ug/L	2.56			4.87	5.46	5.39
Phosphorus mg/L	.114			.12	.141	.194
Potassium mg/L	6.36			5.75	6.59	8.84
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	96.2			86.2	94.4	106
Spcond umhos/cm	880			743	1121	916
Strontium ug/L	237			231	238	251
Sulfate mg/L	70.1			56.4	66.9	74.5
TDS mg/L	568			482	534	548
TempC deg C	24.2			26.2	24.16	26.44
TKN mg/L	.993			.997	.998	1.18
TOC mg/L	5.8			5.97	6.62	5.73
TSS mg/L	16.5			14	21	24
Zinc ug/L	12.4			15.8	17.9	26.2

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200005		CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	2.74	806	41.48810	-81.69330	04110002-06-05

Inorganic Parameters	9/18/17	7/9/18	7/26/18	8/8/18	8/22/18	8/29/18
Alkalinity mg/L	146	131	136	90.2	106	111
Aluminum ug/L	<200	710	324	2080	490	1110
Ammonia mg/L	.261	.188	.19	.236	.304	.245
Arsenic ug/L	2.94	3.09	2.71	2.8	2.41	3.29
Barium ug/L	40	38.4	42	39.2	39.1	41
BOD 5-Day mg/L	<2					
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	68.1	47.3	60.9	40.9	51.2	49.8
CBOD20 mg/L		18.2	19.8	9.25	11.9	12
Chloride mg/L	182	121	145	100	130	124
Chlorophyll ug/L	2.16	3.36	15.6	6.16	10.4	7.32
Chromium ug/L	<2	<2	<2	<2	<2	2.2
COD mg/L	<20	38.4	25.3	35	25.3	22.4
Copper ug/L	3.31	5.65	4.47	5.6	4.92	5.54
DO mg/L	10.14	5.63	5.41	5.27	6.01	5.11
DOC mg/L	5.43	7.08	5.38		3.94	
DOsat percent	121.7	67.6	66.7	63.3	71.8	63.2
E. coli						
Hardness mg/L	240	161	210	138	176	172
Iron ug/L	422	1710	787	2180	986	2650
Lead ug/L	<2	2.34	<2	2.94	<2	3.38
Magnesium mg/L	16.9	10.4	14	8.74	11.6	11.6
Manganese ug/L	71.5	121	97.7	98.6	54.4	97.8
Nickel ug/L	5.78	4.9	5.22	5.8	4.13	5.3
Nitrate, nitrite mg/L	7.73	2.21	4.44	2.35	4.09	3.56
Nitrite mg/L	.0429	<.02	.0462	.0285	.0325	.0423
Ortho-P mg/L	.152	.0661	.0245	.0442	.0795	.0776
pH su	7.44	7.44	7.6	7.5	7.77	7.56
Pheophytin ug/L	<.56	3.43	3.44	5.16	7.44	8.28
Phosphorus mg/L	.2	.122	.0852	.12	.146	.18
Potassium mg/L	9.75	5.13	6.78	5.43	5.87	5.67
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	120	76.5	98	67.3	88.7	76.3
Spcond umhos/cm	1091	732	939	691	774	764
Strontium ug/L	257	238	238	188	218	211
Sulfate mg/L	87.4	44.8	61.5	45.7	55.4	53.7
TDS mg/L	634	410	530	358	452	448
TempC deg C	24.24	24.5	25.9	24.5	24.2	26.1
TKN mg/L	1.09	.94	.9	.916	1.27	1.03
TOC mg/L	5.32					
TSS mg/L	9.5	44	23.5	43	21.5	69.5
Zinc ug/L	19.7	16.9	18.8	19.6	20.6	27.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200005		CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	2.74	806	41.48810	-81.69330	04110002-06-05

Inorganic Parameters	9/12/18	9/24/18	10/9/18	5/16/19	5/30/19	6/12/19
Alkalinity mg/L	112	139	113	151	127	125
Aluminum ug/L	601	458	284	833	1860	613
Ammonia mg/L	.0943	.204	.137	.153	.229	.195
Arsenic ug/L	2.86	3	2.28	2.69	3.14	2.53
Barium ug/L	37.2	46.2	35.7	44.2	47.1	37.3
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	40.2	58.9	44.1	59.4	51.7	45.8
CBOD20 mg/L	12	10.3	15.8	12.4	16.5	10.8
Chloride mg/L	95	136	89.3	140	118	108
Chlorophyll ug/L	9.36	2.82	4.91	2.42	7.36	3.48
Chromium ug/L	<2	<2	<2	<2	2.95	<2
COD mg/L	34.9	34.4	30.4	28.9	30	29
Copper ug/L	4.1	4.02	3.69	4.93	7.95	4.03
DO mg/L	7.37	6.36	7.26	7.66	5.31	6.37
DOC mg/L	6.46	5.19	5.87	5.86	2.12	6.51
DOsat percent	81.1	73.5	83.5	76.8	58.7	71.2
E. coli						
Hardness mg/L	137	206	151	204	182	157
Iron ug/L	1070	1120	770	2130	4080	1530
Lead ug/L	<2	<2	<2	2.71	6.01	<2
Magnesium mg/L	8.94	14.2	9.89	13.6	12.9	10.4
Manganese ug/L	69.1	107	50.3	106	181	102
Nickel ug/L	3.25	4.91	3.28	5.74	7.18	4.49
Nitrate, nitrite mg/L	1.1	4.21	1.96	2.42	2.4	1.78
Nitrite mg/L	<.02	<.02	.0201	.0303	.0327	.025
Ortho-P mg/L	.0747	.0715	.0599	.0361	.04	.0324
pH su	8.15		8.41	7.77	7.53	7.6
Pheophytin ug/L	3	2.9	3.18	4.4	7.75	1.44
Phosphorus mg/L	.131	.117	.0978	.136	.168	.0882
Potassium mg/L	4.26	7.66	4.93	4.4	5.3	3.86
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	59.8	92.3	59.5	86.2	81.1	61.7
Spcond umhos/cm	620	851	590	835	696	597
Strontium ug/L	198	253	200	245	241	203
Sulfate mg/L	42.8	58.2	38.1	53.7	49.6	39
TDS mg/L	356	486	328	468	412	360
TempC deg C	19.9	22.9	22.2	15.4	20.2	20.8
TKN mg/L	.902	1.05	.754	1.04	1.49	1.01
TOC mg/L						
TSS mg/L	18	24.5	11	49	104	27
Zinc ug/L	<10	33	12.5	18.8	39.8	20.5

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200005		CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	2.74	806	41.48810	-81.69330	04110002-06-05

Inorganic Parameters	6/26/19	7/8/19	7/25/19	8/14/19	8/29/19	9/18/19
Alkalinity mg/L	109	126	130	137	141	116
Aluminum ug/L	766	1010	736	239	276	322
Ammonia mg/L	.119	.178	.127	.161	.217	.418
Arsenic ug/L	2.57	3.01	3.28	3.02	2.89	3.01
Barium ug/L	38.1	42.4	41.6	48.5	49.1	43.6
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	41.2	50.9	49.8	65.5	63.9	56
CBOD20 mg/L	11.6	10.2		13	9.28	14.6
Chloride mg/L	71.7	100	94	131	133	112
Chlorophyll ug/L	3.45	3.7	9.26	3.86	3.59	3.52
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	29	28.9	26.3	<20	<20	24.4
Copper ug/L	3.76	5.09	4.25	4.07	3.43	6.29
DO mg/L	5.31	5.03	5.48	5.21	4.41	4.48
DOC mg/L	6.49	5.59	6.57	5.52	5.48	4.82
DOsat percent	58.7	61.9	65.3	62.5	51.8	52.7
E. coli						
Hardness mg/L	140	175	169	227	220	191
Iron ug/L	1920	1950	1140	578	620	789
Lead ug/L	2.43	<2	<2	<2	<2	<2
Magnesium mg/L	8.97	11.6	10.9	15.4	14.8	12.4
Manganese ug/L	95	83.9	112	104	100	136
Nickel ug/L	4.17	5.76	4	4.97	5.2	4.73
Nitrate, nitrite mg/L	1.33	2.47	2.02	4.74	5.33	3.42
Nitrite mg/L	<.02	.0286	<.02	.0204	.0356	.0234
Ortho-P mg/L	.0402	.0363	.055	.0655	.0719	.0572
pH su	7.53	7.51	7.73	7.69	7.68	7.72
Pheophytin ug/L	1.33	2.32	2.75	1.88	<.7	2.09
Phosphorus mg/L	.104	.0843	.135	.107	.0698	.11
Potassium mg/L	3.88	4.79	4.43	6.52	6.66	5.66
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	47	65.8	60.9	89.2	90.6	77.1
Spcond umhos/cm	696	760	656	869	878	724
Strontium ug/L	175	212	202	253	246	235
Sulfate mg/L	30	48.1	37.3	59.3	62.8	51.5
TDS mg/L	294	390	376	502	548	430
TempC deg C	22.7	26.9	24.1	24.4	23.3	23.4
TKN mg/L	.798	.868	1.14	1.25	1.3	.839
TOC mg/L						
TSS mg/L	31	27.5	27	8.5	14.5	19
Zinc ug/L	13.6	16.5	15	20.3	23.2	24.6

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200005		CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	2.74	806	41.48810	-81.69330	04110002-06-05

Inorganic Parameters	10/24/19
Alkalinity mg/L	141
Aluminum ug/L	244
Ammonia mg/L	.249
Arsenic ug/L	2.74
Barium ug/L	45.5
BOD 5-Day mg/L	
Cadmium ug/L	<.2
Calcium mg/L	72.5
CBOD20 mg/L	9.04
Chloride mg/L	149
Chlorophyll ug/L	1.43
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	3.41
DO mg/L	6.79
DOC mg/L	4.96
DOsat percent	71.1
E. coli	
Hardness mg/L	254
Iron ug/L	624
Lead ug/L	<2
Magnesium mg/L	17.7
Manganese ug/L	98.2
Nickel ug/L	5.68
Nitrate, nitrite mg/L	6.51
Nitrite mg/L	<.02
Ortho-P mg/L	.0434
pH su	7.39
Pheophytin ug/L	1.49
Phosphorus mg/L	.0816
Potassium mg/L	8.32
Selenium ug/L	<2
Sodium mg/L	109
Spcond umhos/cm	
Strontium ug/L	281
Sulfate mg/L	68.3
TDS mg/L	566
TempC deg C	17.5
TKN mg/L	1.22
TOC mg/L	
TSS mg/L	9.5
Zinc ug/L	31.9

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	48.70	331	41.14920	-81.45670	04110002-03-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	134		126	119	133	146
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	.0641		.0534	.0841	<.05	<.05
Arsenic ug/L	2.08		3.07	2.52	2.77	2.28
Barium ug/L	50		46.8	44.7	51.6	53.1
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	52.3		45.2	44.6	47.4	55.2
CBOD20 mg/L						
Chloride mg/L	76.6		68.5	74.2	84.9	96.8
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		21.7	<20	<20	<20
Copper ug/L	<2		2.65	3.8	2.78	2.66
DO mg/L	7.3		6.59	6.4	6.51	13.16
DOC mg/L						
DOsat percent	85.5		78.7	71	76.9	145.5
E. coli		104		1300	179.6	
Hardness mg/L	179		156	155	166	194
Iron ug/L	332		364	463	357	185
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	11.8		10.4	10.6	11.5	13.5
Manganese ug/L	74.7		131	112	141	50.4
Nickel ug/L	<2		<2	<2	<2	2.76
Nitrate, nitrite mg/L	1.42		.946	2.07	1.58	3.67
Nitrite mg/L	<.02		<.02	.0271	.0221	.0264
Ortho-P mg/L						
pH su	7.93		7.89	7.77	7.81	8.17
Pheophytin ug/L						
Phosphorus mg/L	.0614		.0785	.0991	.0921	.904
Potassium mg/L	3.21		2.82	3.25	3.29	4.85
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	47		40.9	45.5	50.6	62.8
Spcond umhos/cm	550		499.3	528	549	617
Strontium ug/L	132		117	122	121	137
Sulfate mg/L	31.6		24.5	30.5	31.6	41.9
TDS mg/L	344		302	326	346	400
TempC deg C	23.2		24.2	20.4	23.9	19.47
TKN mg/L	.638		.662	.721	.719	.618
TOC mg/L						
TSS mg/L	<5		6.5	7	8.5	<5
Zinc ug/L	<10		<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200037		CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	48.70	331	41.14920	-81.45670	04110002-03-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	125
Aluminum ug/L	<200
Ammonia mg/L	.0579
Arsenic ug/L	2.86
Barium ug/L	48
Cadmium ug/L	<.2
Calcium mg/L	47.7
CBOD20 mg/L	13.2
Chloride mg/L	
Chlorophyll ug/L	7.58
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	2.26
DO mg/L	
DOC mg/L	4.85
DOsat percent	
E. coli	
Hardness mg/L	165
Iron ug/L	288
Lead ug/L	<2
Magnesium mg/L	11.2
Manganese ug/L	98.8
Nickel ug/L	2.12
Nitrate, nitrite mg/L	1.47
Nitrite mg/L	<.02
Ortho-P mg/L	.0363
pH su	
Pheophytin ug/L	6.98
Phosphorus mg/L	.0532
Potassium mg/L	3.25
Selenium ug/L	<2
Sodium mg/L	40.2
Spcond umhos/cm	
Strontium ug/L	122
Sulfate mg/L	28.6
TDS mg/L	322
TempC deg C	
TKN mg/L	.699
TOC mg/L	5.34
TSS mg/L	5.5
Zinc ug/L	13.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200042 CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	39.70	433	41.13860	-81.55280	04110002-04-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	142		134	152	144	161
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	<.05		<.05	.0703	<.05	<.05
Arsenic ug/L	2.01		2.66	2.34	2.56	2.17
Barium ug/L	53.1		48.5	50.4	55	58.2
BOD 5-Day mg/L					<2	<2
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	60.1		51	54.9	56.8	64.5
CBOD20 mg/L						
Chloride mg/L	107		84.3	119	119	138
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		22.9	<20	<20	<20
Copper ug/L	2.16		2.41	2.98	2.67	2.66
DO mg/L	8.35		7.69	7.96	7.52	7.78
DOC mg/L					5.93	5.35
DOsat percent	101.1		94.6	90.6	91.6	84.7
E. coli		108		613	284.6	
Hardness mg/L	206		176	192	201	226
Iron ug/L	260		270	276	286	255
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	13.5		11.9	13.4	14.3	15.7
Manganese ug/L	51.2		72.3	77.1	70	52.4
Nickel ug/L	<2		<2	2.19	2.08	3.14
Nitrate, nitrite mg/L	.952		.841	1.44	1.26	2.18
Nitrite mg/L	<.02		<.02	.0209	<.02	<.02
Ortho-P mg/L					.0291	.038
pH su	8.25		8.12	8	8.02	7.9
Pheophytin ug/L						
Phosphorus mg/L	.0371		.478	.0591	.0545	.564
Potassium mg/L	3.18		2.88	3.62	3.43	4.41
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	64.4		50	70	70.6	82.6
Spcond umhos/cm	685		586	727	697	872
Strontium ug/L	165		138	157	161	177
Sulfate mg/L	40.3		30.1	39.7	39	54.5
TDS mg/L	404		354	432	418	502
TempC deg C	24.9		25.6	21.2	24.5	19.38
TKN mg/L	.544		.494	.729	.535	.71
TOC mg/L					5.36	4.51
TSS mg/L	<5		<5	<5	7.5	<5
Zinc ug/L	<10		<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200042		CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	39.70	433	41.13860	-81.55280	04110002-04-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	135
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.6
Barium ug/L	53.7
BOD 5-Day mg/L	
Cadmium ug/L	<.2
Calcium mg/L	60.2
CBOD20 mg/L	10.4
Chloride mg/L	
Chlorophyll ug/L	7.27
Chromium ug/L	<2
COD mg/L	20.6
Copper ug/L	2.3
DO mg/L	8.99
DOC mg/L	4.59
DOsat percent	105
E. coli	
Hardness mg/L	208
Iron ug/L	250
Lead ug/L	<2
Magnesium mg/L	14
Manganese ug/L	69.1
Nickel ug/L	2.13
Nitrate, nitrite mg/L	1.32
Nitrite mg/L	<.02
Ortho-P mg/L	.0317
pH su	8.03
Pheophytin ug/L	4.33
Phosphorus mg/L	.0542
Potassium mg/L	3.63
Selenium ug/L	<2
Sodium mg/L	59.6
Spcond umhos/cm	640
Strontium ug/L	165
Sulfate mg/L	36.9
TDS mg/L	370
TempC deg C	22.9
TKN mg/L	.87
TOC mg/L	5.04
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200064 TRIB. TO CUYAHOGA R. (63.82) @ ST. RT. 303

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-041	0.10	4	41.24373	-81.29568	04110002-02-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	184	271	172	232	197
Aluminum ug/L	393	<200	<200	<200	<200
Ammonia mg/L	.0683	<.05	<.05	.0568	.0523
Arsenic ug/L	2.18	<2	2.04	2.03	2.25
Barium ug/L	60.2	78.3	51.9	73.2	52.9
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	75.6	99.5	69.5	95.5	71.5
Chloride mg/L	108	145	112	145	106
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	32	72.3	26.8
Copper ug/L	2.9	<2	2.78	<2	<2
DO mg/L	6.51	8.55	6.41	6.87	6.83
DOsat percent	71.4	90.6	68.3	73	72.1
Hardness mg/L	258	356	235	331	246
Iron ug/L	1030	121	521	305	554
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	16.8	26.1	15	22.6	16.3
Manganese ug/L	207	67.4	83.7	140	79.2
Nickel ug/L	2.71	2.81	2.16	2.6	2.26
Nitrate, nitrite mg/L	.235	.365	.172	.272	.156
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.59	7.92	7.47	7.59	7.67
Phosphorus mg/L	.048	<.02	.0391	.0222	.0364
Potassium mg/L	2.28	2.35	3.07	3.03	3.72
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	68.7	85.6	67.1	95.1	69.1
Spcond umhos/cm	799	1080	805	990	805
Strontium ug/L	345	373	287	398	311
Sulfate mg/L	62.2	89.4	54	68.3	46.8
TDS mg/L	494	626	486	596	452
TempC deg C	19.7	18	18.3	18.1	17.8
TKN mg/L	.414	.399	.792	.604	.844
TSS mg/L	14.5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200081 TINKERS CREEK NEAR TWINSBURG, 0.36 MI. UPST. RTS. 82 & 14

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	18.00	48	41.30814	-81.43689	04110002-05-04

Inorganic Parameters	6/28/18	8/2/18	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	111	201	150	144	170	166
Aluminum ug/L	1620	<200	440	352	207	<200
Ammonia mg/L	.109	.0615	.0843	<.05	.076	<.05
Arsenic ug/L	4.16	3.3	3.09	3.23	3.06	2.73
Barium ug/L	39.5	53.5	48.9	43.7	46.6	41
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	36	90.8	65.5	58.4	69.7	58.9
CBOD20 mg/L			13			
Chloride mg/L	103	305		221	206	154
Chlorophyll ug/L			1.87			
Chromium ug/L	2.22	<2	<2	<2	<2	<2
COD mg/L	51.4	40.7	53	27.6	28.8	<20
Copper ug/L	6.02	4.45	3.94	3.81	3.11	2.42
DO mg/L	6.85	6.49	5.96	6.47	6.42	8.78
DOC mg/L	9.64	5.28	5.94	6.46	6.59	8.92
DOsat percent	77.2	75.3	70.3	74.7	72.7	89.4
Hardness mg/L	121	321	230	206	240	203
Iron ug/L	3500	321	964	790	627	641
Lead ug/L	2.27	<2	<2	<2	<2	<2
Magnesium mg/L	7.66	22.9	16.1	14.6	16.1	13.5
Manganese ug/L	229	64.8	126	97.4	92.5	69.9
Nickel ug/L	3.81	3.82	3.23	3.41	3.19	2.57
Nitrate, nitrite mg/L	1.16	5.21	3.47	3.14	3.03	2.38
Nitrite mg/L	.0263	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0613	.0368	.0296	.0408	.0418	.0297
pH su	7.58	7.95	7.59	7.79	7.8	7.74
Pheophytin ug/L			<1.4			
Phosphorus mg/L	.254	.0564	.0744	.0762	.0764	.0604
Potassium mg/L	3.86	6.36	5.47	4.82	4.5	4.47
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	65.9	174	140	125	120	98
Spcond umhos/cm	578	1420	1200	1080	1080	849
Strontium ug/L	259	465	412	430	506	390
Sulfate mg/L	20.5	68.7	50.8	46.1	48.1	36
TDS mg/L	344	788	688	602	612	500
TempC deg C	21.2	22.6	23.5	22.4	20.9	16.1
TKN mg/L	1.45	.873	1.08	.871	1.16	1.01
TOC mg/L			6.55			
TSS mg/L	59	5.5	18.5	13	8	<5
Zinc ug/L	17	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200102 TRIB. TO FURNACE RUN (7.90) N OF RICHFIELD, NEAR MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-001	0.20	1	41.26738	-81.64016	04110002-04-03

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	168	230	204	197	190
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	35.8	48.3	44.7	42.4	44.5
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	52.2	81.9	76.1	70.2	65.3
Chloride mg/L	66.2	65.3	60.5	55.5	46.7
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	<20	<20	<20
Copper ug/L	4.06	<2	<2	<2	<2
DO mg/L	7.96	6.75	5.74	7.06	7.04
DOsat percent	85.3	73.2	63	76.8	75.4
Hardness mg/L	178	280	261	242	226
Iron ug/L	155	<50	<50	65.1	<50
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	11.6	18.4	17.2	16.2	15.4
Manganese ug/L	<10	<10	<10	<10	<10
Nickel ug/L	<2	2.43	2.36	2.23	<2
Nitrate, nitrite mg/L	.816	.354	.362	.464	.314
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.87	7.94	7.95	8.14	8.17
Phosphorus mg/L	.0478	.0394	.0382	.0564	.0462
Potassium mg/L	2.89	3.2	2.92	3.08	3.86
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	39.6	31.9	30.2	29.3	26.5
Spcond umhos/cm	566	749	654	602	558
Strontium ug/L	131	184	169	166	161
Sulfate mg/L	29	48.3	46.2	43.1	38.3
TDS mg/L	334	412	382	364	320
TempC deg C	18.6	19.2	19.8	18.9	18.6
TKN mg/L	.537	.499	.331	.458	.442
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200113 BRIMFIELD DITCH NEAR KENT, NEAR MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-001	0.10	5	41.15475	-81.31858	04110002-02-02

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/19/18
Alkalinity mg/L		173				177
Aluminum ug/L		<200				<200
Ammonia mg/L		.155				.0734
Arsenic ug/L		4.93				5.58
Barium ug/L		68.6				66.6
Cadmium ug/L		<.2				<.2
Calcium mg/L		56.7				52.3
CBOD20 mg/L						7.65
Chloride mg/L		118				
Chlorophyll ug/L						.531
Chromium ug/L		<2				<2
COD mg/L		22.6				32.4
Copper ug/L		3.17				<2
DO mg/L		4.42				5.48
DOC mg/L		9.34				6.89
DOsat percent		49.6				63.5
E. coli	262		995	987	32100	
Hardness mg/L		196				182
Iron ug/L		1180				943
Lead ug/L		<2				<2
Magnesium mg/L		13.1				12.4
Manganese ug/L		837				956
Nickel ug/L		2.06				<2
Nitrate, nitrite mg/L		.404				.1
Nitrite mg/L		.0275				<.02
Ortho-P mg/L		.0255				.022
pH su		7.45				7.41
Pheophytin ug/L						1.96
Phosphorus mg/L		.0956				.0909
Potassium mg/L		2.67				<2
Selenium ug/L		<2				<2
Sodium mg/L		70				43.5
Spcond umhos/cm		815				647
Strontium ug/L		158				144
Sulfate mg/L		26.5				23.2
TDS mg/L		466				384
TempC deg C		20.9				22.6
TKN mg/L		.977				.852
TOC mg/L						7.3
TSS mg/L		<5				<5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

200113		BRIMFIELD DITCH NEAR KENT, NEAR MOUTH			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-001	0.10	5	41.15475	-81.31858	04110002-02-02

Inorganic Parameters	7/24/18	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	178	200	138	149
Aluminum ug/L	<200	<200	<200	<200
Ammonia mg/L	.0826	.0701	.0541	.0647
Arsenic ug/L	6.07	5.08	5.58	3.22
Barium ug/L	75	76.9	65.9	56.1
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	60	69.9	51.3	50.4
CBOD20 mg/L				
Chloride mg/L	103	109	65.2	71.1
Chlorophyll ug/L				
Chromium ug/L	<2	<2	<2	<2
COD mg/L	31.6	154	41.5	<20
Copper ug/L	<2	<2	<2	<2
DO mg/L	5.18	5.4	3.71	6
DOC mg/L	6.6	5.04	8.67	8.03
DOsat percent	58.7	58.8	42	62.8
E. coli				
Hardness mg/L	207	239	181	176
Iron ug/L	1430	761	1430	858
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	13.9	15.6	12.7	12.1
Manganese ug/L	1050	995	837	294
Nickel ug/L	<2	2.13	<2	<2
Nitrate, nitrite mg/L	.111	.139	.114	.126
Nitrite mg/L	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0248	.019	.0419	.027
pH su	7.58	7.7	7.51	7.4
Pheophytin ug/L				
Phosphorus mg/L	.0984	.069	.129	.0639
Potassium mg/L	2.38	2.29	3.91	3.14
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	56	59	39.3	41
Spcond umhos/cm	654	808	511	527
Strontium ug/L	162	173	153	143
Sulfate mg/L	23.2	27.5	21.4	28.9
TDS mg/L	416	466	314	328
TempC deg C	21	19.4	21.4	17.5
TKN mg/L	.77	.741	.841	.586
TOC mg/L				
TSS mg/L	6.5	<5	5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 200116 L. CUYAHOGA R. AT AKRON, 0.15 MI. DST. ST. RT. 91

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	8.40	30	41.06458	-81.44223	04110002-03-03

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	184	195	205	125	139
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.0906	.0999	.0832	.051	.158
Arsenic ug/L	2.35	2.68	2.57	2.52	2.75
Barium ug/L	82.6	82.8	90.6	75.1	66.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	70.6	68.9	77.5	49.1	47.6
Chloride mg/L	98.6	103	113	57.9	55.8
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	29.4	33.8	<20	35.2	26.6
Copper ug/L	2.27	2.13	<2	<2	<2
DO mg/L	6.84	6.84	6.8	8.08	7.55
DOsat percent	79.7	79.7	76	86	78.9
Hardness mg/L	244	238	268	173	168
Iron ug/L	584	611	550	568	430
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	16.5	16.1	18.2	12.2	11.9
Manganese ug/L	192	200	180	145	112
Nickel ug/L	2.3	2.56	2.7	<2	<2
Nitrate, nitrite mg/L	.48	.526	.476	.601	.386
Nitrite mg/L	<.02	<.02	<.02	<.02	.0463
pH su	7.95	7.95	7.94	7.68	7.71
Phosphorus mg/L	.0662	.0574	.0507	.0811	.0641
Potassium mg/L	2.33	2.26	2.8	3.13	3.13
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	55	53	62.7	33.8	32.5
Spcond umhos/cm	772	772	822	509	467
Strontium ug/L	178	168	197	150	142
Sulfate mg/L	43	43.4	43.6	36.6	27.6
TDS mg/L	446	428	458	310	284
TempC deg C	22.8	22.8	20.7	18.3	17.4
TKN mg/L	.648	.832	.726	.765	.942
TSS mg/L	10	9	8.5	17.5	8.5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 300085 ROCK CREEK UPST. ELM GROVE BRIDGE

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-002	0.20	1	41.26834	-81.63827	04110002-04-03

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	139	180	148	102	172
Aluminum ug/L	<200	<200	<200	226	<200
Ammonia mg/L	.0518	<.05	<.05	<.05	<.05
Arsenic ug/L	2.68	3.02	2.83	4.05	2.28
Barium ug/L	27.6	49.1	43.8	33	47
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	43.8	87.4	69.6	46.9	73.1
Chloride mg/L	295	535	439	337	346
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	30.4	29.6	34.4	28.8	33.1
Copper ug/L	4.66	5.4	4.34	4.21	3.49
DO mg/L	7.42	7.28	6.9	7.2	7.49
DOsat percent	81.7	80	76.5	79	81.2
Hardness mg/L	146	303	241	159	257
Iron ug/L	299	<50	138	440	<50
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	8.98	20.6	16.3	10.2	18
Manganese ug/L	12	13.3	17.9	15	10.1
Nickel ug/L	2.09	2.93	2.52	2.2	2.29
Nitrate, nitrite mg/L	.259	.123	.155	.483	.136
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.9	7.94	7.84	8.09	8.25
Phosphorus mg/L	.0507	<.02	.0214	.0457	.0235
Potassium mg/L	4.05	4.72	5.29	4.59	6.27
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	185	312	249	206	202
Spcond umhos/cm	1200	2240	1740	1100	1430
Strontium ug/L	310	600	481	385	570
Sulfate mg/L	46.7	79.3	70.9	58.6	67.6
TDS mg/L	662	1100	946	732	824
TempC deg C	19.9	19.6	20.2	19.9	19.1
TKN mg/L	.865	.676	.587	.716	.729
TSS mg/L	<5	<5	<5	5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 300088 FURNACE RUN DST. CONFLUENCE WITH ROCK CREEK

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-000	7.25	6	41.26000	-81.63710	04110002-04-03

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	140	169	147	130	175
Aluminum ug/L	259	<200	<200	237	<200
Ammonia mg/L	.0537	<.05	<.05	<.05	<.05
Arsenic ug/L	2.43	<2	<2	2.42	<2
Barium ug/L	33.5	51.8	48.2	45.7	49.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	43.5	67.2	61.7	58.2	62.5
Chloride mg/L	208	263	259	255	172
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	25.1	<20	20.2	20.9	30.8
Copper ug/L	6.16	2.73	2.64	3.31	2.47
DO mg/L	6.92	5.54	5.77	7.19	7.47
DOsat percent	75.8	61	64.3	79.1	80.2
Hardness mg/L	145	227	210	198	213
Iron ug/L	611	88.1	89.5	503	116
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	8.96	14.5	13.5	12.8	13.7
Manganese ug/L	33	32.5	32.8	28.5	32.9
Nickel ug/L	2.24	2.36	2.21	2.31	2.08
Nitrate, nitrite mg/L	.262	<.1	.141	1.15	.198
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.87	7.84	7.83	8.02	7.89
Phosphorus mg/L	.0494	<.02	<.02	.0318	.0275
Potassium mg/L	3.28	3.16	3.25	3.96	4.03
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	126	139	140	149	111
Spcond umhos/cm	1040	1330	1080	1100	996
Strontium ug/L	200	286	268	278	282
Sulfate mg/L	36.4	54.3	53.1	48.9	47.5
TDS mg/L	526	642	636	620	524
TempC deg C	19.6	19.9	20.5	19.9	18.7
TKN mg/L	.76	.714	.445	.538	.695
TSS mg/L	6.5	<5	<5	6	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 300509 CUYAHOGA R. NEAR BRECKSVILLE @ ST. RT. 82 (DST DAM)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	20.67	583	41.32158	-81.58731	04110002-05-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	152		157	196	157	167
Aluminum ug/L	<200		<200	<200	<200	215
Ammonia mg/L	<.05		<.05	.719	.0576	<.05
Arsenic ug/L	<2		2.35	2.23	3.12	2.47
Barium ug/L	54.4		44.9	46.1	47.1	48.8
BOD 5-Day mg/L	2.76		53.5	2.47	2.07	2.59
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	72.7		61.1	63.8	65.6	73.1
Chloride mg/L	141		119	148	140	170
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		<20	<20	<20	22
Copper ug/L	2.66		2.76	2.83	3.15	3.29
DO mg/L	7.72		9.38	8.3	8.02	8.86
DOC mg/L	6.02		7.2	5.37	6.33	5.78
DOsat percent	93.6		120.5	94.7	95.8	99.7
E. coli		133		345	79	
Hardness mg/L	249		211	224	229	255
Iron ug/L	346		311	341	596	679
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	16.5		14.2	15.6	15.8	17.6
Manganese ug/L	61.4		45.6	72.7	76	79.1
Nickel ug/L	2.4		2.62	2.88	3.09	4.13
Nitrate, nitrite mg/L	4.24		2.07	3.81	5.6	6.04
Nitrite mg/L	.13		<.02	.0246	.0487	.0347
Ortho-P mg/L	<.01		.0233	.0489	.321	.0895
pH su	8.1		8.15	8.01	8.06	7.88
Phosphorus mg/L	.0295		.0664	.0842	.322	.177
Potassium mg/L	5.09		4.48	5.38	5.23	6.57
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	90.9		76	94.4	93.3	107
Spcond umhos/cm	883		788	901	859	1057
Strontium ug/L	218		185	207	201	221
Sulfate mg/L	61.6		48.8	62.4	64.4	72.6
TDS mg/L	530		466	528	530	622
TempC deg C	24.9		25.4	21.9	24.3	20.75
TKN mg/L	.835		.722	1.1	.766	.917
TOC mg/L	6.24		6.34	5.97	5.64	5.36
TSS mg/L	<5		7.5	7	19.5	19.5
Zinc ug/L	10.2		<10	11.4	<10	15.2

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 300516 CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOWING)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	50.00	326	41.14090	-81.43527	04110002-03-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	134		126	133	136	146
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	.0783		<.05	.0682	<.05	<.05
Arsenic ug/L	2.03		3.02	2.65	2.86	2.32
Barium ug/L	48.6		45.5	44.5	49.7	47.5
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	51.2		44.7	45.6	46.6	52.8
CBOD20 mg/L						
Chloride mg/L	73.4		64.3	76.6	73.6	91
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		20.1	20.4	21.2	<20
Copper ug/L	<2		2.39	3.52	2.42	2.4
DO mg/L	7.46		6.78	6.7	6.49	13.81
DOC mg/L						
DOsat percent	87.8		81	74.9	78	154.1
E. coli		45		921	98.4	
Hardness mg/L	176		154	160	163	184
Iron ug/L	341		344	373	257	156
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	11.6		10.3	11.2	11.5	12.7
Manganese ug/L	83.9		137	112	127	46.8
Nickel ug/L	<2		<2	<2	<2	2.59
Nitrate, nitrite mg/L	1.32		.759	2.21	1.62	3.55
Nitrite mg/L	<.02		<.02	.0263	.0261	.0276
Ortho-P mg/L						
pH su	7.98		7.97	7.77	7.93	8.24
Pheophytin ug/L						
Phosphorus mg/L	.0708		.0798	.077	.0772	.0846
Potassium mg/L	3.1		2.77	3.42	3.18	4.22
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	44.5		38.6	45.7	45	55.9
Spcond umhos/cm	538		491	545.9	450	684
Strontium ug/L	128		115	122	120	129
Sulfate mg/L	32.1		24.7	32.6	31.2	39.3
TDS mg/L	336		290	338	340	402
TempC deg C	23.3		24.5	20.5	24.2	20.61
TKN mg/L	.555		.627	.739	.422	.68
TOC mg/L						
TSS mg/L	<5		5	<5	5	<5
Zinc ug/L	<10		<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

300516		CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOWING)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	50.00	326	41.14090	-81.43527	04110002-03-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	125
Aluminum ug/L	<200
Ammonia mg/L	.0698
Arsenic ug/L	2.62
Barium ug/L	45.5
Cadmium ug/L	<.2
Calcium mg/L	47.7
CBOD20 mg/L	14.2
Chloride mg/L	
Chlorophyll ug/L	6.74
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	
DOC mg/L	5
DOsat percent	
E. coli	
Hardness mg/L	165
Iron ug/L	275
Lead ug/L	<2
Magnesium mg/L	11.1
Manganese ug/L	108
Nickel ug/L	<2
Nitrate, nitrite mg/L	1.67
Nitrite mg/L	<.02
Ortho-P mg/L	.0385
pH su	
Pheophytin ug/L	7.51
Phosphorus mg/L	.0557
Potassium mg/L	3.4
Selenium ug/L	<2
Sodium mg/L	42.5
Spcond umhos/cm	
Strontium ug/L	124
Sulfate mg/L	29.4
TDS mg/L	332
TempC deg C	
TKN mg/L	.643
TOC mg/L	5.39
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 300518 CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	52.50	307	41.13931	-81.39185	04110002-03-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	120		122	126	132	136
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	.0555		.0688	.0715	<.05	.0759
Arsenic ug/L	2.17		3.3	2.97	3.21	2.62
Barium ug/L	49.9		47.7	47.5	54.5	54.8
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	48.2		42.4	44.6	44.6	50.5
CBOD20 mg/L						
Chloride mg/L	58.4		55.6	67.3	65.3	76.1
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		26.5	28.3	22.8	<20
Copper ug/L	<2		2.67	3.52	2.59	2.88
DO mg/L	6.09		6.02	6.28	5.89	10.64
DOC mg/L						
DOsat percent	70.6		73	70	69.9	116.1
E. coli		51		579	92.5	
Hardness mg/L	165		147	156	156	176
Iron ug/L	401		457	455	293	567
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	11		10	10.8	10.9	12.2
Manganese ug/L	106		196	154	177	136
Nickel ug/L	<2		<2	<2	<2	2.5
Nitrate, nitrite mg/L	1.34		.653	1.71	1.74	2.92
Nitrite mg/L	<.02		<.02	<.02	<.02	<.02
Ortho-P mg/L						
pH su	7.9		8.07	7.46	8.02	8.05
Pheophytin ug/L						
Phosphorus mg/L	.0551		.0733	.0985	.094	.103
Potassium mg/L	2.95		2.52	2.96	2.87	3.77
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	37.6		33.5	40.3	39.6	46.7
Spcond umhos/cm	475		447.6	501.7	423.5	591
Strontium ug/L	118		108	116	114	123
Sulfate mg/L	27.2		22.7	29.2	28.6	35.8
TDS mg/L	288		264	314	306	358
TempC deg C	21.8		24	20.5	23.8	19.39
TKN mg/L	.782		.727	.667	.403	.784
TOC mg/L						
TSS mg/L	<5		7.5	7.5	7	6.5
Zinc ug/L	<10		<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

300518		CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	52.50	307	41.13931	-81.39185	04110002-03-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	118
Aluminum ug/L	<200
Ammonia mg/L	.0613
Arsenic ug/L	2.75
Barium ug/L	46.7
Cadmium ug/L	<.2
Calcium mg/L	44.4
CBOD20 mg/L	13.4
Chloride mg/L	
Chlorophyll ug/L	9.26
Chromium ug/L	<2
COD mg/L	23.4
Copper ug/L	<2
DO mg/L	7.65
DOC mg/L	5.01
DOsat percent	89.1
E. coli	
Hardness mg/L	154
Iron ug/L	224
Lead ug/L	<2
Magnesium mg/L	10.4
Manganese ug/L	106
Nickel ug/L	2.29
Nitrate, nitrite mg/L	1.98
Nitrite mg/L	<.02
Ortho-P mg/L	.0466
pH su	7.54
Pheophytin ug/L	7.28
Phosphorus mg/L	.0862
Potassium mg/L	2.98
Selenium ug/L	<2
Sodium mg/L	36.6
Spcond umhos/cm	487
Strontium ug/L	117
Sulfate mg/L	26.5
TDS mg/L	302
TempC deg C	22.8
TKN mg/L	.603
TOC mg/L	5.52
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	51.00	323	41.13690	-81.41830	04110002-03-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	128		130	130	140	156
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	.105		.061	.0811	.0753	.0591
Arsenic ug/L	2.05		2.96	2.65	2.87	2.22
Barium ug/L	50.5		46.1	44.6	52.5	50
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	52		45.8	45.3	48.9	54.1
CBOD20 mg/L						
Chloride mg/L	75.2		66.2	77.5	75.7	88.8
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		21.5	<20	<20	<20
Copper ug/L	<2		2.36	3.33	2.45	2.36
DO mg/L	7.4		5.77	7	7.48	12.92
DOC mg/L						
DOsat percent	85.7		70.6	79.7	87.9	141.1
E. coli		58		613	134.3	
Hardness mg/L	179		158	159	171	188
Iron ug/L	354		318	310	224	136
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	11.9		10.5	11.1	12	13
Manganese ug/L	92.7		151	101	128	53.2
Nickel ug/L	<2		<2	<2	<2	2.48
Nitrate, nitrite mg/L	1.26		.853	2.13	1.6	3.39
Nitrite mg/L	.0215		<.02	.0321	.0343	.0251
Ortho-P mg/L						
pH su	7.9		7.87	7.66	7.77	7.97
Pheophytin ug/L						
Phosphorus mg/L	.0486		1.8	.0848	.0896	.0947
Potassium mg/L	3.29		2.85	3.49	3.39	4.24
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	46.8		40.4	45.7	48.2	55.3
Spcond umhos/cm	541		512	546.1	659	656
Strontium ug/L	132		118	122	127	131
Sulfate mg/L	32.3		25.4	33	33.1	40.2
TDS mg/L	340		296	336	338	386
TempC deg C	22.6		24	20.4	24	19.48
TKN mg/L	.716		.594	.741	.554	.71
TOC mg/L						
TSS mg/L	<5		<5	<5	<5	<5
Zinc ug/L	<10		<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

300574		CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	51.00	323	41.13690	-81.41830	04110002-03-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	128
Aluminum ug/L	<200
Ammonia mg/L	.0824
Arsenic ug/L	2.81
Barium ug/L	47.6
Cadmium ug/L	<.2
Calcium mg/L	48.8
CBOD20 mg/L	10.7
Chloride mg/L	
Chlorophyll ug/L	7.2
Chromium ug/L	<2
COD mg/L	21.2
Copper ug/L	<2
DO mg/L	8.26
DOC mg/L	5.03
DOsat percent	96.6
E. coli	
Hardness mg/L	169
Iron ug/L	253
Lead ug/L	<2
Magnesium mg/L	11.6
Manganese ug/L	101
Nickel ug/L	2.51
Nitrate, nitrite mg/L	1.81
Nitrite mg/L	<.02
Ortho-P mg/L	.0421
pH su	7.7
Pheophytin ug/L	5.5
Phosphorus mg/L	.13
Potassium mg/L	3.64
Selenium ug/L	<2
Sodium mg/L	46.5
Spcond umhos/cm	558
Strontium ug/L	131
Sulfate mg/L	31
TDS mg/L	340
TempC deg C	23.1
TKN mg/L	.569
TOC mg/L	5.6
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 301193 BIG CREEK AT BROOKLYN, UPST. FORD BRANCH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	4.40	19	41.44600	-81.75400	04110002-06-03

Inorganic Parameters	7/9/18	7/26/18	8/7/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	152	132	84.8	90.6	160	164
Aluminum ug/L	<200	<200	1050	<200	<200	<200
Ammonia mg/L	.0855	.0511	.11	<.05	.0891	<.05
Arsenic ug/L	2.9	3.77	2.65	<2	2.46	3.42
Barium ug/L	39.3	33.9	24.3	28.9	37.8	46.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	58	51.1	34.9	37.2	57.6	63.7
CBOD20 mg/L			16.4			
Chloride mg/L	217	161		90.8	186	158
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	32.4	<20	31.8	26	43.3	35.2
Copper ug/L	5.25	4.89	5.59	5.2	5.23	3.5
DO mg/L	8.74	6.73	7.73	7.55	8.13	9.19
DOC mg/L	5.01	4.89	6.69	4.38	4.23	3.64
DOsat percent	105	78.6	90.4	85.4	89.1	95.8
Hardness mg/L	192	168	121	118	188	217
Iron ug/L	208	185	1920	290	229	185
Lead ug/L	<2	<2	2.44	<2	<2	<2
Magnesium mg/L	11.3	9.74	8.08	6.12	10.7	14
Manganese ug/L	34	23	54.7	25.8	16.1	12
Nickel ug/L	3.11	2.8	4.99	2.06	3.15	3.3
Nitrate, nitrite mg/L	.629	.692	1.31	.312	.885	.4
Nitrite mg/L	<.02	<.02	.0205	<.02	<.02	<.02
Ortho-P mg/L	.0947	.101	.0424	.0547	.0718	.0986
pH su	8.22	7.72	8.04	7.78	7.99	
Phosphorus mg/L	.141	.159	.135	.0977	.0947	.136
Potassium mg/L	4.62	4.4	3.95	3.03	4.55	6.53
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	133	115	57.3	72	128	114
Spcond umhos/cm	839	1010		581	1090	1110
Strontium ug/L	472	406	186	307	464	508
Sulfate mg/L	70.8	54.9	44.7	36.8	80.2	67.6
TDS mg/L	602	506	322	314	604	524
TempC deg C	24.5	22.9	23	21.4	19.6	16.9
TKN mg/L	.578	.701	.925	.572	.889	<.6
TOC mg/L			6.85			
TSS mg/L	<5	<5	29.5	<5	<5	<5
Zinc ug/L	<10	<10	11.7	13.3	<10	11.8

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 302337 ADAMS RUN AT AKRON @ ESSEX ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-031-001	0.20	2	41.04780	-81.46584	04110002-03-03

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	232	237	189	183	194
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.458	.499	.283	.32	.246
Arsenic ug/L	2.84	3.34	4.55	2.97	3.76
Barium ug/L	49.2	53.3	51.9	55.9	52.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	83.3	77.8	69.7	75.7	68.7
Chloride mg/L	116	120	96.9	106	93.5
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	23	33.7	152	24.6	24.7
Copper ug/L	<2	<2	2.94	<2	<2
DO mg/L	1.31	1.31	.98	4.44	4.17
DOsat percent	14.3	14.3	10.5	46.5	42.5
Hardness mg/L	273	255	228	246	223
Iron ug/L	620	859	1430	1330	1760
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	15.8	14.8	13.1	13.9	12.4
Manganese ug/L	292	354	492	287	490
Nickel ug/L	2.14	2.04	2.42	2.28	2.5
Nitrate, nitrite mg/L	.24	.226	.357	1.21	.839
Nitrite mg/L	.0625	.0539	.0419	.0496	.0361
pH su	7.47	7.47	7.63	7.56	7.61
Phosphorus mg/L	.0343	.0715	.064	.0757	.0976
Potassium mg/L	2.06	2.15	2.1	3.44	3.02
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	67.6	66.3	60.4	75.3	59.9
Spcond umhos/cm	914	914	783	773	667
Strontium ug/L	195	185	179	221	193
Sulfate mg/L	41.9	45.2	29	40.9	32.3
TDS mg/L	496	496	408	448	404
TempC deg C	19.7	19.7	19	17.4	16.2
TKN mg/L	1.01	1.42	.817	.974	1.37
TSS mg/L	<5	5	6	8.5	6
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 302644		TRIB. TO CUYAHOGA R. (21.70) DST. RIVERVIEW RD., DST. SPLIT			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-036	0.10	3	41.30710	-81.58576	04110002-05-05

Inorganic Parameters	6/20/18
E. coli	439

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 302647 TRIB. TO CHIPPEWA CREEK (0.80) NEAR BRECKSVILLE, NEAR MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-009-001	0.10	1	41.31564	-81.60202	04110002-05-03

Inorganic Parameters	7/9/18	7/26/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	158	166	128	133	159
Aluminum ug/L	257	393	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	28.5	37.3	32.4	32.2	35.9
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	49.6	65.6	56.7	58.9	67.4
Chloride mg/L	100	130	159	115	137
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	27.6	<20	24.4	31.8	<20
Copper ug/L	6.46	4	3.39	3.75	2.72
DO mg/L	5.69	5.54	7.46	6.67	6.74
DOsat percent	61.6	61.9	82.1	71.4	70
Hardness mg/L	181	239	211	217	247
Iron ug/L	603	950	160	278	445
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	13.8	18.3	16.9	17	19.2
Manganese ug/L	25.4	52.3	<10	14.2	39.5
Nickel ug/L	2.51	3.43	<2	2.55	2.82
Nitrate, nitrite mg/L	.265	.505	.428	.907	.185
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.68	7.77	7.61		7.66
Phosphorus mg/L	.0217	<.02	<.02	.0202	.0272
Potassium mg/L	4.09	4.63	4.6	4.83	4.69
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	73.5	90.4	102	86.8	92.8
Spcond umhos/cm	729	956	971	850	915
Strontium ug/L	171	229	211	207	233
Sulfate mg/L	68.7	112	85.8	95.2	107
TDS mg/L	424	576	572	472	534
TempC deg C	19.1	20.7	19.9	18	17
TKN mg/L	.722	.546	.646	.551	.568
TSS mg/L	21	139	7.5	9	<5
Zinc ug/L	25.6	<10	22.3	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303461 NEDO Field Duplicate

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
99-000-000	0.00	0	41.31105	-81.46274	--

Inorganic Parameters	8/22/17	9/18/17	6/19/18	7/9/18	7/26/18	8/2/18
Alkalinity mg/L	156	147	183	239	258	161
Aluminum ug/L	236	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	.154	.0669	<.05	<.05
Arsenic ug/L	3.03	2.33	5.66	2.28	2.32	2.6
Barium ug/L	46.4	53.3	68.8	82.8	91.2	47.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	67.3	59.5	74.4	86.9	94.7	73.8
CBOD20 mg/L						
Chloride mg/L	145	131	88.6	143	140	263
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	21.4	22.3	29.2	<20	27.8
Copper ug/L	3.54	2.61	2.01	3.17	<2	5.93
DOC mg/L				5.9	4.23	5.2
Hardness mg/L	235	207	250	294	326	254
Iron ug/L	786	163	1030	431	223	233
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	16.3	14.1	15.6	18.6	21.8	16.9
Manganese ug/L	78.8	58.2	348	96.4	66.9	33.2
Nickel ug/L	3.37	2.88	2.2	2.27	3.05	5.01
Nitrate, nitrite mg/L	6.44	2.85	.344	.294	.231	5.85
Nitrite mg/L	.0631	<.02	.0207	<.02	<.02	.0322
Ortho-P mg/L				.0189	.0164	.104
Phosphorus mg/L	.34	.082	.233	.0344	.0254	.135
Potassium mg/L	5.47	4.57	2.46	2.76	2.78	8.07
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	95.8	79.8	50.7	80.9	78.4	157
Strontium ug/L	204	152	173	239	229	447
Sulfate mg/L	66.6	46.4	25.3	53.1	56	76
TDS mg/L	540	472	420	590	600	676
TKN mg/L	.748	.692	.718	.855	.508	.944
TSS mg/L	10.5	<5	<5	<5	<5	<5
Zinc ug/L	17.7	<10	<10	<10	<10	15.5

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

303461		NEDO Field Duplicate			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
99-000-000	0.00	0	41.31105	-81.46274	--

Inorganic Parameters	8/15/18	8/22/18	9/24/18	10/1/18
Alkalinity mg/L	122	168	149	162
Aluminum ug/L	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	.0504	<.05
Arsenic ug/L	2.29	2.13	2.53	2.37
Barium ug/L	35.6	69.2	36.3	38.7
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	57	65.8	60.9	64.2
CBOD20 mg/L			10.8	
Chloride mg/L	192	48.8	242	171
Chromium ug/L	<2	<2	<2	<2
COD mg/L	<20	23.4	25.6	54.3
Copper ug/L	4.61	<2	4.24	3.82
DOC mg/L	5.11	4.86	3.33	4.77
Hardness mg/L	195	222	218	219
Iron ug/L	319	400	130	260
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	12.8	14.1	15.9	14.3
Manganese ug/L	32	53.1	13.8	19.6
Nickel ug/L	3.7	<2	3.52	3.36
Nitrate, nitrite mg/L	4.48	.125	<.1	3.4
Nitrite mg/L	.0206	<.02	<.02	<.02
Ortho-P mg/L	.043	.0195	.0227	.043
Phosphorus mg/L	.0689	.0271	.043	.0693
Potassium mg/L	6.02	2.47	5.81	6.16
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	121	58.8	151	116
Strontium ug/L	340	180	403	410
Sulfate mg/L	59.6	171	82.7	57.3
TDS mg/L	568	444	644	546
TKN mg/L	1.03	.811	.54	.814
TSS mg/L	6	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303949 TRIB. TO CUYAHOGA R. (21.40) @ RIVERVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-043	0.40	1	41.31000	-81.58900	04110002-05-05

Inorganic Parameters	6/20/18	6/29/18	7/6/18	7/9/18	7/26/18	8/22/18
Alkalinity mg/L				277	324	214
Aluminum ug/L				<200	<200	212
Ammonia mg/L				.0782	<.05	<.05
Arsenic ug/L				<2	<2	<2
Barium ug/L				43.9	49.2	40.5
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				109	129	105
Chloride mg/L				43.9	31.9	107
Chromium ug/L				<2	<2	<2
COD mg/L				<20	<20	25.3
Copper ug/L				<2	<2	<2
DO mg/L				7.63	8.6	8.22
DOsat percent				83.7	97.3	88.4
E. coli	454	386	2610			
Hardness mg/L				408	501	390
Iron ug/L				327	217	547
Lead ug/L				<2	<2	<2
Magnesium mg/L				33	43.5	30.9
Manganese ug/L				151	168	104
Nickel ug/L				3	3.93	2.65
Nitrate, nitrite mg/L				.154	.148	.185
Nitrite mg/L				<.02	<.02	<.02
pH su				7.94	7.97	7.84
Phosphorus mg/L				<.02	<.02	<.02
Potassium mg/L				3.07	2.99	3.56
Selenium ug/L				<2	<2	<2
Sodium mg/L				29.1	23.9	35.4
Spcond umhos/cm				903	1020	862
Strontium ug/L				319	416	291
Sulfate mg/L				164	227	42.2
TDS mg/L				590	722	582
TempC deg C				19.7	21.3	18.8
TKN mg/L				.315	<.3	.45
TSS mg/L				<5	<5	8
Zinc ug/L				<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

303949		TRIB. TO CUYAHOGA R. (21.40) @ RIVERVIEW RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-043	0.40	1	41.31000	-81.58900	04110002-05-05

Inorganic Parameters	9/12/18	9/24/18
Alkalinity mg/L	255	333
Aluminum ug/L	<200	<200
Ammonia mg/L	<.05	<.05
Arsenic ug/L	<2	<2
Barium ug/L	40.8	44.7
Cadmium ug/L	<.2	<.2
Calcium mg/L	102	135
Chloride mg/L	49.7	38
Chromium ug/L	<2	<2
COD mg/L	28.4	<20
Copper ug/L	<2	<2
DO mg/L	7.66	9.58
DOsat percent	80.9	94.7
E. coli		
Hardness mg/L	395	519
Iron ug/L	278	340
Lead ug/L	<2	<2
Magnesium mg/L	34.4	44.2
Manganese ug/L	135	157
Nickel ug/L	3.33	4.01
Nitrate, nitrite mg/L	.146	<.1
Nitrite mg/L	<.02	<.02
pH su		7.95
Phosphorus mg/L	<.02	<.02
Potassium mg/L	3.11	3.18
Selenium ug/L	<2	<2
Sodium mg/L	32.6	27.2
Spcond umhos/cm	938	999
Strontium ug/L	338	426
Sulfate mg/L	177	216
TDS mg/L	582	684
TempC deg C	17.9	14.7
TKN mg/L	<.3	<.3
TSS mg/L	7.5	<5
Zinc ug/L	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303950 MORROW DITCH AT OLD FORGE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-009	1.50	0	41.08261	-81.31960	04110002-03-02

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		149				193
Aluminum ug/L		231				<200
Ammonia mg/L		.277				.637
Arsenic ug/L		3.78				3
Barium ug/L		56.7				127
Cadmium ug/L		<.2				<.2
Calcium mg/L		58.7				106
Chloride mg/L		265				451
Chromium ug/L		<2				<2
COD mg/L		50.6				35.5
Copper ug/L		13.2				4.12
DO mg/L		5.67				3.04
DOsat percent		65.7				36.3
E. coli	350		37	319	2140	
Hardness mg/L		207				405
Iron ug/L		1360				1760
Lead ug/L		<2				<2
Magnesium mg/L		14.7				33.7
Manganese ug/L		972				2050
Nickel ug/L		4.55				3.89
Nitrate, nitrite mg/L		.756				.274
Nitrite mg/L		.0683				.0269
pH su		7.71				7.39
Phosphorus mg/L		.23				.0566
Potassium mg/L		5.29				4.04
Selenium ug/L		<2				<2
Sodium mg/L		163				185
Spcond umhos/cm		1020				1890
Strontium ug/L		203				317
Sulfate mg/L		49.4				75
TDS mg/L		706				1140
TempC deg C		22.5				23.9
TKN mg/L		1.61				1.8
TSS mg/L		13				9.5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

303950		MORROW DITCH AT OLD FORGE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-009	1.50	0	41.08261	-81.31960	04110002-03-02

Inorganic Parameters	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	247	70.8	85.2
Aluminum ug/L	<200	430	254
Ammonia mg/L	.128	.615	.162
Arsenic ug/L	3.26	13.9	6.5
Barium ug/L	129	68	52.1
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	128	26.9	29.2
Chloride mg/L	444	125	51.4
Chromium ug/L	<2	<2	<2
COD mg/L	49.5	123	116
Copper ug/L	3.71	16.3	5.05
DO mg/L	2.94	4.12	5.38
DOsat percent	33.5	45.8	57
E. coli			
Hardness mg/L	494	96.1	104
Iron ug/L	1480	10400	5720
Lead ug/L	<2	3.93	<2
Magnesium mg/L	42.1	7.04	7.62
Manganese ug/L	1520	1680	593
Nickel ug/L	5.28	6.04	7.16
Nitrate, nitrite mg/L	<.1	.285	.4
Nitrite mg/L	<.02	<.02	<.02
pH su	7.4	7.4	7.48
Phosphorus mg/L	.0525	.62	.494
Potassium mg/L	3.38	9.57	5.64
Selenium ug/L	<2	<2	<2
Sodium mg/L	163	67.9	32.7
Spcond umhos/cm	1940	501	350
Strontium ug/L	346	106	104
Sulfate mg/L	70.7	11.2	7.45
TDS mg/L	1150	386	284
TempC deg C	21.5	20.6	18.1
TKN mg/L	1.21	4.45	2.65
TSS mg/L	14	37	7.5
Zinc ug/L	<10	17.7	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303963 TRIB. TO PLUM CK.(2.77) @ SUNNYBROOK RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-027-001	0.35	4	41.11147	-81.37156	04110002-03-04

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	165	163	133	59.9	83.7
Aluminum ug/L	<200	<200	<200	493	295
Ammonia mg/L	1.72	<.05	<.05	<.05	<.05
Arsenic ug/L	2.67	<2	<2	<2	<2
Barium ug/L	120	39.5	41.3	36.9	36.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	156	49.3	48.5	23.4	26.5
Chloride mg/L	149	106	107	27.3	32.9
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	153	34	<20	49.4	44.6
Copper ug/L	4.03	6.58	<2	3.2	2.61
DO mg/L	7.87	7.87	7.48	8.62	9.52
DOsat percent	91.4	91.4	83.3	89.8	97.2
Hardness mg/L	473	166	164	80.1	90.3
Iron ug/L	359	283	279	1460	1350
Lead ug/L	3.11	<2	<2	<2	<2
Magnesium mg/L	19.9	10.5	10.5	5.24	5.83
Manganese ug/L	258	68.7	86.2	59	54
Nickel ug/L	6.11	2.17	2.08	2.1	2.23
Nitrate, nitrite mg/L	1.62	.874	1.46	.407	.226
Nitrite mg/L	.0272	<.02	<.02	<.02	<.02
pH su	8.05	8.05	8.03	7.75	7.81
Phosphorus mg/L	.107	.102	.0882	.146	.137
Potassium mg/L	8.05	2.92	4.09	4.68	4.15
Selenium ug/L	3.29	<2	<2	<2	<2
Sodium mg/L	85.7	57.7	63.8	18.4	20
Spcond umhos/cm	663	663	658	262	283
Strontium ug/L	583	198	184	107	118
Sulfate mg/L	292	14	19.8	20.7	14.8
TDS mg/L	1030	378	376	172	196
TempC deg C	22.7	22.7	20.5	17.3	16.4
TKN mg/L	4.65	.979	<.6	.677	.982
TSS mg/L	<5	<5	<5	9	<5
Zinc ug/L	27.6	<10	<10	10.9	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303964 RIDING RUN @WHEATLEY RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-003	0.10	1	41.21617	-81.59249	04110002-04-03

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	176	205	190	195	219
Aluminum ug/L	2990	<200	<200	3450	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	3.54	<2	<2	3.37	<2
Barium ug/L	40.3	41.2	38.3	52	36.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	56.8	93.9	84.4	76.3	78.1
Chloride mg/L	77.5	89.6	108	77.8	63.8
Chromium ug/L	4.11	<2	<2	3.88	<2
COD mg/L	67.4	<20	<20	64.5	26.2
Copper ug/L	7.21	<2	2.02	6.18	2.17
DO mg/L	8.35	7	6.17	7.26	8.55
DOsat percent	90.2	76.7	67.5	80	90.9
Hardness mg/L	193	322	289	263	268
Iron ug/L	5610	78.3	220	6300	242
Lead ug/L	2.74	<2	<2	2.42	<2
Magnesium mg/L	12.5	21.2	18.9	17.5	17.6
Manganese ug/L	81.3	19.9	22.3	81.7	14
Nickel ug/L	7.97	5.61	3.24	9.08	3.01
Nitrate, nitrite mg/L	.113	<.1	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	8.04	7.93	7.97	8.19	8.12
Phosphorus mg/L	.27	<.02	<.02	.0893	<.02
Potassium mg/L	3.75	3.61	3.47	4.76	4.08
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	52.1	56.2	67.2	52.6	48.9
Spcond umhos/cm	599	948	910	780	698
Strontium ug/L	254	396	384	368	383
Sulfate mg/L	47.1	135	108	77.2	75.5
TDS mg/L	378	564	566	454	426
TempC deg C	19	19.6	19.6	19.9	18.2
TKN mg/L	.706	.534	.417	.668	.486
TSS mg/L	228	<5	<5	54	<5
Zinc ug/L	13.5	<10	<10	17.1	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303968 TRIB. TO BRIDGE CK. (8.85) @ AUBURN RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-035-003	1.40	3	41.39122	-81.24631	04110002-01-04

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	96.8	119	113	81.7	99.5
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.0845	.0936	.0902	.102	.104
Arsenic ug/L	2.12	<2	<2	<2	<2
Barium ug/L	34.6	40.8	48.5	43.8	47
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	28.3	39.8	37.6	26.2	33.3
Chloride mg/L	42.2	58.1	47.7	37.9	37.6
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	50.5	30.8	44.1	58.4	52.2
Copper ug/L	<2	<2	<2	<2	<2
DO mg/L	4.34	1.79	1.91	1.3	2.04
DOsat percent	51.2	17.9	20	14.2	21.1
Hardness mg/L	93.1	128	123	87.5	112
Iron ug/L	1330	1520	2620	1320	763
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	5.48	6.87	7.07	5.36	6.9
Manganese ug/L	593	808	1460	437	284
Nickel ug/L	<2	2.31	<2	<2	<2
Nitrate, nitrite mg/L	.148	.211	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.03	6.68	7.24	7.14	7.14
Phosphorus mg/L	.143	.0821	.141	.0913	.0556
Potassium mg/L	<2	<2	<2	2.44	2.63
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	26.3	32.1	28.1	21.5	23.7
Spcond umhos/cm	310	450	514	317	419
Strontium ug/L	76.6	91.5	89.6	68.7	85.2
Sulfate mg/L	<5	8.83	<5	11.5	8.02
TDS mg/L	204	250	228	190	192
TempC deg C	23.6	15.2	17.4	19.4	17.7
TKN mg/L	.811	.674	.834	1.08	.766
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	94.2	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303969 BREAKNECK CREEK @ JOHNNYCAKE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	18.70	34	41.05879	-81.26847	04110002-02-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	211	223	212	180	216
Aluminum ug/L	201	<200	<200	<200	<200
Ammonia mg/L	.131	.0981	.0769	.0918	.0973
Arsenic ug/L	4.65	4.29	4.28	5.51	3.77
Barium ug/L	95.9	93.3	99.1	97.8	95.9
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	84.1	82.4	86.8	78.8	88
Chloride mg/L	48.8	50.6	49.5	45.8	44.7
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	25.2	27.3	39.4	33.9
Copper ug/L	<2	<2	<2	2.25	<2
DO mg/L	6.33	6.88	6.53	6.19	7.38
DOsat percent	73.1	77.3	70.8	67.9	74.4
Hardness mg/L	288	281	297	269	299
Iron ug/L	1010	565	408	1410	1190
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	18.9	18.2	19.5	17.6	19.1
Manganese ug/L	458	266	256	332	266
Nickel ug/L	2.72	2.84	2.5	2.79	2.84
Nitrate, nitrite mg/L	.665	.875	.769	.661	.819
Nitrite mg/L	.0229	<.02	<.02	<.02	<.02
pH su	7.79	7.97	7.91	7.75	7.49
Phosphorus mg/L	.157	.18	.119	.186	.124
Potassium mg/L	2.65	2.64	2.79	4.23	3.71
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	24.6	22.6	23.1	23.8	22.8
Spcond umhos/cm	614	622	662	582	617
Strontium ug/L	167	160	163	168	179
Sulfate mg/L	61.4	65.2	63.4	60.2	71
TDS mg/L	428	408	432	410	436
TempC deg C	22.4	20.9	19.2	19.8	15.7
TKN mg/L	.688	.5	.54	1.15	.894
TSS mg/L	10	6.5	<5	7.5	6
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303970 TRIB. TO FURNACE RUN (1.20) @ EVERETT RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-004	0.10	2	41.20524	-81.58779	04110002-04-03

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	175	199	181	211	226
Aluminum ug/L	810	<200	<200	948	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	2.25	<2	<2	2.38	<2
Barium ug/L	28.5	47.9	41.1	46.5	39.5
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	48.2	95.5	80.9	83.5	75
Chloride mg/L	112	244	205	158	121
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	29.9	<20	29.1	31	25.6
Copper ug/L	4.53	2.85	9.86	4.04	2.66
DO mg/L	8.44	7.9	8.03	8.37	8.4
DOsat percent	92.3	89.8	89.5	93	90.4
Hardness mg/L	164	328	279	289	261
Iron ug/L	1590	58.3	82.7	1730	113
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	10.5	21.7	18.8	19.6	17.8
Manganese ug/L	25.3	11.1	<10	26.2	<10
Nickel ug/L	3.65	3.71	3.06	4.9	2.82
Nitrate, nitrite mg/L	.231	<.1	.219	.383	.124
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	8.14	8.07	8.09	8.18	8.17
Phosphorus mg/L	.0938	<.02	<.02	.0304	<.02
Potassium mg/L	3.16	4	3.82	4.74	4.42
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	79.6	125	119	101	89.7
Spcond umhos/cm	687	1360	1170	1000	919
Strontium ug/L	273	495	428	474	454
Sulfate mg/L	37.8	119	86.3	76.9	58.5
TDS mg/L	432	718	664	618	496
TempC deg C	19.6	21.4	20.5	20.9	18.8
TKN mg/L	.796	.653	.474	.673	.604
TSS mg/L	28	<5	<5	24	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303971 TRIB. TO CUYAHOGA R. (25.41) @ RIVERVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-045	0.15	2	41.27565	-81.56804	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	165	174	202	132	132
Aluminum ug/L	<200	<200	<200	<200	229
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	35	33.4	55.1	27.4	23.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	75.6	71	130	57	44.9
Chloride mg/L	96.3	75.7	64	76.4	60.8
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	21.3	<20	20.5	<20
Copper ug/L	<2	2.34	<2	2.1	2.25
DO mg/L	6.51	5.39	4.25	8.11	9.18
DOsat percent	69.5	59.4	47.1	85.1	93
Hardness mg/L	282	266	484	219	171
Iron ug/L	<50	142	66.4	156	457
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	22.7	21.5	38.7	18.5	14.4
Manganese ug/L	<10	<10	11.4	<10	13.8
Nickel ug/L	2.26	2.41	3.77	<2	2.47
Nitrate, nitrite mg/L	.2	.221	<.1	.226	.131
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.97	7.9	7.73	8.03	8.05
Phosphorus mg/L	<.02	<.02	<.02	<.02	<.02
Potassium mg/L	3.54	3.52	4.58	3.5	3.21
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	61.8	54.1	53.6	55.9	42.9
Spcond umhos/cm	857	771	676	679	538
Strontium ug/L	227	211	366	174	143
Sulfate mg/L	123	136	291	80.3	66.6
TDS mg/L	568	482	716	396	322
TempC deg C	18.4	20	20.3	17.6	15.9
TKN mg/L	.46	.5	.339	.362	.302
TSS mg/L	<5	<5	<5	5.5	9
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 303997 SPRING CREEK @ BUCKEYE TRAIL UPST. BLUE HEN FALLS

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-012	0.90	1	41.25834	-81.57340	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	203	212	224	166	168
Aluminum ug/L	1170	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	3.92	<2	2.45	2.77	2.07
Barium ug/L	57.3	47	51.4	44.2	35.3
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	79.7	74.9	93.8	69.2	57
Chloride mg/L	469	379	383	380	238
Chromium ug/L	2.1	<2	<2	5.48	<2
COD mg/L	37	20.9	<20	22.2	24.7
Copper ug/L	6.44	5.7	3.13	5.07	3.82
DO mg/L	7.62	6.7	8	8.2	9.62
DOsat percent	79.5	73.6	87.6	85.1	96.6
Hardness mg/L	289	270	343	253	209
Iron ug/L	2620	114	<50	119	271
Lead ug/L	3.88	<2	<2	<2	<2
Magnesium mg/L	21.8	20	26.4	19.5	16.1
Manganese ug/L	77.1	<10	<10	<10	<10
Nickel ug/L	4.68	2.22	2.86	2.48	2.79
Nitrate, nitrite mg/L	.355	.467	.474	.344	.296
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.95	7.86	7.97	8.07	7.9
Phosphorus mg/L	.0506	.0242	<.02	.0252	.0397
Potassium mg/L	3.97	3.68	3.78	3.97	3.76
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	272	217	218	260	161
Spcond umhos/cm	1890	1500	1720	1730	1150
Strontium ug/L	338	320	361	298	246
Sulfate mg/L	89.3	81.6	83.4	97.3	71.9
TDS mg/L	1090	912	932	922	638
TempC deg C	17.1	19.7	19.5	16.9	15.4
TKN mg/L	.603	<.6	.503	.751	.604
TSS mg/L	62.5	7.5	<5	<5	<5
Zinc ug/L	15.9	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	33.20	480	41.20190	-81.56860	04110002-04-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	160		128	153	150	162
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	.417		.0596	.127	.0963	.0576
Arsenic ug/L	<2		2.86	2.08	2.67	2.22
Barium ug/L	54.1		44.2	50.5	47.4	45
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	70.4		47.1	63.4	65.4	71
CBOD20 mg/L						
Chloride mg/L	137		80.7	145	141	163
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		21.4	<20	<20	43.1
Copper ug/L	2.54		2.51	2.87	3.23	2.83
DO mg/L	6.92		7.02	7.12	6.89	6.03
DOC mg/L						
DOsat percent	81.4		84.7	80	81.1	66.4
E. coli		118		727	215.2	
Hardness mg/L	240		162	221	229	247
Iron ug/L	279		303	295	641	184
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	15.6		10.7	15.2	15.9	16.9
Manganese ug/L	57.8		111	67.8	87.3	34
Nickel ug/L	2.31		<2	2.5	3.08	3.39
Nitrate, nitrite mg/L	3.67		.968	3.95	5.62	6.16
Nitrite mg/L	.195		<.02	.132	.0573	.0258
Ortho-P mg/L						
pH su	7.82		7.89	7.74	7.81	7.95
Pheophytin ug/L						
Phosphorus mg/L	.0442		.0652	.102	.32	.452
Potassium mg/L	5.27		2.83	5.11	5.27	5.84
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	89.4		47.2	90.3	94.1	105
Spcond umhos/cm	862		744	875	851	1021
Strontium ug/L	206		124	191	196	206
Sulfate mg/L	56.4		26.5	56.5	60.6	69.3
TDS mg/L	520		338	528	532	590
TempC deg C	23.1		24.6	20.9	23.5	19.91
TKN mg/L	1.19		.631	1.11	.855	.869
TOC mg/L						
TSS mg/L	<5		<5	<5	13	<5
Zinc ug/L	13.9		<10	<10	15	17

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502010		CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	33.20	480	41.20190	-81.56860	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	8/16/18	9/11/18	9/27/18
Alkalinity mg/L	157	150	150	142	110	125
Aluminum ug/L	<200	210	<200	<200	773	571
Ammonia mg/L	.094	.123	.0848	.182	<.05	<.05
Arsenic ug/L	2.67	3.39	2.79	2.9	3.25	3.97
Barium ug/L	44.2	44.8	48.3	47.1	53.6	48.5
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	60.9	53.8	60.6	67.5	44.2	45.8
CBOD20 mg/L				16.2		
Chloride mg/L	135	124	133		78.3	80.4
Chlorophyll ug/L				7.11		
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	25.1	25.5	<20	21.7	35	31.5
Copper ug/L	3.36	4.83	3.22	4.22	4.67	4.15
DO mg/L	7.06	6.26	6.42	6.14	7.7	8.26
DOC mg/L	5.75	5.97	5.76	5.67	6.47	8.11
DOsat percent	78.5	72.8	73.9	71.9	83.5	87.8
E. coli						
Hardness mg/L	207	186	207	231	153	156
Iron ug/L	420	729	492	368	2400	1700
Lead ug/L	<2	<2	<2	<2	2.9	2.22
Magnesium mg/L	13.3	12.4	13.6	15.1	10.2	10.2
Manganese ug/L	67	93.6	73.4	78.6	206	120
Nickel ug/L	2.83	2.91	3.01	2.61	2.94	3.36
Nitrate, nitrite mg/L	2.53	2.7	2.89	6.82	1.05	1.77
Nitrite mg/L	.0359	.0459	<.02	.284	<.02	<.02
Ortho-P mg/L	.0416	.117	.0497	.121	.113	.131
pH su	7.72	7.79	7.7	7.45	7.79	7.75
Pheophytin ug/L				2.34		
Phosphorus mg/L	.0814	.177	.0985	.17	.241	.212
Potassium mg/L	4.72	4.28	5.26	6.44	4.33	4.99
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	80.8	73.8	83.3	97.2	53.2	52.6
Spcond umhos/cm	849	789	849	954	538	543
Strontium ug/L	185	170	184	194	169	165
Sulfate mg/L	51.4	47.8	52.2	60.5	31.6	32.9
TDS mg/L	520	458	494	532	306	330
TempC deg C	20.4	22.7	22.2	23.1	19.2	18.2
TKN mg/L	1.09	1.05	1.03	2.19	.978	.89
TOC mg/L				7.89		
TSS mg/L	6.5	16	11.5	6.5	56	27.5
Zinc ug/L	11.6	15	10.8	15	18.3	14.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502010		CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	33.20	480	41.20190	-81.56860	04110002-04-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	145
Aluminum ug/L	<200
Ammonia mg/L	.0529
Arsenic ug/L	2.41
Barium ug/L	46.7
Cadmium ug/L	<.2
Calcium mg/L	65.2
CBOD20 mg/L	11
Chloride mg/L	
Chlorophyll ug/L	6.67
Chromium ug/L	<2
COD mg/L	23.5
Copper ug/L	2.94
DO mg/L	9.21
DOC mg/L	5.11
DOsat percent	108
E. coli	
Hardness mg/L	224
Iron ug/L	175
Lead ug/L	<2
Magnesium mg/L	14.9
Manganese ug/L	43.3
Nickel ug/L	2.63
Nitrate, nitrite mg/L	4.71
Nitrite mg/L	<.02
Ortho-P mg/L	.044
pH su	7.73
Pheophytin ug/L	<1.4
Phosphorus mg/L	.099
Potassium mg/L	5.65
Selenium ug/L	<2
Sodium mg/L	86
Spcond umhos/cm	861
Strontium ug/L	195
Sulfate mg/L	54.4
TDS mg/L	498
TempC deg C	23
TKN mg/L	.946
TOC mg/L	5.57
TSS mg/L	<5
Zinc ug/L	17.6

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	13.08	707	41.39464	-81.62927	04110002-06-02

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	157			156	156	144
Aluminum ug/L	<200			<200	<200	229
Ammonia mg/L	<.05			<.05	<.05	<.05
Arsenic ug/L	<2			2.33	2.08	2.73
Barium ug/L	53.1			45.6	44.8	43.6
BOD 5-Day mg/L	2.78			3.18	2.24	2.68
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	70.7			61.9	65.7	64.8
CBOD20 mg/L						
Chloride mg/L	145			121	156	153
Chlorophyll ug/L	9.32			15	6.51	16.2
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			<20	<20	23.1
Copper ug/L	3.45			2.99	2.85	3.62
DO mg/L	7.95			9.01	16.37	10.34
DOC mg/L	6.26			6.81	5.68	6.47
DOsat percent	82.5			112.1	190.6	125.5
E. coli		466	130		166	4600
Hardness mg/L	244			214	228	226
Iron ug/L	293			335	310	648
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	16.3			14.4	15.6	15.7
Manganese ug/L	55.9			42.8	50.8	55.1
Nickel ug/L	2.8			2.46	2.73	3.37
Nitrate, nitrite mg/L	3.83			2.58	3.68	4.84
Nitrite mg/L	.0474			<.02	.021	.0384
Ortho-P mg/L	<.01			.0168	.037	.146
pH su	8.13			8.22	8.12	8.1
Pheophytin ug/L	4.93			3.18	5.16	4.57
Phosphorus mg/L	.0386			.061	.073	.187
Potassium mg/L	5.09			4.87	5.18	5.14
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	92.8			81.5	93	93.2
Spcond umhos/cm	847			766	1178	866
Strontium ug/L	239			213	230	218
Sulfate mg/L	62.3			50.6	65.1	63.5
TDS mg/L	546			476	540	592
TempC deg C	25.6			26.4	22.94	25
TKN mg/L	.903			.819	.685	.349
TOC mg/L	6.12			6.31	5.49	5.75
TSS mg/L	8.5			14	<5	62
Zinc ug/L	12.9			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502020		CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	13.08	707	41.39464	-81.62927	04110002-06-02

Inorganic Parameters	9/18/17	7/9/18	7/26/18	8/8/18	8/22/18	8/30/18
Alkalinity mg/L	163	155	141	138	102	133
Aluminum ug/L	<200	625	<200	440	1310	1330
Ammonia mg/L	<.05	.052	<.05	.0933	.0616	<.05
Arsenic ug/L	2.46	3.51	2.48	2.51	2.68	3.2
Barium ug/L	44.7	44.1	41.7	43.3	42	53.4
BOD 5-Day mg/L	2.38					
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	72.2	54	61.2	59.1	45.4	59.7
CBOD20 mg/L		11.8	12	8.92	12.5	11
Chloride mg/L	183	122	138	155	108	132
Chlorophyll ug/L	5.74	6.67	14.7	13.9	5.27	13.9
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	31.8	<20	34.8	39.7	42.3
Copper ug/L	3.02	5.29	4.1	5.08	5.48	4.73
DO mg/L		7.6	7.22	8.44	7.45	8.77
DOC mg/L	5.53	6.2	5.15		3.74	
DOsat percent		88.7	87.4	102	86.1	106
E. coli						
Hardness mg/L	253	186	208	201	154	207
Iron ug/L	260	1860	407	676	2520	3380
Lead ug/L	<2	2.51	<2	<2	3.74	2.96
Magnesium mg/L	17.6	12.3	13.5	13	9.95	14.1
Manganese ug/L	40.2	103	56.9	55.8	145	128
Nickel ug/L	3.8	3.83	4.03	3.47	3.61	3.76
Nitrate, nitrite mg/L	6.93	1.71	3.36	3.01	1.64	2.95
Nitrite mg/L	.0227	<.02	<.02	.0953	<.02	<.02
Ortho-P mg/L	.0915	.0601	.035	.0329	.0467	.0606
pH su	8.15	7.86	8.01	7.99	7.72	7.94
Pheophytin ug/L	3.8	2.5	3.82	4.3	4.14	6.44
Phosphorus mg/L	.136	.132	.0895	.0757	.165	.176
Potassium mg/L	7.3	3.98	4.87	5.36	3.96	6.06
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	112	75	92.9	97.1	72.3	85.4
Spcond umhos/cm	1079	785	867	933	672	860
Strontium ug/L	239	220	223	245	200	213
Sulfate mg/L	76.5	45.3	55.4	61.5	42.2	59.3
TDS mg/L	628	442	502	522	378	526
TempC deg C	22	23	24.9	24.7	22.5	24.6
TKN mg/L	.96	.879	<.6	1.09	1.12	1.14
TOC mg/L	5.29					
TSS mg/L	7.5	35.5	11.5	17.5	95	76.5
Zinc ug/L	12.6	18.7	<10	<10	24.1	22.3

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502020		CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	13.08	707	41.39464	-81.62927	04110002-06-02

Inorganic Parameters	9/12/18	9/24/18	10/9/18	5/16/19	5/30/19	6/12/19
Alkalinity mg/L	114	153	128	149	145	128
Aluminum ug/L	1500	<200	445	<200	412	746
Ammonia mg/L	<.05	.0514	<.05	<.05	.103	<.05
Arsenic ug/L	3.93	2.47	2.81	<2	2.18	2.73
Barium ug/L	48.3	47.2	43.6	42.1	39.9	40.5
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	42.3	61.2	51	58.1	51.9	46.3
CBOD20 mg/L	11	11.1	17.7	11.9	12.4	11.5
Chloride mg/L	90.5	129	93.7	122	129	92.3
Chlorophyll ug/L	11.4	3.08	7.41	3.66	6.72	3.27
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	36.4	29.6	34	24.2	<20	26.7
Copper ug/L	6.13	3.5	3.73	2.83	3.68	3.76
DO mg/L	8.69	8.18	8.58	10.2	7.65	8.4
DOC mg/L	6.93	5.72	7.08	5.72	5.73	6.86
DOsat percent	93.9	86.9	98.3	106	85.3	92.5
E. coli						
Hardness mg/L	146	210	175	199	181	159
Iron ug/L	3170	559	1450	672	926	2270
Lead ug/L	4.23	<2	<2	<2	<2	2.35
Magnesium mg/L	9.73	14	11.6	13.1	12.4	10.6
Manganese ug/L	177	63.7	81.3	62.3	78	120
Nickel ug/L	4.42	3.09	3.18	3.05	3.55	3.75
Nitrate, nitrite mg/L	1.03	3.4	1.9	1.84	1.9	1.32
Nitrite mg/L	<.02	<.02	<.02	.024	.0338	<.02
Ortho-P mg/L	.0905	.0463	.114	.0121	.0193	.0397
pH su		7.96	7.83	8.09	7.87	7.88
Pheophytin ug/L	6.31	2.16	3.54	3.38	5.1	4.56
Phosphorus mg/L	.204	.0722	.177	.0555	.0951	.121
Potassium mg/L	4.12	5.58	5.06	3.63	3.96	3.35
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	56	83.7	62.7	76.2	83.1	56.6
Spcond umhos/cm	615	799	645	789	904	626
Strontium ug/L	196	233	206	217	241	184
Sulfate mg/L	38.2	54.2	38.4	47.6	47.1	34
TDS mg/L	346	470	360	422	444	348
TempC deg C	19	16	22	16.8	20.6	20
TKN mg/L	1.09	.781	.978	.77	1.09	.712
TOC mg/L						
TSS mg/L	83	14.5	29	12	26	50.5
Zinc ug/L	18.7	10.1	11.3	<10	<10	15.5

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502020		CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	13.08	707	41.39464	-81.62927	04110002-06-02

Inorganic Parameters	6/26/19	7/8/19	7/25/19	8/14/19	8/29/19	9/18/19
Alkalinity mg/L	111	133	136	145	148	139
Aluminum ug/L	1300	679	439	215	<200	269
Ammonia mg/L	<.05	<.05	.247	<.05	<.05	.0576
Arsenic ug/L	3.56	3.15	3.44	2.52	2.58	2.84
Barium ug/L	45.1	43.6	41.7	49.3	46	49.3
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	41.2	53.3	51.1	64.2	63.7	65.2
CBOD20 mg/L	11.7	9.42		22.7	15.1	12.6
Chloride mg/L	65.3	96.8	89.1	127	123	120
Chlorophyll ug/L	4.3	3.25	8.63	3.89	4.62	3.63
Chromium ug/L	2.09	<2	<2	<2	<2	<2
COD mg/L	33.2	<20	21	<20	<20	23.4
Copper ug/L	4.95	5.05	3.94	3.73	3.36	3.52
DO mg/L	7.07	7.43	8.32	8.41	9.11	8.71
DOC mg/L	7.2	5.84	6.76	5.8	5.38	5.32
DOsat percent	82.6	90	97.3	98.8	105	98.6
E. coli						
Hardness mg/L	141	182	174	221	219	224
Iron ug/L	4070	1890	1380	640	399	751
Lead ug/L	5.27	2.31	<2	<2	<2	<2
Magnesium mg/L	9.27	11.8	11.4	14.7	14.7	14.9
Manganese ug/L	160	97	119	61	54.7	75.3
Nickel ug/L	4.77	4.65	3.16	3.65	3.3	3.89
Nitrate, nitrite mg/L	.929	1.99	1.39	3.07	3.6	3.45
Nitrite mg/L	<.02	.0279	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0342	.0469	.0476	.0329	.0235	.0346
pH su	7.72	7.78	7.93	8.01	8.12	8.08
Pheophytin ug/L	4.39	3.25	3.1	1.01	2.77	3.91
Phosphorus mg/L	.161	.139	.0972	.0665	.0483	.0711
Potassium mg/L	3.61	4	3.9	5.01	5.17	5.85
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	40.3	63.2	56.4	84.3	82.9	80.2
Spcond umhos/cm	464	690	651	814	872	785
Strontium ug/L	155	215	182	245	222	225
Sulfate mg/L	26.1	42.4	35	55.9	55.5	55.8
TDS mg/L	276	376	374	494	510	484
TempC deg C	23	24.9	23.1	23.3	22.4	21.4
TKN mg/L	.699	.822	.943	1.01	1.02	.809
TOC mg/L						
TSS mg/L	117	45.5	36	15	7	16
Zinc ug/L	23.2	11.2	13.4	12.9	10.3	12.3

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502020		CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	13.08	707	41.39464	-81.62927	04110002-06-02

Inorganic Parameters	10/24/19
Alkalinity mg/L	151
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.19
Barium ug/L	44.3
BOD 5-Day mg/L	
Cadmium ug/L	<.2
Calcium mg/L	70.9
CBOD20 mg/L	8.42
Chloride mg/L	137
Chlorophyll ug/L	5.69
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	2.62
DO mg/L	9.71
DOC mg/L	5.01
DOsat percent	91.8
E. coli	
Hardness mg/L	247
Iron ug/L	268
Lead ug/L	<2
Magnesium mg/L	16.9
Manganese ug/L	36.4
Nickel ug/L	3.68
Nitrate, nitrite mg/L	3.73
Nitrite mg/L	<.02
Ortho-P mg/L	.0264
pH su	8.02
Pheophytin ug/L	3.37
Phosphorus mg/L	.0541
Potassium mg/L	6.23
Selenium ug/L	<2
Sodium mg/L	92.3
Spcond umhos/cm	910
Strontium ug/L	233
Sulfate mg/L	63.6
TDS mg/L	526
TempC deg C	12.7
TKN mg/L	.955
TOC mg/L	
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	75.83	151	41.34060	-81.16690	04110002-02-03

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	106			105	90.9	105
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.0616			.0632	<.05	<.05
Arsenic ug/L	<2			2.6	<2	2.02
Barium ug/L	45			38.8	43.9	41.2
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	37.9			32.2	29.8	31.5
Chloride mg/L	46.4			37.9	42.5	44.5
Chromium ug/L	<2			<2	<2	<2
COD mg/L	24			25.5	22.1	<20
Copper ug/L	<2			<2	<2	<2
DO mg/L	6.14			3.46	4.61	4.49
DOsat percent	73.8			41.2	51.2	53.3
E. coli		210	43		89.2	54.6
Hardness mg/L	130			110	101	109
Iron ug/L	644			1140	622	362
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	8.47			7.15	6.59	7.34
Manganese ug/L	269			226	169	159
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	.284			.152	.143	.181
Nitrite mg/L	.025			<.02	<.02	<.02
pH su	7.51			7.24	7.12	7.56
Phosphorus mg/L	.0488			.124	.0781	.0642
Potassium mg/L	2.37			<2	2.23	2.26
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	29.6			25.4	25.6	26.7
Spcond umhos/cm	381.3			305	350.1	340.8
Strontium ug/L	95.4			88.1	80.3	85.9
Sulfate mg/L	16.5			9.68	18.9	12.9
TDS mg/L	218			194	206	206
TempC deg C	24.6			24.1	20.4	24
TKN mg/L	.64			.585	.668	.579
TSS mg/L	5			5	6	5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502030		CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	75.83	151	41.34060	-81.16690	04110002-02-03

Inorganic Parameters	9/18/17
Alkalinity mg/L	108
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.09
Barium ug/L	45.4
Cadmium ug/L	<.2
Calcium mg/L	32.2
Chloride mg/L	47.9
Chromium ug/L	<2
COD mg/L	22.5
Copper ug/L	<2
DO mg/L	6.28
DOsat percent	68.8
E. coli	
Hardness mg/L	111
Iron ug/L	381
Lead ug/L	<2
Magnesium mg/L	7.42
Manganese ug/L	201
Nickel ug/L	<2
Nitrate, nitrite mg/L	.119
Nitrite mg/L	<.02
pH su	7.56
Phosphorus mg/L	.0627
Potassium mg/L	2.45
Selenium ug/L	<2
Sodium mg/L	28.1
Spcond umhos/cm	353
Strontium ug/L	84.9
Sulfate mg/L	14.7
TDS mg/L	222
TempC deg C	19.8
TKN mg/L	.748
TSS mg/L	6.5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502090 TINKERS CREEK AT GLEN WILLOW, DST. RICHMOND RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	8.65	69	41.37670	-81.49000	04110002-05-04

Inorganic Parameters	6/28/18	8/2/18	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	153	179	96.6	124	159	163
Aluminum ug/L	1710	<200	1220	<200	<200	<200
Ammonia mg/L	.105	.267	.0921	.0975	.0772	.0861
Arsenic ug/L	4.27	2.61	2.85	4.18	2.86	2.38
Barium ug/L	50.2	49.3	35	38.9	46.7	38.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	54.6	76	37.5	54.8	69.7	59
CBOD20 mg/L			18.6			
Chloride mg/L	209	270		184	226	160
Chromium ug/L	2.46	<2	<2	2.09	<2	<2
COD mg/L	35.6	44.1	157	22.4	36.7	37.9
Copper ug/L	7.81	5.6	6.15	5.03	3.99	3.07
DO mg/L	6.58	6.44	6.45	7.25	2.8	4.75
DOC mg/L	6.93	6.26	6.22	6.08	6.63	8.41
DOsat percent	74.5	73.8	75.8	83.6	32.1	49.8
Hardness mg/L	189	266	128	188	239	203
Iron ug/L	3880	334	2710	531	388	408
Lead ug/L	3.05	<2	2.37	<2	<2	<2
Magnesium mg/L	12.8	18.5	8.44	12.5	15.9	13.6
Manganese ug/L	256	48.9	143	54.4	40	34.9
Nickel ug/L	5.01	5.59	4.21	4.33	3.84	3.2
Nitrate, nitrite mg/L	3.05	6.4	1.7	4.56	5.33	3.71
Nitrite mg/L	.0233	.0471	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0634	.0895	.0466	.0701	.0795	.0695
pH su	7.76	7.91	7.63	7.89	7.92	7.95
Phosphorus mg/L	.235	.124	.166	.104	.102	.097
Potassium mg/L	4.4	9.53	4.37	6.64	6.75	6.1
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	114	168	77.2	121	132	105
Spcond umhos/cm	993	1310	666	976	1160	887
Strontium ug/L	390	465	276	379	472	400
Sulfate mg/L	43.6	75	33.8	52.4	59.2	45.4
TDS mg/L	584	712	370	558	664	518
TempC deg C	21.3	21.9	23.3	22.3	21.9	17.5
TKN mg/L	1.37	1.3	1.37	1.13	1.12	1.2
TOC mg/L			7			
TSS mg/L	101	5.5	61	7.5	5.5	<5
Zinc ug/L	24.1	29.2	18.6	27.5	11.7	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	0.12	19	41.41780	-81.63830	04110002-06-01

Inorganic Parameters	7/9/18	7/26/18	7/31/18	8/7/18	8/8/18	8/13/18
Alkalinity mg/L	209	177	195	74.2	131	204
Aluminum ug/L	<200	<200	<200	2170	272	<200
Ammonia mg/L	.218	.0664	.153	.16	.273	.16
Arsenic ug/L	2.08	2.35	2.11	3.41	3.53	2.45
Barium ug/L	64.1	59.8	62.4	35.8	44	70.5
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	79.2	73.1	73.9	31	53	86
CBOD20 mg/L	12.4	19.8	9.28	17.9		8.95
Chloride mg/L	222	188	210		142	228
Chromium ug/L	<2	<2	<2	3.65	<2	<2
COD mg/L	27.4	<20	25	46.7	23.9	32.5
Copper ug/L	10.6	9.47	8.08	8.89	7.4	8.29
DO mg/L	10.1	9.63	8.03	7.43	7.9	8.29
DOC mg/L	5.17	6.21	4.78	4.95		
DOsat percent	126	116	91.3	85.9	94	93.3
Hardness mg/L	282	260	264	101	178	305
Iron ug/L	618	600	586	4310	574	602
Lead ug/L	<2	<2	<2	6.13	<2	<2
Magnesium mg/L	20.5	18.8	19.3	5.8	11	21.9
Manganese ug/L	80.8	65.9	65.1	118	57.1	92.8
Nickel ug/L	4.53	4.24	4.33	6.61	4	4.61
Nitrate, nitrite mg/L	1.38	1.07	1.46	.664	.773	1.47
Nitrite mg/L	.166	.125	.147	<.02	.0432	.126
Ortho-P mg/L	.0115	<.01	.0116	.0393	.0246	<.01
pH su	8.02	8.01	7.81	7.83	7.76	7.51
Phosphorus mg/L	.0494	.0461	.0383	.165	.0651	.0372
Potassium mg/L	9.4	9.3	9.14	4.25	6.59	9.89
Selenium ug/L	<2	<2	<2	<2	<2	2.04
Sodium mg/L	131	130	119	50	97.7	138
Spcond umhos/cm	1260	1140	1150		882	1330
Strontium ug/L	462	434	429	187	321	483
Sulfate mg/L	103	84.8	96.4	38.7	71.9	109
TDS mg/L	704	632	662	276	490	738
TempC deg C	26.2	24.6	21.5	22.5	23.9	20.9
TKN mg/L	1.1	.993	.975	.888	.926	.96
TOC mg/L				4.81		
TSS mg/L	<5	<5	<5	84	<5	<5
Zinc ug/L	16.6	16.9	13.8	31	<10	11.2

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502110		MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	0.12	19	41.41780	-81.63830	04110002-06-01

Inorganic Parameters	8/22/18	8/30/18	9/5/18	9/12/18	9/20/18	9/24/18
Alkalinity mg/L	119	111	159	169	201	220
Aluminum ug/L	342	641	<200	<200	<200	<200
Ammonia mg/L	.2	.181	.0753	.414	.0896	.104
Arsenic ug/L	2.24	2.6	2.71	2.63	2.11	2.11
Barium ug/L	41.7	40.7	58.3	57.7	67.5	68.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	53.4	47.6	70.7	69.6	84.2	87.5
CBOD20 mg/L	12.7	13.3	10.4	11.9	13.6	9.56
Chloride mg/L	126	115	240	218	213	219
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	28.1	27.6	<20	24.4	23.5	21.9
Copper ug/L	6.56	6.74	6.29	6.51	6.09	6.19
DO mg/L	7.96	8.21	7.45	8.54	8.77	10.1
DOC mg/L	4.43			4.85	3.46	3.39
DOsat percent	89.7	96.8	92.9	94	98.7	107
Hardness mg/L	179	161	247	238	302	318
Iron ug/L	801	1390	584	592	651	753
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	11.1	10.3	17.1	15.6	22.2	24.2
Manganese ug/L	64.7	77.7	53.2	56.4	55.4	59.2
Nickel ug/L	3.15	3.68	3.17	3.91	4.39	4.65
Nitrate, nitrite mg/L	.644	.652	.865	1.35	1.46	1.39
Nitrite mg/L	.0488	.0494	.0641	.0708	.0879	.0991
Ortho-P mg/L	.0275	.0307	.0246	.0273	.0121	<.01
pH su	7.86	7.82	8	7.83	8.02	
Phosphorus mg/L	.0726	.0971	.0724	.0751	.0372	.0956
Potassium mg/L	6.6	6.33	8.19	7.99	10	10.1
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	96.6	79.4	149	144	135	139
Spcond umhos/cm	819	705	1250	1220	1250	1290
Strontium ug/L	316	278	427	446	484	500
Sulfate mg/L	67	61.7	88	92	104	109
TDS mg/L	448	442	688	670	722	720
TempC deg C	21.1	23.5	26.4	19.9	20.9	17.9
TKN mg/L	.951	.913	<.6	1.16	.768	.607
TOC mg/L						
TSS mg/L	6.5	16.5	<5	<5	<5	<5
Zinc ug/L	14.5	16.4	11.8	<10	<10	33.9

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	0.12	19	41.41780	-81.63830	04110002-06-01

Inorganic Parameters	10/9/18	10/18/18	5/6/19	5/16/19	5/23/19	5/30/19
Alkalinity mg/L	188	213	228	229	240	180
Aluminum ug/L	<200	<200	210	<200	<200	1180
Ammonia mg/L	.164	.368	.336	.372	.396	.288
Arsenic ug/L	2.1	<2	2.04	2.02	2.11	3.02
Barium ug/L	63.2	62.6	67.2	67.8	72.2	57
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	78.2	85.9	96.1	91.1	90	66.7
CBOD20 mg/L	12.2	14.6	11.9	13.2	9.03	17.1
Chloride mg/L	171	217	295	287	278	227
Chromium ug/L	<2	<2	<2	<2	<2	2.5
COD mg/L	20.1	28.3	25.8	30.7	<20	25.9
Copper ug/L	6.64	7.07	18.9	17.7	17.8	9.02
DO mg/L	9.53	12.27	12.7	13.3	12.5	8.35
DOC mg/L	4.75	3.91		5.08	4.46	5
DOsat percent	110	106.5	129	140	137	88.6
Hardness mg/L	275	306	344	329	342	235
Iron ug/L	706	887	1390	1350	1440	2400
Lead ug/L	<2	<2	<2	<2	<2	5.54
Magnesium mg/L	19.3	22.2	25.2	24.7	28.5	16.7
Manganese ug/L	68.5	86.5	126	106	108	174
Nickel ug/L	4.43	4.49	6.72	5.94	6.04	6.28
Nitrate, nitrite mg/L	1.13	1.52	.85	.83	1.2	.768
Nitrite mg/L	.12	.148	.0576	.078	.161	.0382
Ortho-P mg/L	.0137	<.01	<.01	<.01	.0729	.0434
pH su	7.86	7.97	8.15	8.22	8.13	7.89
Phosphorus mg/L	.0465	.0473	.0324	.0473	.0501	.192
Potassium mg/L	9.34	9.1	9.18	9.33	12	6.89
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	121	136	187	176	185	148
Spcond umhos/cm	1110	1276	1250	1450	1530	1140
Strontium ug/L	467	485	549	541	594	435
Sulfate mg/L	92.5	115	129	125	122	72.9
TDS mg/L	622	730	850	828	880	638
TempC deg C	22.6	9	15.9	17.4	19.7	18
TKN mg/L	.903	.98	1.48	1.21	1.47	1.57
TOC mg/L						
TSS mg/L	<5	<5	<5	<5	<5	58.5
Zinc ug/L	17.9	32.5	43.1	35.5	32.5	29.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	0.12	19	41.41780	-81.63830	04110002-06-01

Inorganic Parameters	6/12/19	6/18/19	6/26/19	7/2/19	7/8/19	7/25/19
Alkalinity mg/L	142	246	230	229	241	229
Aluminum ug/L	<200	312	263	<200	<200	<200
Ammonia mg/L	.0581	.5	.495	.318	.42	.311
Arsenic ug/L	<2	2.1	2.29	2.41	2.45	2.2
Barium ug/L	32	65.4	70.9	75.3	80	76
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	61.9	89.3	89.9	92	97.2	89.7
CBOD20 mg/L	10.6	10.5	11.7	9.97	9.04	
Chloride mg/L	263	183	148	191	190	189
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	26	23.3	<20	<20	30
Copper ug/L	3.7	14.6	13.1	14.1	14.4	10.8
DO mg/L	7.91	7.41	6.56	8.74	7.52	9.18
DOC mg/L	3.77	5.42	5.24	5.08	5.38	5.29
DOsat percent	87.5	77.9	77	105	90.9	107
Hardness mg/L	226	307	309	331	347	324
Iron ug/L	235	1200	1090	934	849	699
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	17.4	20.4	20.6	24.7	25.2	24.3
Manganese ug/L	20.7	140	143	157	178	118
Nickel ug/L	4.09	5.42	5.12	6.53	6.96	4.88
Nitrate, nitrite mg/L	.842	.851	.801	1.18	1.38	1.24
Nitrite mg/L	<.02	.0611	.0474	.202	.215	.174
Ortho-P mg/L	.0496	.015	.0152	<.01	<.01	<.01
pH su	7.84	7.79	7.76	7.87	7.7	7.89
Phosphorus mg/L	.06	.0657	.0931	.0554	.0588	.0248
Potassium mg/L	5.34	8.03	8.49	10.1	10.6	10.6
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	154	124	111	126	131	130
Spcond umhos/cm	1230	1160	1110	1260	1310	1250
Strontium ug/L	312	520	497	532	577	527
Sulfate mg/L	94.7	110	99.8	119	132	116
TDS mg/L	678	684	644	726	748	746
TempC deg C	20.1	17.6	23.2	24.3	24.7	22.9
TKN mg/L	.546	1.36	1.37	1.07	1.38	1.14
TOC mg/L						
TSS mg/L	<5	9	10	<5	5	<5
Zinc ug/L	<10	41	38.9	32.1	30.6	16.5

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	0.12	19	41.41780	-81.63830	04110002-06-01

Inorganic Parameters	7/29/19	8/14/19	8/21/19	8/29/19	9/18/19	9/24/19
Alkalinity mg/L	223	198	177	182	211	201
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.152	.217	.254	.177	.379	.161
Arsenic ug/L	2.09	2.34	2.03	2.23	2.7	2.33
Barium ug/L	80.1	72.7	59.6	59	75.3	72.9
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	92	86.7	66.6	71.3	90.3	87.4
CBOD20 mg/L	10.4	14.4	12.4	10.5	15.5	14.8
Chloride mg/L	251	188	136	173	176	178
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	<20	25.4	<20	<20	27.4
Copper ug/L	11.2	9.29	8.8	6.46	7.88	8.69
DO mg/L	9.74	8.32	6.2	10.6	7.44	8.16
DOC mg/L	5.1	5.04	5.2	4.88	5.34	4.96
DOsat percent	120	95.1	71.7	121	82.1	901
Hardness mg/L	339	311	237	259	322	315
Iron ug/L	636	644	793	363	656	689
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	26.5	23.1	17.3	19.8	23.5	23.5
Manganese ug/L	83.2	97.9	89.5	38.3	105	80.1
Nickel ug/L	5.09	5.25	4.37	3.82	5.42	5.49
Nitrate, nitrite mg/L	1.13	1.11	1.09	.77	1.2	1.27
Nitrite mg/L	.159	.146	.154	.077	.119	.139
Ortho-P mg/L	<.01	<.01	<.01	.0115	<.01	<.01
pH su	8.33	7.9	7.63	8.12	7.86	7.84
Phosphorus mg/L	.0241	.035	.0469	.0525	.0335	.0542
Potassium mg/L	11.4	9.77	8.09	8.26	10.1	10.1
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	157	129	94.8	120	125	119
Spcond umhos/cm	1270	1180	956	1140	1130	1180
Strontium ug/L	558	518	404	405	522	491
Sulfate mg/L	117	107	82.4	85.7	106	101
TDS mg/L	796	710	574	654	704	680
TempC deg C	25.8	21.8	22.4	19.7	20	20
TKN mg/L	.96	.788	.83	.949	.844	.54
TOC mg/L						
TSS mg/L	<5	<5	<5	<5	<5	<5
Zinc ug/L	13.4	18.6	14.7	<10	15.8	14.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502110		MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	0.12	19	41.41780	-81.63830	04110002-06-01

Inorganic Parameters	10/8/19	10/24/19
Alkalinity mg/L	188	195
Aluminum ug/L	<200	<200
Ammonia mg/L	.15	.243
Arsenic ug/L	<2	2.16
Barium ug/L	63.2	64.9
Cadmium ug/L	<.2	<.2
Calcium mg/L	80	81.8
CBOD20 mg/L	12.6	7.86
Chloride mg/L	155	180
Chromium ug/L	<2	<2
COD mg/L	22.2	25.8
Copper ug/L	6.19	6.24
DO mg/L	9.36	8.83
DOC mg/L	4.39	4.47
DOsat percent	91.5	79.3
Hardness mg/L	290	297
Iron ug/L	661	717
Lead ug/L	<2	<2
Magnesium mg/L	21.9	22.5
Manganese ug/L	57.6	69.1
Nickel ug/L	4.79	5.02
Nitrate, nitrite mg/L	1.93	1.33
Nitrite mg/L	.0829	.0987
Ortho-P mg/L	<.01	<.01
pH su	7.98	7.7
Phosphorus mg/L	.0399	.0324
Potassium mg/L	9.29	9.6
Selenium ug/L	<2	<2
Sodium mg/L	107	123
Spcond umhos/cm	1060	1190
Strontium ug/L	451	483
Sulfate mg/L	98.8	97.6
TDS mg/L	604	684
TempC deg C	14.2	10.4
TKN mg/L	.506	.889
TOC mg/L		
TSS mg/L	<5	<5
Zinc ug/L	10.7	11.7

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502120 BIG CREEK @ JENNINGS AVE.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	0.23	37	41.44670	-81.68830	04110002-06-03

Inorganic Parameters	6/13/18	6/25/18	7/5/18	7/9/18	7/26/18	7/31/18
Alkalinity mg/L				156	138	145
Aluminum ug/L				<200	<200	<200
Ammonia mg/L				.0884	.0622	.0505
Arsenic ug/L				2.79	2.89	2.52
Barium ug/L				37.4	33.1	36.9
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				60.4	54.7	61.4
CBOD20 mg/L				13	19.7	10.4
Chloride mg/L				265	197	258
Chromium ug/L				<2	<2	<2
COD mg/L				39.4	<20	<20
Copper ug/L				5.75	5.01	5.39
DO mg/L				9.15	8.4	8.54
DOC mg/L				4.95	4.91	4
DOsat percent				106	100	98.1
E. coli	17900	1440	18200			
Hardness mg/L				209	187	212
Iron ug/L				191	156	136
Lead ug/L				<2	<2	<2
Magnesium mg/L				14.1	12.2	14.2
Manganese ug/L				35.2	21.9	19
Nickel ug/L				4.04	3.51	3.53
Nitrate, nitrite mg/L				.518	.252	.195
Nitrite mg/L				<.02	<.02	<.02
Ortho-P mg/L				.0416	.0402	.0235
pH su				7.94	8.09	8.16
Phosphorus mg/L				.0713	.0665	.0362
Potassium mg/L				5.36	4.34	4.72
Selenium ug/L				<2	<2	<2
Sodium mg/L				162	127	152
Spcond umhos/cm				1240	1070	1150
Strontium ug/L				383	369	413
Sulfate mg/L				75	63.8	76.4
TDS mg/L				674	572	636
TempC deg C				22.4	24	22.1
TKN mg/L				.752	.706	.751
TOC mg/L						
TSS mg/L				<5	<5	<5
Zinc ug/L				<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502120		BIG CREEK @ JENNINGS AVE.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	0.23	37	41.44670	-81.68830	04110002-06-03

Inorganic Parameters	8/7/18	8/8/18	8/13/18	8/22/18	8/30/18	9/5/18
Alkalinity mg/L	56.5	99.1	144	86.2	80.3	131
Aluminum ug/L	1700	849	<200	262	<200	<200
Ammonia mg/L	.12	.0822	<.05	<.05	<.05	<.05
Arsenic ug/L	2.95	2.25	2.57	<2	<2	2.32
Barium ug/L	23.1	25.2	33.3	22.3	23.6	34.2
Cadmium ug/L	.307	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	21.4	36.8	59.6	34.9	33.6	55.1
CBOD20 mg/L	17.5		11.3	10.8	13.8	8.96
Chloride mg/L		103	242	98.8	96.8	159
Chromium ug/L	4.06	<2	<2	<2	<2	<2
COD mg/L	46.9	27.4	21.2	29	33.9	22.5
Copper ug/L	8.81	7.06	5.39	5.29	4.93	3.52
DO mg/L	7.96	7.79	9.45	8.26	7.71	
DOC mg/L	5.24			3.85		
DOsat percent	92.4	91	112	93.5	89.9	
E. coli						
Hardness mg/L	71.2	122	204	119	112	193
Iron ug/L	3320	832	117	422	412	105
Lead ug/L	8.03	<2	<2	<2	<2	<2
Magnesium mg/L	4.32	7.22	13.3	7.61	6.83	13.4
Manganese ug/L	80.6	31	18.4	21.5	22	14.2
Nickel ug/L	5.54	4.1	3.58	2.7	2.64	2.77
Nitrate, nitrite mg/L	.704	.738	.273	.473	.509	.381
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0514	.0393	.0245	.0359	.0478	.0463
pH su	7.83	7.83	8.18	7.83	8.08	
Phosphorus mg/L	.142	.0777	.042	.0678	.0828	.062
Potassium mg/L	3.02	3.62	4.79	3.21	3.43	4.63
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	39.4	71.7	141	74.4	65	111
Spcond umhos/cm		662	1120	596	583	
Strontium ug/L	144	232	378	220	234	351
Sulfate mg/L	23.1	45.3	71.9	41.4	39.1	64.3
TDS mg/L	208	358	632	330	346	502
TempC deg C	22.7	23.1	23.8	21.4	22.9	
TKN mg/L	.85	.756	.749	.648	.47	.758
TOC mg/L	4.95					
TSS mg/L	75	8.5	<5	5	6	<5
Zinc ug/L	38.4	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502120		BIG CREEK @ JENNINGS AVE.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	0.23	37	41.44670	-81.68830	04110002-06-03

Inorganic Parameters	9/12/18	9/20/18	9/24/18	10/9/18	10/18/18	5/6/19
Alkalinity mg/L	147	120	147	148	160	187
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.176	<.05	<.05	.0571	.0716	<.05
Arsenic ug/L	2.74	<2	2.43	2.07	<2	<2
Barium ug/L	36.1	32	39.1	35.2	34.8	40.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	58.2	54.4	64.2	58.1	63.5	80.1
CBOD20 mg/L	11	14.4	10.6	8.77	19.9	11.3
Chloride mg/L	236	211	246	164	260	297
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	26.5	21.9	25.8	26.1	20.9	<20
Copper ug/L	5.96	4.29	4.14	4.55	4.07	4.96
DO mg/L	8.76	8.73	11	8.38	13.36	12.4
DOC mg/L	5.06	3.98	3.4	5.19	3.23	
DOsat percent	96.4	96	114	94.6	113.6	125
E. coli						
Hardness mg/L	198	188	229	200	221	286
Iron ug/L	259	129	141	198	247	464
Lead ug/L	<2	<2	<2	<2	<2	4.84
Magnesium mg/L	12.7	12.7	16.8	13.4	15	20.9
Manganese ug/L	15.6	11	14.8	16.7	26.7	34.6
Nickel ug/L	3.83	3.33	3.58	3.64	3.43	6.81
Nitrate, nitrite mg/L	.995	.467	<.1	.673	.335	.244
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0499	.0308	.0216	.0517	.0394	.0119
pH su	8.02	8.16		8.02	8.07	8.62
Phosphorus mg/L	.0725	.0357	.0285	.0665	.0552	.0288
Potassium mg/L	4.96	4.68	6.15	5.04	4.74	5.15
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	148	135	159	116	153	177
Spcond umhos/cm	1170	1000	1140	965	1260	938
Strontium ug/L	393	350	424	378	425	450
Sulfate mg/L	81.8	65.8	79.5	63.7	78.6	119
TDS mg/L	646	566	644	524	686	780
TempC deg C	19.9	19.8	16.9	21.2	8.1	15.4
TKN mg/L	.871	.567	.586	.816	<.6	1.19
TOC mg/L						
TSS mg/L	<5	<5	<5	<5	<5	<5
Zinc ug/L	14.4	<10	<10	<10	10.5	11.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502120		BIG CREEK @ JENNINGS AVE.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	0.23	37	41.44670	-81.68830	04110002-06-03

Inorganic Parameters	5/16/19	5/23/19	5/30/19	6/12/19	6/18/19	6/26/19
Alkalinity mg/L	180	183	154	163	195	159
Aluminum ug/L	<200	622	228	<200	<200	<200
Ammonia mg/L	.0522	.102	.104	.112	.101	.117
Arsenic ug/L	2.06	2.37	2.22	2.17	2.29	2.49
Barium ug/L	41.1	43.3	33.5	34.5	29	35.5
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	77.6	70.6	58.2	62.6	55.6	62.1
CBOD20 mg/L	13.1	11.9	12.2	10.5	11.8	10.7
Chloride mg/L	301	286	183	302	259	274
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	21.5	<20	<20	23.7	23.2
Copper ug/L	4.75	5.03	5.09	4.58	4.89	4.17
DO mg/L	13	10.1	8.32	9.1	8.79	8.54
DOC mg/L	4.81	6.02	5.72	5.21	5.62	5.44
DOsat percent	132	108	87.3	95.7	93.3	98.9
E. coli						
Hardness mg/L	282	267	207	217	190	215
Iron ug/L	329	784	451	241	329	362
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	21.3	21.9	14.9	14.7	12.5	14.4
Manganese ug/L	38.4	52	32	27.2	21.7	33.5
Nickel ug/L	5.79	6.47	5.23	4.59	5.48	4.3
Nitrate, nitrite mg/L	.128	.395	.814	.819	.854	.649
Nitrite mg/L	<.02	.0411	<.02	<.02	<.02	<.02
Ortho-P mg/L	<.01	.0123	.0327	.0369	.04	.0328
pH su	8.56	8.24	8	8.1	8.14	8.06
Phosphorus mg/L	.0455	.0522	.101	.0595	.0618	.084
Potassium mg/L	5.42	6.71	5.51	4.78	3.91	5.39
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	191	187	131	168	132	177
Spcond umhos/cm	1410	1410	577	1320	1270	1340
Strontium ug/L	472	496	413	403	327	382
Sulfate mg/L	104	106	76.9	80.4	87.2	71.4
TDS mg/L	768	806	584	722	748	718
TempC deg C	15.8	18.5	17.6	17.6	18.1	22.4
TKN mg/L	.764	1.21	1.2	.723	.915	.716
TOC mg/L						
TSS mg/L	<5	17.5	<5	<5	<5	<5
Zinc ug/L	<10	15.2	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502120		BIG CREEK @ JENNINGS AVE.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	0.23	37	41.44670	-81.68830	04110002-06-03

Inorganic Parameters	7/2/19	7/8/19	7/25/19	7/29/19	8/14/19	8/21/19
Alkalinity mg/L	178	152	151	139	114	117
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.0915	.0757	.0782	<.05	<.05	.0544
Arsenic ug/L	3.1	2.87	2.9	2.79	2.57	2.11
Barium ug/L	56	39.4	39.7	43.4	35.8	31.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	75.4	63.5	61.2	63	53	47.1
CBOD20 mg/L	10.5	8.92		7.86	13	21.1
Chloride mg/L	326	232	230	275	161	124
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	<20	30.7	<20	<20	<20
Copper ug/L	5.76	5.42	4.52	4.78	4.47	4.11
DO mg/L	9.58	7.63	8.01	10.1	8.35	6.78
DOC mg/L	4.98	4.65	5.25	4.32	5.88	5.16
DOsat percent	116	88.6	91.2	126	95.7	79.6
E. coli						
Hardness mg/L	264	220	212	225	186	163
Iron ug/L	195	345	278	160	245	268
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	18.5	14.8	14.3	16.4	12.9	11.1
Manganese ug/L	27.5	26.7	30.9	24	21.8	20.7
Nickel ug/L	5.37	5.98	4.01	3.97	3.91	3.71
Nitrate, nitrite mg/L	.52	.95	.434	.161	.558	.521
Nitrite mg/L	.0224	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0285	.0294	.0363	.0196	.0266	.0324
pH su	8.2	7.91	8.07	8	8.19	7.92
Phosphorus mg/L	.0703	.0728	.0496	.0456	.0492	.0784
Potassium mg/L	6.43	5.66	5.27	6.04	4.59	4.09
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	207	147	144	172	116	92.1
Spcond umhos/cm	1520	1210	1140	1400	753	726
Strontium ug/L	489	375	397	437	334	298
Sulfate mg/L	96.6	82.6	74.3	85.8	65.8	55.9
TDS mg/L	874	646	650	710	522	456
TempC deg C	24.9	22.6	21.6	27	22	23.2
TKN mg/L	.878	.712	.764	.792	.648	.551
TOC mg/L						
TSS mg/L	<5	<5	5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	11.3	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502120		BIG CREEK @ JENNINGS AVE.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	0.23	37	41.44670	-81.68830	04110002-06-03

Inorganic Parameters	8/29/19	9/18/19	9/24/19	10/8/19	10/24/19
Alkalinity mg/L	128	141	140	130	125
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.0613	.336	.0548	.083	.0608
Arsenic ug/L	2.59	3.24	3.13	2.75	2.25
Barium ug/L	36.9	42.5	43.1	34.9	31.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	57.8	64.5	64.5	57.5	55.2
CBOD20 mg/L	11.4	14.8	13.3	11.5	7.08
Chloride mg/L	221	236	255	231	182
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	<20	25.6	29
Copper ug/L	4.41	4.3	5.59	3.69	3.28
DO mg/L	10	7.79	9.73	9.42	10.2
DOC mg/L	5.19	4.5	4.18	4.98	4.07
DOsat percent	114	84.4	108	91.8	91.9
E. coli					
Hardness mg/L	203	223	230	203	195
Iron ug/L	167	195	160	157	169
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	14.3	15	16.7	14.4	13.9
Manganese ug/L	20.9	25.7	19.9	16	19.2
Nickel ug/L	3.91	4.23	4.62	3.98	3.81
Nitrate, nitrite mg/L	.227	.292	.109	<.1	.104
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.02	.0285	.0186	.0282	.0363
pH su	8.31	8.04	8.35	8.01	8.06
Phosphorus mg/L	.0302	.0724	.086	.0561	.0547
Potassium mg/L	4.98	5.57	5.88	4.94	4.8
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	136	153	158	132	126
Spcond umhos/cm	1060	1150	957	1070	764
Strontium ug/L	386	459	446	383	374
Sulfate mg/L	71.5	72.6	76.7	69.6	66.1
TDS mg/L	622	640	666	590	564
TempC deg C	21.9	19.1	20.4	14.1	10.8
TKN mg/L	.636	.505	.649	.624	.593
TOC mg/L					
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	7.10	786	41.44736	-81.68473	04110002-06-05

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	146			149	150	139
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.069			.0771	.0597	.105
Arsenic ug/L	2.46			2.51	2.42	2.57
Barium ug/L	47.5			42.7	40.4	40.5
BOD 5-Day mg/L	3.22			2.65	2.15	2.48
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	70.1			63.4	64.5	61.8
Chloride mg/L	154			137	155	143
Chlorophyll ug/L	13.3			11.1	9.41	11.3
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			<20	<20	<20
Copper ug/L	177			3.8	3.5	3.96
DO mg/L	7.2			6.24	11.56	13.5
DOC mg/L	6.21			6.66	5.83	6.53
DOsat percent	86.1			75.7	131.1	161.6
E. coli		25900	91		124	866
Hardness mg/L	246			221	224	218
Iron ug/L	616			397	222	346
Lead ug/L	74.4			<2	<2	<2
Magnesium mg/L	17.1			15.2	15.4	15.5
Manganese ug/L	74.7			47.3	48.6	49.1
Nickel ug/L	6.14			3.56	4.83	4.32
Nitrate, nitrite mg/L	5.68			4.55	5.83	6.39
Nitrite mg/L	.0514			.0262	<.02	.0542
Ortho-P mg/L	.0853			.0794	.18	.16
pH su	7.79			7.91	7.87	7.73
Pheophytin ug/L	2.61			4.27	4.68	5.25
Phosphorus mg/L	.15			.129	.207	.201
Potassium mg/L	6.91			6.51	6.6	7.06
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	107			96.9	97	96.4
Spcond umhos/cm	904			921	1187	864
Strontium ug/L	265			235	245	234
Sulfate mg/L	69.1			60.2	66.5	68.6
TDS mg/L	568			526	542	548
TempC deg C	23.8			25	21.36	24.15
TKN mg/L	.932			.894	.492	<.2
TOC mg/L	5.95			6.08	5.41	5.77
TSS mg/L	20.5			9.5	<5	8.5
Zinc ug/L	15.3			17.2	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502130		CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	7.10	786	41.44736	-81.68473	04110002-06-05

Inorganic Parameters	9/18/17
Alkalinity mg/L	148
Aluminum ug/L	<200
Ammonia mg/L	.0608
Arsenic ug/L	2.5
Barium ug/L	37.9
BOD 5-Day mg/L	<2
Cadmium ug/L	<.2
Calcium mg/L	68.3
Chloride mg/L	169
Chlorophyll ug/L	4.49
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	29.8
DO mg/L	
DOC mg/L	5.62
DOsat percent	
E. coli	
Hardness mg/L	242
Iron ug/L	321
Lead ug/L	3.9
Magnesium mg/L	17.3
Manganese ug/L	45.5
Nickel ug/L	6
Nitrate, nitrite mg/L	8.27
Nitrite mg/L	<.02
Ortho-P mg/L	.166
pH su	7.68
Pheophytin ug/L	3.73
Phosphorus mg/L	.211
Potassium mg/L	10.2
Selenium ug/L	<2
Sodium mg/L	117
Spcond umhos/cm	1057
Strontium ug/L	254
Sulfate mg/L	82.4
TDS mg/L	612
TempC deg C	21.36
TKN mg/L	.989
TOC mg/L	5.43
TSS mg/L	7
Zinc ug/L	13.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502150 CUYAHOGA R. AT AKRON @ CUYAHOGA ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	42.60	340	41.11690	-81.52500	04110002-03-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	131		152	141	132	148
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	<.05		.0545	.0748	.0743	<.05
Arsenic ug/L	2.04		2.38	2.5	2.84	2.33
Barium ug/L	50.2		45.6	47.6	49.6	52.8
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	55.1		58.2	52.6	51.3	58.7
CBOD20 mg/L						
Chloride mg/L	94.4		110	116	104	132
Chlorophyll ug/L						
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		20.9	23.2	22.8	26.4
Copper ug/L	2.03		2.64	3.44	3.82	3.39
DO mg/L	8.16		7.57	6.98	7.47	10.82
DOC mg/L						
DOsat percent	99.3		93.2	98.4	90.7	120.6
E. coli		60		241	550.2	
Hardness mg/L	189		200	183	179	204
Iron ug/L	320		267	218	311	150
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	12.5		13.3	12.4	12.3	14
Manganese ug/L	78.1		55.4	66.7	91.6	56.8
Nickel ug/L	<2		2.17	2.09	2.29	2.81
Nitrate, nitrite mg/L	1.24		2.51	1.65	1.48	2.92
Nitrite mg/L	<.02		<.02	.0237	<.02	<.02
Ortho-P mg/L						
pH su	8.37		8.19	8.09	8.18	8.22
Pheophytin ug/L						
Phosphorus mg/L	.045		.0963	.0646	.0965	.252
Potassium mg/L	3.37		4.43	3.66	3.46	4.58
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	57.6		70.7	68.5	64.9	78.2
Spcond umhos/cm	609		551	694	621	824
Strontium ug/L	143		168	144	143	150
Sulfate mg/L	34.4		45.9	36.3	33.4	46.2
TDS mg/L	368		446	424	388	474
TempC deg C	25.2		26	21.9	25.2	20.37
TKN mg/L	.609		.768	.757	.701	.625
TOC mg/L						
TSS mg/L	<5		5.5	<5	5.5	<5
Zinc ug/L	<10		11.1	<10	12.9	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502150		CUYAHOGA R. AT AKRON @ CUYAHOGA ST.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	42.60	340	41.11690	-81.52500	04110002-03-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	124
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.66
Barium ug/L	47.5
Cadmium ug/L	<.2
Calcium mg/L	50.2
CBOD20 mg/L	11.7
Chloride mg/L	
Chlorophyll ug/L	7.51
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	8.8
DOC mg/L	5.2
DOsat percent	102
E. coli	
Hardness mg/L	173
Iron ug/L	227
Lead ug/L	<2
Magnesium mg/L	11.6
Manganese ug/L	86.2
Nickel ug/L	<2
Nitrate, nitrite mg/L	1.62
Nitrite mg/L	<.02
Ortho-P mg/L	.038
pH su	7.96
Pheophytin ug/L	8.03
Phosphorus mg/L	.0894
Potassium mg/L	3.3
Selenium ug/L	<2
Sodium mg/L	53.2
Spcond umhos/cm	585
Strontium ug/L	139
Sulfate mg/L	30.2
TDS mg/L	344
TempC deg C	22.5
TKN mg/L	.615
TOC mg/L	5.26
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502170 CUYAHOGA R. @ STATION RD. (IMPOUNDED)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	20.80	583	41.31932	-81.58763	04110002-05-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	156		158	160	161	170
Aluminum ug/L	<200		<200	<200	215	<200
Ammonia mg/L	<.05		<.05	.0564	.0619	<.05
Arsenic ug/L	<2		2.37	2.17	3.03	2.94
Barium ug/L	54		45.4	47.6	49.9	48.4
BOD 5-Day mg/L	2.98		51	2.32	2.21	2.42
Cadmium ug/L	<.2		<.2	<.2	<.2	.237
Calcium mg/L	73.6		62.4	65.7	70.3	73.7
Chloride mg/L	142		120	149	140	171
Chromium ug/L	<2		<2	<2	<2	9.3
COD mg/L	<20		<20	<20	<20	32.6
Copper ug/L	2.6		2.72	2.81	3.17	8.51
DO mg/L	7.94		8.22	7.96	6.71	13.5
DOC mg/L	6.17		6.46	5.74	6.31	5.38
DOsat percent	96		101.3	90.9	80.8	97.3
E. coli		115		328	121.7	
Hardness mg/L	253		216	229	246	258
Iron ug/L	258		298	437	643	357
Lead ug/L	<2		<2	<2	<2	7.36
Magnesium mg/L	16.8		14.5	15.9	17.1	17.8
Manganese ug/L	60		46.7	76.3	81	69.3
Nickel ug/L	2.43		2.32	2.82	3.18	7.96
Nitrate, nitrite mg/L	4.08		2.05	3.68	5.49	5.96
Nitrite mg/L	.127		<.02	.0237	.0471	.0331
Ortho-P mg/L	<.01		.0246	.0465	.319	.0897
pH su	8.1		8.13	7.98	8.07	7.98
Phosphorus mg/L	.0351		.0584	.102	.381	.247
Potassium mg/L	5.11		4.49	5.39	5.6	6.46
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	92.8		76.6	93.8	98.6	107
Spcond umhos/cm	885		793	907	870	1059
Strontium ug/L	226		190	212	217	226
Sulfate mg/L	63.7		52	64.9	67.8	75.4
TDS mg/L	538		460	538	546	606
TempC deg C	24.7		25.5	21.8	24.4	20.69
TKN mg/L	.862		.645	1.05	.464	.92
TOC mg/L	6.22		6.24	5.78	5.54	5.36
TSS mg/L	<5		6.5	9	15.5	9
Zinc ug/L	10.4		<10	<10	15.1	15

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	0.30	62	41.11469	-81.52795	04110002-03-04

Inorganic Parameters	6/26/18	6/28/18	7/5/18	7/10/18	7/19/18	8/1/18
Alkalinity mg/L	174			176	217	197
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.0692			.159	<.05	<.05
Arsenic ug/L	2.38			2.44	2.31	2.2
Barium ug/L	62.3			64.3	67.3	70
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	73.2			69.6	87.9	86.5
CBOD20 mg/L					12.5	
Chloride mg/L	159			168		175
Chlorophyll ug/L					2.25	
Chromium ug/L	<2			<2	<2	<2
COD mg/L	29.8			25.3	<20	<20
Copper ug/L	2.01			3.29	3.39	2.85
DO mg/L	8.26			8.26	9.07	6.83
DOC mg/L	3.85			3.57	2.8	3.21
DOsat percent	96.4			96.4	110	76.4
E. coli	666	2140	65100			
Hardness mg/L	254			243	303	296
Iron ug/L	282			405	326	370
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	17.2			16.7	20.3	19.5
Manganese ug/L	47.2			58.3	57.3	64.2
Nickel ug/L	2.49			2.75	2.8	3.13
Nitrate, nitrite mg/L	.294			.308	.279	.279
Nitrite mg/L	<.02			<.02	<.02	<.02
Ortho-P mg/L	.0249			.0149	.011	<.01
pH su	8.02			8.02	8.05	7.97
Pheophytin ug/L					<1.4	
Phosphorus mg/L	.0365			.0348	.0268	<.02
Potassium mg/L	3.08			3.17	3.3	3.41
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	89.4			86.6	95.6	98.3
Spcond umhos/cm	1090			1090	1159	1060
Strontium ug/L	239			232	276	283
Sulfate mg/L	58.9			63	85.4	73.7
TDS mg/L	542			540	652	588
TempC deg C	22.9			22.9	24.9	20.7
TKN mg/L	.684			.832	<.6	.662
TOC mg/L					3.12	
TSS mg/L	<5			<5	5.5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

502180		L. CUYAHOGA R. AT AKRON, NEAR MOUTH			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	0.30	62	41.11469	-81.52795	04110002-03-04

Inorganic Parameters	8/16/18	9/11/18	9/27/18
Alkalinity mg/L	174	136	152
Aluminum ug/L	267	238	<200
Ammonia mg/L	<.05	.053	.0585
Arsenic ug/L	2.64	2.34	2.31
Barium ug/L	66.8	66.2	53.4
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	79.2	58.5	50.8
CBOD20 mg/L	12		
Chloride mg/L		96.2	88.5
Chlorophyll ug/L	1.64		
Chromium ug/L	<2	<2	<2
COD mg/L	36.4	22.5	27.4
Copper ug/L	4.33	3.52	3.01
DO mg/L	8.22	10.2	9.09
DOC mg/L	3.35	5.32	6.14
DOsat percent	95.9	108	93.2
E. coli			
Hardness mg/L	276	200	174
Iron ug/L	808	850	513
Lead ug/L	<2	<2	<2
Magnesium mg/L	19	13.1	11.4
Manganese ug/L	67.3	76.9	54.7
Nickel ug/L	2.85	2.47	2.37
Nitrate, nitrite mg/L	.248	.934	.506
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	.0122	.019	.0176
pH su	7.94	8.33	8.15
Pheophytin ug/L	1.53		
Phosphorus mg/L	.0297	.077	.0538
Potassium mg/L	3.73	3.67	3.03
Selenium ug/L	<2	<2	<2
Sodium mg/L	102	59.5	47
Spcond umhos/cm	1080	732	621
Strontium ug/L	264	220	182
Sulfate mg/L	68.6	43.9	43
TDS mg/L	610	408	376
TempC deg C	22.8	18	16.5
TKN mg/L	.842	.695	.854
TOC mg/L	4.08		
TSS mg/L	23.5	19.5	9
Zinc ug/L	<10	10.3	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: 502220 TINKERS CREEK AT BEDFORD @ ST. RT. 14

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	6.32	84	41.38440	-81.52750	04110002-05-04

Inorganic Parameters	6/28/18	8/2/18	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	121	163	91.7	120	153	162
Aluminum ug/L	1610	<200	1230	<200	<200	<200
Ammonia mg/L	.0996	.0862	.102	<.05	<.05	<.05
Arsenic ug/L	3.87	2.58	2.86	2.44	2.64	2.4
Barium ug/L	44.7	45.7	31.5	35.5	42.1	36
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	47.1	73.9	35.6	55.4	66.6	57.5
CBOD20 mg/L			19.1			
Chloride mg/L	193	287		218	223	175
Chromium ug/L	3.07	<2	<2	<2	<2	<2
COD mg/L	37.6	37.1	38.3	24.2	38.1	41.3
Copper ug/L	8.34	5.99	6.51	4.49	4.24	3.42
DO mg/L	7.27	7.46	7.42	9.3	9.28	11.6
DOC mg/L	6.54	5.7	6.35	5.6	6.26	7.65
DOsat percent	81.8	85.6	86.9	110	108	123
Hardness mg/L	161	256	119	189	228	198
Iron ug/L	3800	138	2540	306	257	306
Lead ug/L	3.4	<2	2.59	<2	<2	<2
Magnesium mg/L	10.5	17.4	7.32	12.3	15.1	13.2
Manganese ug/L	240	22.8	113	26.9	23	21.1
Nickel ug/L	5.08	5.14	4.24	3.71	3.95	3.23
Nitrate, nitrite mg/L	2.48	6.48	1.78	4.13	5.31	4.09
Nitrite mg/L	.0264	.0259	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0584	.158	.0553	.0864	.0858	.0814
pH su	7.85	8.15	7.76	8.3	8.3	8.22
Phosphorus mg/L	.214	.184	.159	.111	.0993	.0994
Potassium mg/L	4.35	9.09	4.37	6.33	6.77	6.19
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	117	169	81.1	136	136	112
Spcond umhos/cm	905	1340	687	1040	1150	944
Strontium ug/L	392	454	246	349	450	383
Sulfate mg/L	37.7	76.4	37.7	55.1	58.4	52.3
TDS mg/L	524	736	384	588	664	554
TempC deg C	21.1	22	23.1	23.4	22.9	18.1
TKN mg/L	1.14	1.22	1.31	1.31	<.3	1.07
TOC mg/L			7.04			
TSS mg/L	91	<5	60	12.5	<5	<5
Zinc ug/L	27.6	19.9	20.2	11	11	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01A01 OHIO CANAL (L. CUYAHOGA) AT AKRON @ NORTH ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-001	0.18	50	41.09110	-81.51780	04110002-03-04

Inorganic Parameters	6/26/18	7/10/18	7/19/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	130	126	126	124	110	129
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.0796	<.05	.0732	<.05	.0541	<.05
Arsenic ug/L	2.88	2.78	3.15	2.89	2.76	2.66
Barium ug/L	55.7	55.9	55.4	52.6	56.9	52.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	51.9	45.2	48.5	46.7	46.2	51.1
CBOD20 mg/L			11.5			
Chloride mg/L	147	151		152	138	164
Chlorophyll ug/L			1.63			
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	30.9	31.3	<20	21.6	23.1	27.4
Copper ug/L	5.42	2.64	3.97	2.24	2.29	<2
DO mg/L	8.23	8.23	7.55	7.67	8.67	8.91
DOC mg/L	4.98	4.77	4.96	4.68	3.92	3.96
DOsat percent	102	102	92.5	90.8	96.9	94.4
Hardness mg/L	187	167	180	173	171	185
Iron ug/L	205	85.9	78.3	50.5	137	102
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	14.1	13	14.3	13.8	13.5	13.9
Manganese ug/L	27.9	20.7	18.5	<10	26.3	20.5
Nickel ug/L	2.24	2.17	2.22	2.3	<2	2.04
Nitrate, nitrite mg/L	<.1	<.1	.19	.11	.318	.436
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0302	.0155	.0323	.0125	.0213	.0251
pH su	8.3	8.3	8.24	8.22	8.03	8.07
Pheophytin ug/L			<1.4			
Phosphorus mg/L	.0615	.0332	.0744	.0287	.048	.0365
Potassium mg/L	3.16	2.98	3.54	3.1	3.85	4.34
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	87.8	80	100	89.1	85.9	96.5
Spcond umhos/cm	776	776	956	990	848	806
Strontium ug/L	193	168	201	190	213	236
Sulfate mg/L	37	38.1	48	36.6	36.6	41.6
TDS mg/L	478	444	528	436	432	462
TempC deg C	26.1	26.1	25.5	23.6	20.7	18
TKN mg/L	.836	.873	.902	.649	.497	.775
TOC mg/L			5.55			
TSS mg/L	<5	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01A19 FEEDER CANAL @ TALMADGE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-004	5.63	44	41.10003	-81.30057	04110002-02-02

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		193				217
Aluminum ug/L		825				<200
Ammonia mg/L		.288				.111
Arsenic ug/L		6.77				4.9
Barium ug/L		108				92.5
Cadmium ug/L		<.2				<.2
Calcium mg/L		71.3				80.4
Chloride mg/L		45.4				53.5
Chromium ug/L		<2				<2
COD mg/L		30.1				22.6
Copper ug/L		<2				<2
DO mg/L		4.22				5.31
DOC mg/L		6.07				4.07
DOsat percent		50.8				63.4
E. coli	160		211	747	630	
Hardness mg/L		246				277
Iron ug/L		1920				529
Lead ug/L		<2				<2
Magnesium mg/L		16.6				18.5
Manganese ug/L		848				195
Nickel ug/L		3.3				2.72
Nitrate, nitrite mg/L		.302				.289
Nitrite mg/L		.0618				<.02
Ortho-P mg/L		.049				.0609
pH su		7.58				7.91
Phosphorus mg/L		.234				.121
Potassium mg/L		2.71				2.81
Selenium ug/L		<2				<2
Sodium mg/L		21.6				24.7
Spcond umhos/cm		574				652
Strontium ug/L		148				158
Sulfate mg/L		55.2				58.9
TDS mg/L		374				394
TempC deg C		24.6				23.7
TKN mg/L		1.14				.553
TSS mg/L		52.5				6.5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01A19		FEEDER CANAL @ TALMADGE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-004	5.63	44	41.10003	-81.30057	04110002-02-02

Inorganic Parameters	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	208	156	168
Aluminum ug/L	<200	241	<200
Ammonia mg/L	.0617	.159	.0749
Arsenic ug/L	4.49	6.28	4.55
Barium ug/L	89.9	96.4	72.6
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	82.6	69.8	60.3
Chloride mg/L	50.9	41.6	44.5
Chromium ug/L	<2	<2	<2
COD mg/L	26.4	56.1	48.9
Copper ug/L	<2	<2	<2
DO mg/L	6.94	4.46	6.23
DOC mg/L	3.47	12.1	13.5
DOsat percent	79.3	49.7	63.7
E. coli			
Hardness mg/L	284	241	210
Iron ug/L	362	1180	988
Lead ug/L	<2	<2	<2
Magnesium mg/L	18.8	16.2	14.5
Manganese ug/L	131	516	273
Nickel ug/L	2.42	3.01	2.91
Nitrate, nitrite mg/L	.39	.24	.207
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	.065	.0911	.0733
pH su	7.91	7.72	7.48
Phosphorus mg/L	.0986	.199	.125
Potassium mg/L	2.49	4.54	4.2
Selenium ug/L	<2	<2	<2
Sodium mg/L	23.7	23.4	24.1
Spcond umhos/cm	649	516	495
Strontium ug/L	156	155	140
Sulfate mg/L	60.6	53.4	45.5
TDS mg/L	392	366	342
TempC deg C	21.9	20.6	16.3
TKN mg/L	.552	1.32	.988
TSS mg/L	<5	21	<5
Zinc ug/L	<10	<10	10.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01A25 CUYAHOGA R. UPST. NEORSD SOUTHERLY WWTP

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	10.95	743	41.41818	-81.64767	04110002-06-04

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	155			152	159	153
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	<.05			<.05	<.05	<.05
Arsenic ug/L	<2			2.42	2.17	2.83
Barium ug/L	53.2			45.3	46.3	44.7
BOD 5-Day mg/L	2.56			2.83	2.11	2.32
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	71.4			62.2	67.5	67
Chloride mg/L	146			121	160	156
Chlorophyll ug/L	10.8			15.6	7.75	15.4
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			<20	<20	<20
Copper ug/L	4.19			3.57	3.01	3.55
DO mg/L	6.9			7.46	3.43	9.54
DOC mg/L	6.35			6.87	5.53	6.08
DOsat percent	85.2			91.9	41	114.3
E. coli		16300	141		148	138
Hardness mg/L	247			216	234	234
Iron ug/L	299			406	277	455
Lead ug/L	<2			<2	<2	5.5
Magnesium mg/L	16.7			14.7	15.8	16.3
Manganese ug/L	60.9			48.5	51.8	49.5
Nickel ug/L	2.85			2.71	2.89	3.48
Nitrate, nitrite mg/L	3.63			2.41	3.4	5.92
Nitrite mg/L	.0971			<.02	.0211	.0758
Ortho-P mg/L	<.01			.018	.0361	.142
pH su	8.14			8.14	8.17	8.08
Pheophytin ug/L	2.62			3	5.48	4.69
Phosphorus mg/L	.0319			.0651	.0639	.197
Potassium mg/L	5.22			4.85	5.23	5.69
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	92.7			81.3	95.2	102
Spcond umhos/cm	850			746	1194	903
Strontium ug/L	245			218	239	244
Sulfate mg/L	62.7			51.3	63.9	66.1
TDS mg/L	540			478	552	572
TempC deg C	25.6			25.9	22.13	24.95
TKN mg/L	.886			.708	.646	.292
TOC mg/L	6.02			6.35	5.43	5.32
TSS mg/L	9.5			12.5	<5	11.5
Zinc ug/L	10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01A25		CUYAHOGA R. UPST. NEORSD SOUTHERLY WWTP			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	10.95	743	41.41818	-81.64767	04110002-06-04

Inorganic Parameters	9/18/17
Alkalinity mg/L	165
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.48
Barium ug/L	46.3
BOD 5-Day mg/L	<2
Cadmium ug/L	<.2
Calcium mg/L	72
Chloride mg/L	181
Chlorophyll ug/L	8.22
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	3.15
DO mg/L	
DOC mg/L	5.34
DOsat percent	
E. coli	
Hardness mg/L	252
Iron ug/L	323
Lead ug/L	<2
Magnesium mg/L	17.6
Manganese ug/L	46.8
Nickel ug/L	3.95
Nitrate, nitrite mg/L	6.54
Nitrite mg/L	.0247
Ortho-P mg/L	.094
pH su	7.95
Pheophytin ug/L	3.42
Phosphorus mg/L	.129
Potassium mg/L	7.15
Selenium ug/L	<2
Sodium mg/L	113
Spcond umhos/cm	1078
Strontium ug/L	247
Sulfate mg/L	75.9
TDS mg/L	630
TempC deg C	21.23
TKN mg/L	.839
TOC mg/L	5.2
TSS mg/L	6
Zinc ug/L	12

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	14.60	42	41.08920	-81.29140	04110002-02-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	196	213	203	169	196
Aluminum ug/L	235	<200	<200	248	<200
Ammonia mg/L	.0815	.059	.064	.078	.0645
Arsenic ug/L	4.41	3.97	4.05	5	3.71
Barium ug/L	81.3	84	87.8	95.4	87.1
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	71.8	77.7	78.2	73.9	77.5
Chloride mg/L	43.3	46.1	47.5	42.9	42.6
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	29.2	39	46.5
Copper ug/L	2.04	<2	<2	2.31	<2
DO mg/L	5.81	5.96	5.83	6.35	7.73
DOsat percent	68.2	69	64.8	70.7	78.1
Hardness mg/L	247	268	271	253	264
Iron ug/L	856	266	341	1260	1140
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	16.5	17.8	18.2	16.6	17.2
Manganese ug/L	287	226	258	272	236
Nickel ug/L	2.78	2.57	2.37	2.91	2.75
Nitrate, nitrite mg/L	.562	.491	.37	.674	.691
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.82	7.98	7.97	7.77	7.6
Phosphorus mg/L	.119	.122	.077	.144	.0991
Potassium mg/L	2.49	2.59	2.5	4.37	3.83
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	20.2	21.4	21.4	23.2	21.7
Spcond umhos/cm	595	626	603	543	565
Strontium ug/L	147	157	151	162	165
Sulfate mg/L	54	57	55.5	53.1	62.1
TDS mg/L	390	378	406	386	400
TempC deg C	23.3	22.5	20.5	20.6	15.8
TKN mg/L	.694	.667	.56	.991	.916
TSS mg/L	9	<5	<5	14.5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01A53 CUYAHOGA R. AT BURTON @ ST. RT. 87

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	87.26	38	41.46472	-81.12727	04110002-01-03

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	118			117	98.2	106
Aluminum ug/L	421			268	<200	<200
Ammonia mg/L	.156			.124	<.05	<.05
Arsenic ug/L	2.17			2.72	<2	2.2
Barium ug/L	42.3			35.7	37.9	35.9
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	32.1			30.7	26.5	27.4
Chloride mg/L	54.5			46.2	37.1	36.9
Chromium ug/L	<2			<2	<2	<2
COD mg/L	26.9			26.3	24	<20
Copper ug/L	<2			<2	<2	<2
DO mg/L	4.18			6.2	3.49	3.47
DOsat percent	48			72.6	38.5	40.5
E. coli		325	205		187.2	202.2
Hardness mg/L	113			106	91.1	94.5
Iron ug/L	1240			1210	803	434
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	7.96			7.22	6.03	6.36
Manganese ug/L	407			285	104	114
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	.627			.791	.264	.386
Nitrite mg/L	.0528			.0385	<.02	<.02
pH su	7.37			7.34	7.28	7.47
Phosphorus mg/L	.078			.107	.0777	.0567
Potassium mg/L	4.96			3.99	2.84	3.34
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	47			35.9	25.7	28.9
Spcond umhos/cm	434			364	326.7	316.8
Strontium ug/L	104			97.8	81.9	85.2
Sulfate mg/L	15.6			11.8	11.4	10.2
TDS mg/L	246			224	190	184
TempC deg C	22.2			23.1	20.1	23
TKN mg/L	.889			.788	.661	.4
TSS mg/L	12			11.5	5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01A53		CUYAHOGA R. AT BURTON @ ST. RT. 87			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	87.26	38	41.46472	-81.12727	04110002-01-03

Inorganic Parameters	9/18/17
Alkalinity mg/L	117
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	<2
Barium ug/L	41.5
Cadmium ug/L	<.2
Calcium mg/L	29.8
Chloride mg/L	45
Chromium ug/L	<2
COD mg/L	23.1
Copper ug/L	<2
DO mg/L	3.57
DOsat percent	38.3
E. coli	
Hardness mg/L	104
Iron ug/L	350
Lead ug/L	<2
Magnesium mg/L	7.27
Manganese ug/L	138
Nickel ug/L	<2
Nitrate, nitrite mg/L	.514
Nitrite mg/L	<.02
pH su	7.52
Phosphorus mg/L	.0429
Potassium mg/L	4.03
Selenium ug/L	<2
Sodium mg/L	34.6
Spcond umhos/cm	363.3
Strontium ug/L	95.3
Sulfate mg/L	14
TDS mg/L	224
TempC deg C	18.6
TKN mg/L	.492
TSS mg/L	<5
Zinc ug/L	21

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01A58 CUYAHOGA R. @ BOSTON MILLS RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	26.50	499	41.26280	-81.56030	04110002-04-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	155		156	160	151	170
Aluminum ug/L	<200		<200	<200	<200	<200
Ammonia mg/L	<.05		<.05	<.05	.057	<.05
Arsenic ug/L	<2		2.43	2.21	2.8	2.24
Barium ug/L	52.3		44.7	45.9	46.2	46.1
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	73.1		61.2	68.7	69.2	74.8
Chloride mg/L	138		119	161	150	170
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		<20	24.7	<20	28.8
Copper ug/L	2.66		2.68	2.75	3.17	2.73
DO mg/L	11.55		9.21	9.82	9.54	8.11
DOsat percent	138.6		111.4	112	114.3	90.2
E. coli		133		411	156.5	
Hardness mg/L	251		210	239	241	260
Iron ug/L	286		313	290	563	215
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	16.6		14	16.4	16.6	17.6
Manganese ug/L	49.3		47.4	56.8	67.8	38.5
Nickel ug/L	2.46		2.26	2.71	3.23	3.71
Nitrate, nitrite mg/L	4.42		2.98	6.21	7.07	6.18
Nitrite mg/L	.0743		<.02	.0475	.19	.0246
pH su	8.48		8.2	8.14	8.18	8.04
Phosphorus mg/L	.0371		.0647	.106	.34	.158
Potassium mg/L	5.3		4.52	5.85	5.65	6.83
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	92.3		76.5	102	99.6	111
Spcond umhos/cm	864		785	958	877	1052
Strontium ug/L	215		180	211	206	217
Sulfate mg/L	61.5		49.5	68.6	66.1	73.2
TDS mg/L	538		460	572	556	612
TempC deg C	24.3		24.9	21.7	24.3	20.43
TKN mg/L	.825		.745	1.17	.627	.809
TSS mg/L	<5		6	5.5	12.5	<5
Zinc ug/L	13.8		<10	10.6	12.2	16.9

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G02 CUYAHOGA R. @ CHARDON-WINDSOR RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	96.20	6	41.56250	-81.09240	04110002-01-01

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	126			107	96.4	152
Aluminum ug/L	380			205	<200	<200
Ammonia mg/L	<.05			.0764	<.05	<.05
Arsenic ug/L	2.14			2.31	<2	2.01
Barium ug/L	40.8			31.3	28.2	36.9
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	42.5			31.5	27.9	44.8
Chloride mg/L	24.2			22.2	20.1	50.1
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			28.6	21.9	<20
Copper ug/L	<2			<2	<2	<2
DO mg/L	2.39			3.4	5.1	1.77
DOsat percent	24.4			38.6	54.5	20.1
E. coli		4480	717		300.8	431.2
Hardness mg/L	143			104	91.6	149
Iron ug/L	1040			1130	781	455
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	8.85			6.15	5.36	9.11
Manganese ug/L	212			247	165	273
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	<.1			<.1	<.1	<.1
Nitrite mg/L	<.02			<.02	<.02	<.02
pH su	7.18			7.65	6.87	7.41
Phosphorus mg/L	.065			.0576	.0431	.0318
Potassium mg/L	2.04			<2	<2	<2
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	16.7			14	13	29.3
Spcond umhos/cm	343			251	263.3	416.4
Strontium ug/L	121			89.6	76	138
Sulfate mg/L	9.31			5.45	8.35	7.8
TDS mg/L	194			156	158	240
TempC deg C	16.7			21.7	18.5	21.5
TKN mg/L	.517			.473	.487	.326
TSS mg/L	9			5	<5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01G02		CUYAHOGA R. @ CHARDON-WINDSOR RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	96.20	6	41.56250	-81.09240	04110002-01-01

Inorganic Parameters	9/18/17
Alkalinity mg/L	133
Aluminum ug/L	<200
Ammonia mg/L	.059
Arsenic ug/L	<2
Barium ug/L	43.2
Cadmium ug/L	<.2
Calcium mg/L	42.6
Chloride mg/L	76
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	1.63
DOsat percent	17.6
E. coli	
Hardness mg/L	143
Iron ug/L	689
Lead ug/L	<2
Magnesium mg/L	8.91
Manganese ug/L	209
Nickel ug/L	<2
Nitrate, nitrite mg/L	.492
Nitrite mg/L	<.02
pH su	7.2
Phosphorus mg/L	.0346
Potassium mg/L	2.25
Selenium ug/L	<2
Sodium mg/L	48.1
Spcond umhos/cm	483
Strontium ug/L	137
Sulfate mg/L	12.2
TDS mg/L	304
TempC deg C	16.3
TKN mg/L	.348
TSS mg/L	<5
Zinc ug/L	74.7

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G04 TARE CREEK @ BURTON-WINDSOR RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-038-000	3.10	5	41.50130	-81.07010	04110002-01-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	107	167	167	154	160
Aluminum ug/L	432	319	<200	<200	<200
Ammonia mg/L	.123	.106	<.05	.0584	.058
Arsenic ug/L	<2	2.05	<2	<2	<2
Barium ug/L	31.4	44.9	44.4	42.1	43.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	34.8	54.3	59.5	51	53.4
Chloride mg/L	41.6	42.4	35	30.9	35.1
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	59.1	31.3	22.2	38.8	22.8
Copper ug/L	3.85	<2	<2	<2	<2
DO mg/L	6.76	7.27	8.72	8.43	9.75
DOC mg/L	11.1	5.39	3.58	4.1	4.58
DOsat percent	77.8	86.9	102	94.2	109
Hardness mg/L	120	189	208	178	187
Iron ug/L	1020	1160	662	868	914
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	8.07	13	14.5	12.3	13.1
Manganese ug/L	110	189	116	121	137
Nickel ug/L	2.2	2.29	<2	<2	<2
Nitrate, nitrite mg/L	.742	.595	.662	.733	.632
Nitrite mg/L	<.02	.0337	<.02	<.02	<.02
Ortho-P mg/L	.0463	.0174	.0117	.0182	.0165
pH su	7.41	7.52	7.66	7.64	7.55
Phosphorus mg/L	.168	.0795	.0436	.0665	.0959
Potassium mg/L	5.92	4.01	3.62	3.62	3.97
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	14.2	21	17.3	17.1	18.8
Spcond umhos/cm	321	478	482	411	442
Strontium ug/L	84.5	125	133	122	130
Sulfate mg/L	<5	25.6	30.7	23.7	24.7
TDS mg/L	224	290	300	254	254
TempC deg C	22.2	24.3	23.2	20.7	20.8
TKN mg/L	1.14	.767	.589	.704	.696
TSS mg/L	5	16.5	<5	5.5	37.5
Zinc ug/L	<10	<10	<10	33.7	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G05 W. BR. CUYAHOGA R. @ TAYLOR-WELLS RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-036-000	12.30	7	41.56083	-81.15644	04110002-01-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	8/16/18	9/17/18	10/10/18
Alkalinity mg/L	91.7	108	103	108	105	99.8
Aluminum ug/L	294	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	.0528	<.05	<.05	.0581	.0524
Arsenic ug/L	<2	2.24	2.19	2.2	2.11	<2
Barium ug/L	36.2	38.1	38.5	40.8	48.2	41.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	28.7	33.3	31.9	35.2	36.5	31.8
CBOD20 mg/L				11.7		
Chloride mg/L	49	46.5	42.9		37	29.4
Chlorophyll ug/L				1.08		
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	<20	39.2	29	40.8	52.1
Copper ug/L	2.62	2.63	<2	<2	<2	<2
DO mg/L	5.59	6.26	6.18	7.23	5.74	5.16
DOC mg/L	6.94	5.8	6.48	5.73	5.32	6.6
DOsat percent	64.1	71.1	67.8	83.6	63	55.9
Hardness mg/L	95.8	111	106	118	122	107
Iron ug/L	896	929	917	783	1170	795
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	5.87	6.73	6.41	7.3	7.56	6.71
Manganese ug/L	137	138	135	137	173	110
Nickel ug/L	<2	<2	<2	<2	<2	<2
Nitrate, nitrite mg/L	.193	.29	<.1	<.1	.271	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0136	.0176	.0196	.0153	.0227	.0197
pH su	7.11	7.54	7.3	7.43	7.6	7.52
Pheophytin ug/L				<1.4		
Phosphorus mg/L	.0646	.0451	.0436	.0309	.0491	.0379
Potassium mg/L	<2	2.03	2.07	2.03	2.38	2.73
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	29.1	27	25	25.1	24.1	18.9
Spcond umhos/cm	335	354	340	350	340	308
Strontium ug/L	74.5	87.8	82.9	89.6	100	87.7
Sulfate mg/L	9.09	9.45	7.77	7.38	11.2	9.61
TDS mg/L	208	206	206	196	196	172
TempC deg C	22.1	21.6	19.8	22.5	19.9	19.2
TKN mg/L	.615	.437	.395	.318	.484	.43
TOC mg/L				7.34		
TSS mg/L	9.5	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G07 BUTTERNUT CREEK @ AQUILLA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-037-000	0.80	4	41.53200	-81.18000	04110002-01-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	8/16/18	9/17/18	10/10/18
Alkalinity mg/L	161	116	153	158	143	140
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.154	.0521	.0635	.0506	.522	.0712
Arsenic ug/L	<2	<2	<2	<2	<2	<2
Barium ug/L	57.6	42.1	56.9	60.1	58.4	54.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	58.6	38.3	57.2	60.1	55.1	49.1
CBOD20 mg/L				12.3		
Chloride mg/L	110	75.5	109		85.7	88.6
Chlorophyll ug/L				.678		
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	27.4	22.1	<20	37.1	191
Copper ug/L	<2	<2	<2	2.06	<2	<2
DO mg/L	3.86	5.75	4.81	6.35	5.42	4.52
DOC mg/L	3.5	5.33	3.25	2.93	3.66	4.99
DOsat percent	43	64.1	51.9	70.4	58.4	47.2
Hardness mg/L	201	129	195	205	188	167
Iron ug/L	353	361	319	271	375	295
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	13.2	8.01	12.6	13.4	12.3	10.8
Manganese ug/L	153	57.4	103	102	82.1	131
Nickel ug/L	<2	<2	<2	<2	<2	<2
Nitrate, nitrite mg/L	.257	<.1	.136	.105	.533	.149
Nitrite mg/L	.022	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.018	.0199	.0155	.0138	.0193	.019
pH su	7.04	7.45	7.33	7.19	7.51	8.12
Pheophytin ug/L				<1.4		
Phosphorus mg/L	.0403	.0469	.0328	<.02	.0314	.0277
Potassium mg/L	<2	<2	<2	<2	2.62	2.82
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	64.4	39.5	62.4	62	52.9	52
Spcond umhos/cm	691	479	690	705	591	587
Strontium ug/L	127	86	121	124	126	119
Sulfate mg/L	24.5	16.6	23.4	23.4	20.4	17.5
TDS mg/L	398	278	390	384	338	318
TempC deg C	20.6	20.6	19	20.3	18.9	18.3
TKN mg/L	.527	.481	.646	.439	.53	.498
TOC mg/L				4.3		
TSS mg/L	<5	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	20.5	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G08 HOPSONS CREEK (DIEDRICH CREEK) @ ST. RT. 87

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-036-001	0.60	5	41.47080	-81.16360	04110002-01-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	8/16/18	9/17/18	10/10/18
Alkalinity mg/L	109	114	135	136	118	129
Aluminum ug/L	253	<200	<200	<200	<200	<200
Ammonia mg/L	.104	.0712	.0502	<.05	.286	.0743
Arsenic ug/L	2.32	<2	<2	<2	<2	<2
Barium ug/L	53.4	51.7	61.9	64.3	62.8	63
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	35.5	35.7	46.2	48.1	42.4	43.3
CBOD20 mg/L				15.5		
Chloride mg/L	55.9	51.1	63.2		64.7	57.7
Chlorophyll ug/L				15		
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	<20	20.1	<20	41.7	<20
Copper ug/L	3.74	<2	<2	<2	<2	<2
DO mg/L	6.09	6.43	7.18	7.51	6.7	7.06
DOC mg/L	4.87	4.78	3.27	3.15	3.88	3.65
DOsat percent	69	72.7	79.9	85.6	73.6	77
Hardness mg/L	122	122	159	165	147	150
Iron ug/L	1310	718	646	566	952	695
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	8.04	8.1	10.5	10.9	9.85	10.3
Manganese ug/L	319	170	183	167	192	147
Nickel ug/L	<2	<2	<2	<2	<2	<2
Nitrate, nitrite mg/L	.466	.455	.288	.661	.738	.486
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.045	.0367	.0225	.0385	<.01	.0325
pH su	7.36	7.41	7.53	7.56	7.58	7.49
Pheophytin ug/L				6.36		
Phosphorus mg/L	.131	.082	.0628	.0899	.0817	.061
Potassium mg/L	2.17	3.01	2.42	2.57	4.27	3.71
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	32.1	28.4	36	38.5	41.6	34.2
Spcond umhos/cm	417	414	507	511	463	464
Strontium ug/L	99	98.1	114	119	125	117
Sulfate mg/L	16.3	16.3	18.3	18.7	18.3	18.3
TDS mg/L	256	232	302	286	276	258
TempC deg C	21.5	21.4	20.5	21.7	19.9	19.5
TKN mg/L	.605	.454	.434	.579	.615	.472
TOC mg/L				4.46		
TSS mg/L	11.5	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G10 TRIB. TO BRIDGE CREEK (0.52) NEAR RAPIDS RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-035-001	0.01	8	41.41900	-81.16730	04110002-01-04

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	126	132	130	128	130
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.061	<.05	<.05	<.05	.0562
Arsenic ug/L	2.77	2.25	2.27	2.57	2.36
Barium ug/L	42.2	46.5	54.9	49.4	52.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	37.7	39.7	42.8	42	40.5
Chloride mg/L	31.6	36.9	38.7	37.3	35.2
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	26.7	32.9	39.4	42.2
Copper ug/L	<2	<2	<2	<2	<2
DO mg/L	5.31	3.78	5.32	6.41	3.94
DOsat percent	67	52.1	62.9	51.8	45.4
Hardness mg/L	129	136	145	143	139
Iron ug/L	356	248	464	213	258
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	8.44	8.88	9.37	9.17	9.22
Manganese ug/L	181	106	101	225	237
Nickel ug/L	<2	<2	<2	<2	<2
Nitrate, nitrite mg/L	<.1	<.1	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.31	7.21	7.31	7.65	7.36
Phosphorus mg/L	.0785	.0499	.0764	.0525	.0496
Potassium mg/L	<2	<2	<2	2.64	2.42
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	17.8	19.8	22	22.5	20.3
Spcond umhos/cm	456	372	340	483	377
Strontium ug/L	103	111	116	116	112
Sulfate mg/L	11.2	10.1	8.34	8.64	9.47
TDS mg/L	218	222	240	228	212
TempC deg C	23.7	22	23.7	19.7	23
TKN mg/L	.534	.374	.636	.686	.462
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G12 SAWYER BROOK @ TILDEN RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-034-000	0.30	3	41.37360	-81.15200	04110002-01-06

Inorganic Parameters	6/19/18	7/24/18	8/14/18	8/16/18	9/17/18	10/10/18
Alkalinity mg/L	108	144	124	141	133	144
Aluminum ug/L	361	<200	209	<200	<200	<200
Ammonia mg/L	.0838	.0734	.0857	.0761	.0784	.0876
Arsenic ug/L	2.13	2.03	<2	<2	<2	<2
Barium ug/L	29.5	35.6	32.7	35.4	43.9	40.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	37.5	48.6	40.7	50.8	50.2	50.7
CBOD20 mg/L				12.2		
Chloride mg/L	47.4	33.7	41.3		43.7	43.4
Chlorophyll ug/L				1.25		
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	32	32.8	34.8	<20	34.7	<20
Copper ug/L	2.42	<2	2.06	<2	<2	<2
DO mg/L	6.15	2.04	4.67	6.58	5.82	3.09
DOC mg/L	8.54	4.44	7.35	4.95	4.93	5.16
DOsat percent	70.3	21.9	50.6	73.8	63.8	33.1
Hardness mg/L	134	172	143	180	179	182
Iron ug/L	1380	736	784	664	740	527
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	9.89	12.3	10.1	12.8	13.1	13.5
Manganese ug/L	179	197	176	231	147	102
Nickel ug/L	2.41	2.31	2.11	<2	2.2	<2
Nitrate, nitrite mg/L	.39	.776	.77	.633	1.4	1.07
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0356	.0253	.0412	.0217	.0291	.0433
pH su	7.68	7.76	7.67	7.4	7.77	7.66
Pheophytin ug/L				1.52		
Phosphorus mg/L	.126	.228	.0896	.0501	.0618	.0616
Potassium mg/L	3.37	3.38	5.1	3.7	5.69	5.09
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	31.7	19.3	21.2	23.2	27.4	24.1
Spcond umhos/cm	390	495	420	456	456	549
Strontium ug/L	113	136	108	142	147	142
Sulfate mg/L	21.9	36.7	25.2	28.6	33.4	35.5
TDS mg/L	244	260	264	260	298	274
TempC deg C	21.9	18.7	19.2	20.9	19.8	18.8
TKN mg/L	.582	1.5	.616	.512	.549	.426
TOC mg/L				5.89		
TSS mg/L	12	21.5	<5	7	7.5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G13 TRIB. TO CUYAHOGA R. (69.43) @ CANADA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-024	0.20	4	41.27530	-81.22150	04110002-02-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	124	149	117	130	137
Aluminum ug/L	406	<200	<200	<200	<200
Ammonia mg/L	.0518	<.05	<.05	<.05	<.05
Arsenic ug/L	2.07	<2	<2	<2	<2
Barium ug/L	39.9	42	39.6	43.2	42.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	48.3	57.2	46.8	50.9	51.3
Chloride mg/L	59.3	70.5	59	49.5	67.3
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	26	45.3	20.3
Copper ug/L	<2	<2	<2	<2	<2
DO mg/L	7.08	9.28	8.17	8.38	8.95
DOsat percent	78	98.6	86.4	87.4	93.8
Hardness mg/L	167	198	161	178	180
Iron ug/L	1290	322	577	394	309
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	11.4	13.4	10.7	12.5	12.7
Manganese ug/L	208	138	138	131	88.9
Nickel ug/L	2.11	<2	<2	<2	<2
Nitrate, nitrite mg/L	.51	.713	.518	.808	.503
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.57	7.98	7.76	7.85	7.67
Phosphorus mg/L	.0908	.0316	.0506	.0314	.0288
Potassium mg/L	2.2	<2	2.16	2.38	2.7
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	33.4	36.4	26.6	25.7	34.7
Spcond umhos/cm	453	540	474	456	530
Strontium ug/L	182	167	164	160	182
Sulfate mg/L	20.5	30.8	28.8	30.9	27.6
TDS mg/L	292	314	288	286	302
TempC deg C	20	18.2	17.9	17.3	17.6
TKN mg/L	.405	.361	.467	.406	.362
TSS mg/L	15	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	23	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G15 HARPER DITCH @ BECK RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-020	0.20	5	41.25490	-81.25690	04110002-02-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	115	177	170	155	163
Aluminum ug/L	1120	<200	<200	<200	<200
Ammonia mg/L	.0771	<.05	<.05	<.05	<.05
Arsenic ug/L	3.76	2.43	3	2.96	2.6
Barium ug/L	47.5	56.3	55.9	70.3	56
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	44.9	71	67.7	69.1	64
Chloride mg/L	218	109	138	106	105
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	42.5	24.7	28.3	26.2	27
Copper ug/L	4.99	<2	2.01	<2	<2
DO mg/L	5.65	7.64	4.93	6.87	7.29
DOsat percent	63.7	85.4	53.9	76	78.1
Hardness mg/L	149	244	230	235	220
Iron ug/L	2470	155	246	371	245
Lead ug/L	2.31	<2	<2	<2	<2
Magnesium mg/L	8.92	16.3	14.8	15.2	14.5
Manganese ug/L	246	190	348	245	297
Nickel ug/L	3.04	2.14	2.02	2.2	<2
Nitrate, nitrite mg/L	.359	.312	.327	.296	.206
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.54	7.85	7.67	7.71	7.71
Phosphorus mg/L	.174	.0233	.03	.0532	.036
Potassium mg/L	3.08	2.48	2.35	2.95	3.35
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	147	60.2	77.1	64.7	61.1
Spcond umhos/cm	954	765	890	735	745
Strontium ug/L	116	139	138	145	143
Sulfate mg/L	38.3	53.2	52.6	55.8	45.9
TDS mg/L	538	426	490	430	426
TempC deg C	21.2	20.7	19.5	20.7	18.6
TKN mg/L	.756	.52	.578	.627	.651
TSS mg/L	37	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G16 TRIB. TO CUYAHOGA R. (63.43) @ ST. RT. 303

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-022	0.10	3	41.24100	-81.30107	04110002-02-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	92.1	110	99.6	101	139
Aluminum ug/L	442	<200	377	<200	2000
Ammonia mg/L	.174	.19	.216	.162	.105
Arsenic ug/L	<2	<2	2.47	3.35	8.04
Barium ug/L	43.4	49.5	60.4	73.3	91.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	45.1	55.3	51	51.6	59
Chloride mg/L	51.9	67.2	70.1	61.7	63.5
Chromium ug/L	<2	<2	<2	<2	2.35
COD mg/L	23.4	<20	72.4	23.5	51.9
Copper ug/L	<2	<2	<2	<2	4.84
DO mg/L	5.45	3.35	1.49	.64	.4
DOsat percent	59.5	36.5	15.7	6.7	4.2
Hardness mg/L	156	192	179	182	205
Iron ug/L	4300	2980	6760	8720	15200
Lead ug/L	<2	<2	<2	<2	4.91
Magnesium mg/L	10.6	13.2	12.4	12.9	14
Manganese ug/L	2250	2440	2880	3380	7410
Nickel ug/L	3.78	3.52	4.28	4.44	7.35
Nitrate, nitrite mg/L	.129	<.1	<.1	<.1	.26
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.59	7.52	7.19	7.5	7.48
Phosphorus mg/L	.12	.0245	.053	.0433	.146
Potassium mg/L	2.4	<2	<2	2.34	3.3
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	18.9	19.1	21.3	21.9	25.1
Spcond umhos/cm	367	481	510	540	555
Strontium ug/L	125	149	133	154	240
Sulfate mg/L	33.4	41.8	40.4	41.3	33.7
TDS mg/L	256	294	304	276	308
TempC deg C	19.6	19.4	17.5	17.4	17.6
TKN mg/L	.474	.496	.64	.638	.948
TSS mg/L	19	<5	31	19.5	70
Zinc ug/L	<10	<10	<10	<10	33.8

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G19 ECKERT DITCH @ DAWLEY RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-018	1.09	8	41.19120	-81.29070	04110002-02-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	182	214	203	180	159
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.169	.112	.0779	.159	.103
Arsenic ug/L	5.58	4.31	4.65	6.26	7.16
Barium ug/L	69.2	88.2	83.7	74.5	55.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	75.3	77.5	74.4	68	54.1
Chloride mg/L	88.8	77.7	92.6	76.6	64.6
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	28.2	36.1	76.2
Copper ug/L	<2	<2	<2	<2	<2
DO mg/L	3.63	4.8	6.16	3.85	3.54
DOsat percent	40.6	52.3	65.5	41.8	38.3
Hardness mg/L	253	262	251	229	182
Iron ug/L	955	544	495	1400	1450
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	15.7	16.8	15.9	14.5	11.3
Manganese ug/L	347	521	411	484	473
Nickel ug/L	2.14	2.06	<2	2.41	2.39
Nitrate, nitrite mg/L	.315	.118	<.1	.209	.135
Nitrite mg/L	.0206	<.02	<.02	<.02	<.02
pH su	7.31	7.83	7.57	7.69	8.09
Phosphorus mg/L	.232	.0761	.0725	.202	.319
Potassium mg/L	2.46	2.25	2.27	3.41	4.22
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	51.2	39.7	46.5	42.9	32.4
Spcond umhos/cm	662	672	761	625	544
Strontium ug/L	175	165	168	171	140
Sulfate mg/L	25	30.8	27.6	26.5	16.2
TDS mg/L	406	388	430	408	340
TempC deg C	20.8	19.5	18.2	19.4	19.1
TKN mg/L	.702	.444	.624	1.12	1.29
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	17.7

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G22 BEAR CREEK W OF I-271 @ SOLON RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-007	0.20	5	41.38630	-81.51630	04110002-05-04

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	93.7	143	128	156	189
Aluminum ug/L	237	<200	<200	715	<200
Ammonia mg/L	.0557	<.05	<.05		<.05
Arsenic ug/L	2.03	2.94	3.02	3.88	2.69
Barium ug/L	26.1	50.5	57.6	67.5	51.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	40.5	79.6	89.6	102	91.3
Chloride mg/L	269	435	545	517	371
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	22.2	25.7	28.3		50
Copper ug/L	6.9	6.19	5.81	7.48	4.52
DO mg/L	7.28	7.47	7.85	7.48	10.7
DOsat percent	80.6	84.8	91.3	86.7	112
Hardness mg/L	124	255	289	328	292
Iron ug/L	471	189	125	1310	163
Lead ug/L	<2	<2	<2	3.03	<2
Magnesium mg/L	5.5	13.5	15.9	18.1	15.6
Manganese ug/L	22.2	17.7	16.4	61.7	15.6
Nickel ug/L	3.13	4.07	3.91	5.56	3.99
Nitrate, nitrite mg/L	.408	<.1	<.1		.138
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.99	8.19	8.18	8.19	8.04
Phosphorus mg/L	.0421	<.02	<.02		<.02
Potassium mg/L	5.31	8.53	9.27	11.5	9.85
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	153	255	338	316	258
Spcond umhos/cm	1080	1760	2140	2290	1660
Strontium ug/L	223	429	479	528	437
Sulfate mg/L	63.8	105	125	160	137
TDS mg/L	606	954	1180	1230	960
TempC deg C	20.2	21.3	22.5	21.9	17.3
TKN mg/L	.673	<.6	.737		.682
TSS mg/L	7.5	<5	<5	46.5	<5
Zinc ug/L	<10	<10	<10	19.2	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G23 PLUM CREEK @ TALLMADGE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-027-000	3.70	4	41.10020	-81.36980	04110002-03-04

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	179	188	188	111	127
Aluminum ug/L	<200	<200	224	1980	411
Ammonia mg/L	.0604	.0515	.0553	.358	.0718
Arsenic ug/L	2.5	2.73	2.85	3.31	2.59
Barium ug/L	73.3	70.2	82.8	73.5	62.1
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	69.8	64	74.9	48.7	49
Chloride mg/L	74.4	78.9	79.8	59.1	51.2
Chromium ug/L	<2	<2	<2	2.66	<2
COD mg/L	<20	26.5	<20	42.6	40.2
Copper ug/L	<2	<2	<2	4.13	2.38
DO mg/L	8.78	8.78	7.68	7.61	8.01
DOsat percent	102	102	85.1	80.5	83.1
Hardness mg/L	241	221	255	163	163
Iron ug/L	505	506	658	4260	1050
Lead ug/L	<2	<2	<2	2.76	<2
Magnesium mg/L	16.3	14.8	16.6	9.96	9.9
Manganese ug/L	115	130	164	141	112
Nickel ug/L	<2	2.01	2.39	4.24	2.63
Nitrate, nitrite mg/L	.244	.275	.238	.786	.651
Nitrite mg/L	<.02	<.02	<.02	<.02	.0236
pH su	8.05	8.05	8.03	7.67	7.67
Phosphorus mg/L	.0352	.0279	.0273	.159	.0764
Potassium mg/L	2.61	2.31	3.19	3.8	3.58
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	41.5	38.9	43.2	35.7	31.4
Spcond umhos/cm	678	678	669	499	465
Strontium ug/L	171	156	180	136	131
Sulfate mg/L	49.3	51.8	50.8	46	43.9
TDS mg/L	420	388	398	324	308
TempC deg C	22.7	22.7	20.3	18	17
TKN mg/L	.504	.546	.609	.929	1.02
TSS mg/L	<5	<5	<5	29	7.5
Zinc ug/L	<10	<10	<10	15.3	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-023-000	0.60	3	41.15940	-81.56490	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18	9/4/19
Alkalinity mg/L	253	257	267	141	197	240
Aluminum ug/L	<200	<200	<200	462	<200	<200
Ammonia mg/L	.364	.345	.329	<.05	.105	.223
Arsenic ug/L	<2	<2	<2	2.23	2.03	<2
Barium ug/L	48.6	50.4	54.2	33.7	39.4	53.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	118	119	138	58.5	82.4	126
CBOD20 mg/L						12.5
Chloride mg/L	105	105	104	68.4	71.4	
Chlorophyll ug/L						.75
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	27	151	38.9	20.9	<20
Copper ug/L	<2	<2	<2	3.94	2.34	<2
DO mg/L	8.34	9.05	8.54	8.1	9.52	8.89
DOC mg/L						<2
DOsat percent	83.2	90.8	84.4	83.9	95.1	91.8
Hardness mg/L	413	414	476	203	290	439
Iron ug/L	1250	1470	1620	1390	1140	731
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	28.4	28.4	32.2	13.9	20.5	30.4
Manganese ug/L	367	370	408	83.6	145	351
Nickel ug/L	3.72	3.64	4.14	3.21	3.59	3.99
Nitrate, nitrite mg/L	.102	<.1	.144	.315	.151	.163
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	.0209
Ortho-P mg/L						<.01
pH su	7.61	7.63	7.44	7.76	7.88	7.56
Pheophytin ug/L						<1.4
Phosphorus mg/L	<.02	<.02	<.04	.0839	.0429	.0376
Potassium mg/L	3.19	3.26	3.57	4.18	4.16	3.42
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	59.7	60.5	64.2	50.2	48.9	57.6
Spcond umhos/cm	1090	1000	1130	618	722	1070
Strontium ug/L	273	283	298	267	284	300
Sulfate mg/L	181	180	188	68.4	95.8	183
TDS mg/L	752	718	748	370	464	702
TempC deg C	15.1	15.4	14.7	17	15.2	16.8
TKN mg/L	.615	.697	.625	.884	.774	.549
TOC mg/L						<2
TSS mg/L	<5	<5	<5	14.5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G27 ROBINSON RUN @ AKRON-PENINSULA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-019-000	0.10	1	41.20827	-81.56034	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18	9/4/19
Alkalinity mg/L	255	265	258	197	260	245
Aluminum ug/L	220	330	<200	2480	257	213
Ammonia mg/L	<.05	.0506	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	4.58	2.33	<2
Barium ug/L	40.9	41	40.6	48.1	43	46.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	160	158	172	114	134	182
CBOD20 mg/L						12.4
Chloride mg/L	40.2	41.3	43.2	43.4	40.9	
Chlorophyll ug/L						1.23
Chromium ug/L	<2	<2	<2	3.28	<2	<2
COD mg/L	<20	23.5	28.4	36.3	<20	<20
Copper ug/L	<2	<2	<2	5.35	<2	<2
DO mg/L	9.19	8.96	8.83	8.32	9.18	7.97
DOC mg/L						2.13
DOsat percent	88.3	92	93.2	85.8	88.7	85.1
Hardness mg/L	662	626	708	461	566	748
Iron ug/L	878	871	564	5810	839	788
Lead ug/L	<2	<2	<2	2.57	<2	<2
Magnesium mg/L	63.5	56.3	67.4	42.8	56.1	71.4
Manganese ug/L	261	211	216	181	229	362
Nickel ug/L	5.02	4.77	5.19	8.03	5.67	5.62
Nitrate, nitrite mg/L	<.1	<.1	<.1	.412	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L						<.01
pH su	8.16	7.88	7.88	7.9	7.85	7.48
Pheophytin ug/L						<1.4
Phosphorus mg/L	.0202	<.02	<.02	.0913	<.02	.016
Potassium mg/L	3.17	3.06	3.29	4.1	3.38	3.57
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	30.5	27.8	31.4	31	32.4	31.8
Spcond umhos/cm	1230	1230	1340	946	896	1310
Strontium ug/L	409	365	429	353	389	451
Sulfate mg/L	407	405	461	250	340	455
TDS mg/L	964	914	998	634	786	1010
TempC deg C	13.4	16.5	17.7	16.7	13.7	18.3
TKN mg/L	<.3	<.3	<.3	.55	<.3	<.3
TOC mg/L						2.25
TSS mg/L	18.5	14	8	133	11.5	11.5
Zinc ug/L	<10	<10	<10	17	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G29 DICKERSON RUN @ AKRON-PENINSULA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-017-000	0.60	2	41.21840	-81.55200	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18	9/4/19
Alkalinity mg/L	239	235	319	162	179	280
Aluminum ug/L	<200	<200	<200	332	370	<200
Ammonia mg/L	.143	.129	.0546	<.05	.057	.0934
Arsenic ug/L	3.9	3.48	3.13	7.56	5.28	2.91
Barium ug/L	45.4	42.2	44.6	37.1	39.2	50.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	118	110	144	78.6	81.9	158
CBOD20 mg/L						12.5
Chloride mg/L	60.8	64.1	70	76.8	67.6	
Chlorophyll ug/L						.885
Chromium ug/L	<2	<2	<2	6.75	2.46	<2
COD mg/L	20.4	31.4	151	30.3	29.8	<20
Copper ug/L	<2	<2	<2	3.01	2.53	<2
DO mg/L	4.65	2	3.18	6.61	6.78	5.24
DOC mg/L						2.42
DOsat percent	48.4	21	34.3	69.2	67.7	55.6
Hardness mg/L	461	424	560	325	334	608
Iron ug/L	1490	1450	797	1650	2010	1030
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	40.7	36.4	48.8	31.2	31.4	51.9
Manganese ug/L	835	703	655	280	373	930
Nickel ug/L	3.71	3.19	4.34	3.53	4.32	4.64
Nitrate, nitrite mg/L	.248	<.1	<.1	.182	.125	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L						<.01
pH su	7.7	7.48	7.46	7.67	7.67	7.35
Pheophytin ug/L						<1.4
Phosphorus mg/L	.0242	.0222	<.02	.047	.0283	.0128
Potassium mg/L	3.09	3.05	2.82	4.5	4.53	3.02
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	39.3	39.3	41.3	56.4	49.6	43
Spcond umhos/cm	1020	986	1210	837	793	1210
Strontium ug/L	297	276	332	286	277	342
Sulfate mg/L	229	210	256	147	148	284
TDS mg/L	712	644	836	526	510	870
TempC deg C	17.1	17.6	18.8	17.5	15.2	18
TKN mg/L	.433	.446	.396	.75	.648	.384
TOC mg/L						2.56
TSS mg/L	8.5	7.5	7.5	16.5	16.5	8.5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G30 SALT RUN @ AKRON-PENINSULA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-016-000	0.30	3	41.22610	-81.54730	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	198	188	228	155	174
Aluminum ug/L	<200	<200	<200	346	281
Ammonia mg/L	.0547	.0658	.052	<.05	<.05
Arsenic ug/L	3.15	3.22	2.45	3.27	3.02
Barium ug/L	32.6	31.5	39.2	33.2	31.3
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	95.8	80.9	112	72.2	71.8
Chloride mg/L	62.8	63.1	66.9	47.7	44.6
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	30.5	<20	39.2	25.7
Copper ug/L	<2	3.93	<2	2.53	2.42
DO mg/L	5.14	6.39	5.13	7.06	7.4
DOsat percent	51.5	67.8	52.4	74.3	74.1
Hardness mg/L	362	302	423	281	268
Iron ug/L	944	1150	827	1050	968
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	29.7	24.3	34.6	24.5	21.6
Manganese ug/L	185	194	185	103	122
Nickel ug/L	2.77	2.67	3.37	2.74	3.61
Nitrate, nitrite mg/L	<.1	<.1	<.1	.229	.218
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.54	7.62	7.54	7.8	7.85
Phosphorus mg/L	.0217	<.02	<.02	.0359	<.02
Potassium mg/L	2.32	2.62	2.81	3.92	3.8
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	40.7	40.5	45.5	39.5	34.2
Spcond umhos/cm	873	793	975	654	622
Strontium ug/L	308	282	333	354	332
Sulfate mg/L	173	143	205	111	105
TDS mg/L	588	490	662	414	402
TempC deg C	15.3	18.1	16.2	17.7	15.4
TKN mg/L	.367	.492	.315	3.15	.514
TSS mg/L	<5	5.5	<5	12	5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G32 BOSTON RUN @ DUGWAY HILL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-013-000	0.22	3	41.24480	-81.54580	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	212	221	221	184	207
Aluminum ug/L	<200	256	<200	256	207
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	40.8	43.9	48.3	40.1	39.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	84	86.1	102	72.2	72.4
Chloride mg/L	114	89.9	90.4	102	84.6
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	25.5	157	25.5	32.5
Copper ug/L	<2	2.92	<2	3.05	2.34
DO mg/L	7.18	6.55	6.22	8.25	8.54
DOsat percent	73.2	71.5	69.5	87.2	83.8
Hardness mg/L	297	301	364	259	260
Iron ug/L	138	159	86.8	604	477
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	21.1	20.8	26.6	19	19.2
Manganese ug/L	44.4	66.5	26.3	38.5	44.3
Nickel ug/L	2.44	2.37	3.03	2.7	2.94
Nitrate, nitrite mg/L	.146	<.1	<.1	.321	.16
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	8.01	7.92	8.02	8.17	8.24
Phosphorus mg/L	<.02	<.02	<.02	.0774	<.02
Potassium mg/L	2.94	3.13	3.3	3.49	3.53
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	72	62.9	58.8	80	69
Spcond umhos/cm	761	834	941	873	736
Strontium ug/L	340	344	405	364	348
Sulfate mg/L	95.1	90.4	139	80.8	74.3
TDS mg/L	564	488	614	478	440
TempC deg C	16.2	19.5	20.7	17.9	14.4
TKN mg/L	.38	.45	.34	1.08	.576
TSS mg/L	<5	13.5	<5	11	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G33 SLIPPER RUN @ RIVERVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-012-000	0.16	1	41.24240	-81.55570	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	150	142	146	135	142
Aluminum ug/L	333	<200	<200	224	289
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	35.2	29.6	31.1	32.9	29.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	58.6	49.2	54.1	51.8	45.5
Chloride mg/L	144	109	110	96.8	66.9
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	22.4	28.7	158	29.8	25
Copper ug/L	2.43	2.79	2.06	2.88	2.33
DO mg/L	8.5	8.02	6.61	8.39	9.25
DOsat percent	88	87.7	73	88.3	92.3
Hardness mg/L	208	173	192	185	162
Iron ug/L	813	138	80.7	548	629
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	15.1	12.2	13.7	13.6	11.7
Manganese ug/L	35.5	<10	<10	35.6	19.2
Nickel ug/L	2.46	<2	2.07	2.08	2.13
Nitrate, nitrite mg/L	.365	.471	.393	.412	.232
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	8.12	7.96	7.92	8.09	8.02
Phosphorus mg/L	.0581	.0389	.0331	.0572	.0475
Potassium mg/L	3.3	3.27	3.3	3.76	3.73
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	85.7	67.8	71.7	72.8	51.3
Spcond umhos/cm	842	689	626	680	508
Strontium ug/L	202	171	192	186	168
Sulfate mg/L	54.2	40.1	47.3	53.2	35.1
TDS mg/L	486	382	426	382	304
TempC deg C	16.9	19.6	20.1	17.7	15.2
TKN mg/L	.503	.45	.49	.495	.448
TSS mg/L	<5	<5	<5	6	5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G34 STANFORD RUN @ HINES HILL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-011-000	0.90	2	41.27040	-81.55080	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18	9/4/19
Alkalinity mg/L	245	249	235	217	234	219
Aluminum ug/L	<200	<200	<200	413	780	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	2.48	2.13	3.01	2.67	2.57	2.63
Barium ug/L	51.9	60.9	61.8	55.7	53.7	59.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	108	120	124	123	101	118
CBOD20 mg/L						12.2
Chloride mg/L	383	374	482	269	191	
Chlorophyll ug/L						1.61
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	45	31.2	154	31	31	<20
Copper ug/L	3	4.94	3.8	4.57	3.99	4.14
DO mg/L	8.32	8.49	7.72	8.17	8.31	7.97
DOC mg/L						3.21
DOsat percent	87.5	94.7	86.6	86.5	83.8	89
Hardness mg/L	380	419	444	416	353	429
Iron ug/L	423	284	254	947	1570	480
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	26.6	29.3	32.9	26.4	24.2	32.4
Manganese ug/L	89	76.6	65.7	76.3	95.8	83
Nickel ug/L	3.56	3.35	3.72	4.09	5.05	4.4
Nitrate, nitrite mg/L	.119	.166	.118	.278	.235	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L						<.01
pH su	8.06	7.99	8.05	8.04	7.86	7.93
Pheophytin ug/L						<1.4
Phosphorus mg/L	<.02	<.02	<.02	.0218	.025	.0297
Potassium mg/L	3.72	4.55	4.67	5.87	5.6	4.33
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	210	224	290	207	149	220
Spcond umhos/cm	1790	1860	2150	1670	1290	1740
Strontium ug/L	645	695	765	733	549	680
Sulfate mg/L	159	186	162	223	172	159
TDS mg/L	1060	1080	1210	972	778	1040
TempC deg C	17.5	20.4	20.7	17.9	15.6	20.5
TKN mg/L	.519	.523	.571	.558	.747	.515
TOC mg/L						3.34
TSS mg/L	6	<5	6.5	12.5	20	17.5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G37 SAGAMORE CREEK UPST. SAGAMORE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-011	2.92	3	41.35070	-81.55450	04110002-05-05

Inorganic Parameters	7/9/18	7/26/18	8/22/18	9/12/18	9/24/18	9/4/19
Alkalinity mg/L	192	186	135	166	215	215
Aluminum ug/L	<200	<200	258	<200	<200	<200
Ammonia mg/L	.0826	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	2.43	3.01	2.23	2.09	2.1	3
Barium ug/L	69.9	81.3	59.5	69.1	90.4	110
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	72.9	82.3	58.2	66.1	89.4	108
CBOD20 mg/L						14.4
Chloride mg/L	221	277	165	180	262	
Chlorophyll ug/L						.601
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	36.6	<20	31.2	20.3	<20	<20
Copper ug/L	4.95	5.13	3.79	4.81	3.21	4.95
DO mg/L	7.59	4.69	7.57	8.4	7.27	10.1
DOC mg/L						3.8
DOsat percent	83.7	53.8	84.4	89	74.1	119
Hardness mg/L	245	288	196	222	305	370
Iron ug/L	265	158	480	281	164	218
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	15.3	20	12.2	13.9	19.8	24
Manganese ug/L	36.2	28.8	48.8	26.9	23.9	34
Nickel ug/L	2.59	3.17	2.11	2.62	3.03	2.91
Nitrate, nitrite mg/L	.478	.119	.195	.596	.152	.304
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L						.0278
pH su	7.98	8.24	7.92		8.18	8.08
Pheophytin ug/L						2.16
Phosphorus mg/L	.0672	.0343	.0556	.0546	.0216	.0346
Potassium mg/L	3.51	2.95	2.81	3.58	3.49	3.7
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	113	139	102	108	138	150
Spcond umhos/cm	1100	1300	904	1040	1250	1360
Strontium ug/L	462	426	333	496	465	487
Sulfate mg/L	49.6	57.9	35.6	55	59.6	63.6
TDS mg/L	612	726	492	560	698	764
TempC deg C	19.9	22	20.5	18	16.1	23.3
TKN mg/L	1.1	.682	.774	.778	<.6	.788
TOC mg/L						3.39
TSS mg/L	<5	<5	9	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G38 SAGAMORE CREEK @ CANAL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-011	0.20	6	41.35140	-81.59230	04110002-05-05

Inorganic Parameters	6/5/18	6/20/18	6/29/18	7/6/18	7/9/18	7/26/18
Alkalinity mg/L					170	171
Aluminum ug/L					<200	<200
Ammonia mg/L					<.05	<.05
Arsenic ug/L					<2	<2
Barium ug/L					44.9	49.4
Cadmium ug/L					<.2	<.2
Calcium mg/L					61.2	68.7
CBOD20 mg/L						
Chloride mg/L					226	238
Chlorophyll ug/L						
Chromium ug/L					<2	<2
COD mg/L					41.1	<20
Copper ug/L					3.83	3.75
DO mg/L					5.55	6.28
DOC mg/L						
DOsat percent					59	70.1
E. coli	37	229	53	11200		
Hardness mg/L					205	231
Iron ug/L					<50	<50
Lead ug/L					<2	<2
Magnesium mg/L					12.8	14.3
Manganese ug/L					<10	<10
Nickel ug/L					<2	2.38
Nitrate, nitrite mg/L					.357	<.1
Nitrite mg/L					<.02	<.02
Ortho-P mg/L						
pH su					7.65	7.92
Pheophytin ug/L						
Phosphorus mg/L					.0328	.03
Potassium mg/L					3.14	3.31
Selenium ug/L					<2	<2
Sodium mg/L					128	130
Spcond umhos/cm					1080	1140
Strontium ug/L					352	389
Sulfate mg/L					47.1	55.4
TDS mg/L					608	630
TempC deg C					18.2	20.6
TKN mg/L					.643	.72
TOC mg/L						
TSS mg/L					<5	<5
Zinc ug/L					<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01G38		SAGAMORE CREEK @ CANAL RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-011	0.20	6	41.35140	-81.59230	04110002-05-05

Inorganic Parameters	8/22/18	9/12/18	9/24/18	9/4/19
Alkalinity mg/L	132	154	177	169
Aluminum ug/L	231	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2	2.04
Barium ug/L	39.8	45.2	47.5	55.7
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	52.3	59.9	66.2	79
CBOD20 mg/L				12
Chloride mg/L	170	199	203	
Chlorophyll ug/L				.491
Chromium ug/L	<2	<2	<2	<2
COD mg/L	29	<20	31.8	<20
Copper ug/L	3.11	3.19	2.55	15.5
DO mg/L	7.73	7.3	7.72	8.69
DOC mg/L				2.37
DOsat percent	86.7	78.4	81.3	97.9
E. coli				
Hardness mg/L	177	204	224	269
Iron ug/L	338	<50	<50	201
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	11.4	13.1	14.4	17.3
Manganese ug/L	15.2	<10	<10	<10
Nickel ug/L	2.02	2.18	2.2	2.38
Nitrate, nitrite mg/L	.156	.376	.111	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02
Ortho-P mg/L				.0287
pH su	7.69		7.9	7.83
Pheophytin ug/L				<1.4
Phosphorus mg/L	.022	.0309	.0209	.0252
Potassium mg/L	2.84	2.98	3.17	3.56
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	102	116	121	113
Spcond umhos/cm	915	1070	1010	1040
Strontium ug/L	298	351	376	442
Sulfate mg/L	38.3	53.8	50.9	54.7
TDS mg/L	494	578	574	580
TempC deg C	20.9	18.7	17.7	21.1
TKN mg/L	.539	.576	.354	.537
TOC mg/L				2.05
TSS mg/L	6.5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G41 TRIB. TO CUYAHOGA R. (14.33) @ STONE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-008	0.10	3	41.38190	-81.62390	04110002-06-02

Inorganic Parameters	6/13/18	6/25/18	7/5/18	7/9/18	7/26/18	8/22/18
Alkalinity mg/L				150	139	110
Aluminum ug/L				<200	<200	609
Ammonia mg/L				<.05	<.05	<.05
Arsenic ug/L				<2	2.25	<2
Barium ug/L				27.8	26.1	24.1
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				59.9	55.2	41.4
Chloride mg/L				287	275	131
Chromium ug/L				<2	<2	<2
COD mg/L				49.1	<20	189
Copper ug/L				4.88	4.83	5.49
DO mg/L				8.36	7.82	8.11
DOsat percent				91.8	88.3	90.8
E. coli	113	117	128			
Hardness mg/L				223	207	155
Iron ug/L				60.2	138	1120
Lead ug/L				<2	<2	2.47
Magnesium mg/L				17.9	16.8	12.5
Manganese ug/L				<10	<10	54.7
Nickel ug/L				2.86	3.09	3.84
Nitrate, nitrite mg/L				.835	.408	.851
Nitrite mg/L				<.02	<.02	<.02
pH su				7.89	7.94	7.88
Phosphorus mg/L				.0363	.0272	.099
Potassium mg/L				4.82	4.48	3.96
Selenium ug/L				<2	<2	<2
Sodium mg/L				155	142	96.3
Spcond umhos/cm				1290	1220	790
Strontium ug/L				256	235	179
Sulfate mg/L				79.7	70.5	53.1
TDS mg/L				740	682	442
TempC deg C				19.7	21.1	20.8
TKN mg/L				.741	.667	.883
TSS mg/L				<5	8.5	57
Zinc ug/L				<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01G41		TRIB. TO CUYAHOGA R. (14.33) @ STONE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-008	0.10	3	41.38190	-81.62390	04110002-06-02

Inorganic Parameters	9/12/18	9/24/18
Alkalinity mg/L	138	154
Aluminum ug/L	<200	<200
Ammonia mg/L	<.05	<.05
Arsenic ug/L	<2	2.11
Barium ug/L	24.5	30.3
Cadmium ug/L	<.2	<.2
Calcium mg/L	52.9	67
Chloride mg/L	210	319
Chromium ug/L	<2	<2
COD mg/L	35.1	<20
Copper ug/L	4.77	3.48
DO mg/L	9.13	9.33
DOsat percent	98.6	95
E. coli		
Hardness mg/L	196	252
Iron ug/L	178	<50
Lead ug/L	<2	<2
Magnesium mg/L	15.6	20.6
Manganese ug/L	<10	<10
Nickel ug/L	3.18	3.11
Nitrate, nitrite mg/L	1.24	.459
Nitrite mg/L	<.02	<.02
pH su		7.92
Phosphorus mg/L	.0497	<.02
Potassium mg/L	4.72	4.96
Selenium ug/L	<2	<2
Sodium mg/L	131	170
Spcond umhos/cm	1120	1360
Strontium ug/L	237	294
Sulfate mg/L	76.1	88.5
TDS mg/L	602	758
TempC deg C	18.3	18.2
TKN mg/L	.819	.601
TSS mg/L	<5	<5
Zinc ug/L	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G43 WEST CREEK AT PARMA @ BROADVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	3.70	5	41.41120	-81.69280	04110002-06-04

Inorganic Parameters	7/9/18	7/26/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	120	108	103	126	118
Aluminum ug/L	<200	<200	219	205	<200
Ammonia mg/L	.0544	<.05	<.05	.126	.109
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	23.9	20.7	18.9	26.7	26.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	47	43.6	37	49.2	53.8
Chloride mg/L	138	110	80.3	142	137
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	34.7	<20	32.7	26.4	25.7
Copper ug/L	4.65	3.93	6.16	5.46	3.08
DO mg/L	8.15	6.57	7.52	7.57	8.38
DOsat percent	98.6	79.8	84.8	84.6	87.6
Hardness mg/L	176	163	136	185	205
Iron ug/L	<50	<50	309	420	<50
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	14.2	13.2	10.7	15	17.2
Manganese ug/L	<10	<10	<10	12.6	<10
Nickel ug/L	2.53	2.05	2.79	3.34	2.61
Nitrate, nitrite mg/L	.635	.367	.854	1.19	.32
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	8.45	8.64	8.14	8.31	
Phosphorus mg/L	.0906	.105	.0743	.0901	.106
Potassium mg/L	3.75	3.4	3.43	4.07	3.99
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	83.1	73.6	65.9	98.8	90.8
Spcond umhos/cm	826	749	656	901	825
Strontium ug/L	227	207	173	242	258
Sulfate mg/L	72.1	65	50.8	83.8	81.7
TDS mg/L	456	422	326	502	470
TempC deg C	24.9	25.1	21.2	20.7	16.9
TKN mg/L	.474	.413	.707	.539	.577
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G44 W. BR. CUYAHOGA R. @ AQUILLA RD. NEAR FISHER RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-036-000	5.60	25	41.48780	-81.17430	04110002-01-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	119	101	106	96.4	100
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.118	.0737	.0737	.0675	.0691
Arsenic ug/L	<2	<2	<2	<2	<2
Barium ug/L	36.8	37.3	41.1	41.1	40.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	37.9	31.2	34.3	32.2	32.2
Chloride mg/L	50.2	45.4	44.5	35.7	39.1
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	24.9	28.1	37.5	22.9
Copper ug/L	<2	<2	<2	<2	<2
DO mg/L	4.87	5.1	3.91	4.74	1.3
DOsat percent	56.4	59.3	45	53.7	14.5
Hardness mg/L	128	105	115	109	110
Iron ug/L	487	716	722	714	812
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	8.14	6.45	7.16	6.95	7.16
Manganese ug/L	162	228	243	213	182
Nickel ug/L	<2	<2	<2	<2	<2
Nitrate, nitrite mg/L	.238	.261	.212	.251	.157
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.46	7.5	7.53	7.6	7.44
Phosphorus mg/L	.0558	.0851	.0726	.0674	.107
Potassium mg/L	<2	<2	<2	3.18	3.67
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	28.7	25.3	25.5	22.6	22.6
Spcond umhos/cm	388	343	356	317	333
Strontium ug/L	93.2	80.2	84.7	85.8	86.2
Sulfate mg/L	10.2	8.83	6.7	7.98	7.04
TDS mg/L	242	202	218	190	184
TempC deg C	22.7	22.8	22.2	21.4	20.7
TKN mg/L	.528	.517	.532	.66	.554
TSS mg/L	5.5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01G46 YELLOW CREEK @ GRANGER RD. (FIRST CROSSING UPST. NORTH FORK)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-021-000	5.30	11	41.16060	-81.64900	04110002-04-02

Inorganic Parameters	6/28/18	7/19/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	141	170	175	161	167	152
Aluminum ug/L	321	<200	<200	297	232	<200
Ammonia mg/L	.0824	.0548	.074	.0513	.0735	.0805
Arsenic ug/L	2.84	3.01	2.98	3.23	2.67	2.51
Barium ug/L	68.6	95.1	101	101	102	86.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	46.4	61.2	64.5	64.2	65.7	56.2
CBOD20 mg/L		10.6				
Chloride mg/L	97.9		117	122	110	93.6
Chlorophyll ug/L		6.17				
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	22	23.2	<20	24.5	25.1	27.1
Copper ug/L	4.61	2.76	2.22	2.47	2.32	2.63
DO mg/L	8.44	7.79	7.94	6.86	7.61	7.84
DOC mg/L	5.56	3.68	3.74	3.54	3.47	4.6
DOsat percent	96.1	92.4	91.6	79.9	87.5	86
Hardness mg/L	156	209	219	219	223	191
Iron ug/L	1040	543	822	1050	917	839
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	9.83	13.7	14.1	14.3	14.2	12.3
Manganese ug/L	113	118	130	173	137	117
Nickel ug/L	2.29	2.25	2.67	2.62	2.59	2.12
Nitrate, nitrite mg/L	.458	.178	.22	.159	.275	.454
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0172	.0142	.0156	.0125	.0166	.0235
pH su	8.13	8.13	8.15	8.13	8.14	8.06
Pheophytin ug/L		7.12				
Phosphorus mg/L	.0953	.0499	.0417	.0447	.0566	.0578
Potassium mg/L	2.64	2.61	2.63	2.66	3.15	3.75
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	54.8	63.2	63.4	64.5	61.3	52.1
Spcond umhos/cm	614	749	809	740	702	618
Strontium ug/L	146	169	170	171	184	167
Sulfate mg/L	21.8	32.2	31.5	31.4	29.9	26
TDS mg/L	372	438	414	434	410	366
TempC deg C	21.7	23.8	22.3	22.9	21.9	19.8
TKN mg/L	.786	.859	.822	.824	.694	.79
TOC mg/L		3.98				
TSS mg/L	19.5	7	6	9	10.5	7
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P09 MILL CREEK @ BROADWAY RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	4.20	13	41.43360	-81.60580	04110002-06-01

Inorganic Parameters	6/13/18	6/25/18	7/5/18	7/9/18	7/26/18	8/7/18
Alkalinity mg/L				157	138	78.4
Aluminum ug/L				<200	<200	1350
Ammonia mg/L				.304	.214	.0844
Arsenic ug/L				2.48	2.85	3.74
Barium ug/L				46.8	39.1	34
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				63.6	53.3	34.6
CBOD20 mg/L						19.7
Chloride mg/L				229	171	
Chromium ug/L				<2	<2	2.38
COD mg/L				29.3	<20	69.1
Copper ug/L				5.06	4.49	6.58
DO mg/L				8.21	7.52	7.13
DOC mg/L				3.99	5.8	5.84
DOsat percent				97.3	88.7	82.2
E. coli	2590	3240	17600			
Hardness mg/L				216	181	109
Iron ug/L				246	242	2700
Lead ug/L				<2	<2	3.33
Magnesium mg/L				13.8	11.5	5.38
Manganese ug/L				36.8	36.6	83
Nickel ug/L				3.09	3	4.7
Nitrate, nitrite mg/L				1.14	.877	.687
Nitrite mg/L				.191	.13	<.02
Ortho-P mg/L				.163	.165	.0456
pH su				8.14	8	7.82
Phosphorus mg/L				.235	.248	.141
Potassium mg/L				5.14	4.61	4.45
Selenium ug/L				<2	<2	<2
Sodium mg/L				140	109	64
Spcond umhos/cm				1160	966	592
Strontium ug/L				362	305	217
Sulfate mg/L				68.2	55.3	49.2
TDS mg/L				618	542	328
TempC deg C				23.7	23.5	22.3
TKN mg/L				.919	.669	.847
TOC mg/L						6.3
TSS mg/L				<5	<5	59
Zinc ug/L				<10	<10	18.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P09		MILL CREEK @ BROADWAY RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-006-000	4.20	13	41.43360	-81.60580	04110002-06-01

Inorganic Parameters	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	104	144	156
Aluminum ug/L	217	<200	<200
Ammonia mg/L	.0805	.167	.197
Arsenic ug/L	2.85	3.06	2.18
Barium ug/L	35.5	53.9	41.9
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	47.1	58.3	62.4
CBOD20 mg/L			
Chloride mg/L	144	239	192
Chromium ug/L	<2	<2	<2
COD mg/L	26.4	34.2	28.6
Copper ug/L	4.39	5.11	2.47
DO mg/L	7.99	7.98	10.2
DOC mg/L	4.25	4.9	2.5
DOsat percent	91.6	87	106
E. coli			
Hardness mg/L	153	194	215
Iron ug/L	372	242	191
Lead ug/L	<2	<2	<2
Magnesium mg/L	8.59	11.7	14.4
Manganese ug/L	34.6	28.1	18.6
Nickel ug/L	2.51	3.39	2.69
Nitrate, nitrite mg/L	.55	.971	1.29
Nitrite mg/L	.0352	.0555	.161
Ortho-P mg/L	.0801	.103	.261
pH su	7.91	7.84	
Phosphorus mg/L	.116	.148	.287
Potassium mg/L	4.74	6.01	4.87
Selenium ug/L	<2	<2	<2
Sodium mg/L	114	152	118
Spcond umhos/cm	856	1210	941
Strontium ug/L	301	398	355
Sulfate mg/L	50.7	81	65.4
TDS mg/L	438	650	556
TempC deg C	22	19.4	16.9
TKN mg/L	.925	.947	.9
TOC mg/L			
TSS mg/L	<5	<5	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	0.19	13	41.41470	-81.64780	04110002-06-04

Inorganic Parameters	6/13/18	6/25/18	7/5/18	7/9/18	7/26/18	7/31/18
Alkalinity mg/L				133	119	123
Aluminum ug/L				<200	<200	<200
Ammonia mg/L				<.05	<.05	<.05
Arsenic ug/L				2.1	2.35	2.16
Barium ug/L				31.9	28.7	28
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				58.6	53.5	54.7
CBOD20 mg/L				10.5	14.5	8.86
Chloride mg/L				290	250	267
Chromium ug/L				<2	<2	<2
COD mg/L				36.1	<20	24.9
Copper ug/L				5.9	4.88	4.56
DO mg/L				9.22	8.49	9.52
DOC mg/L				3.16	3.29	2.67
DOsat percent				115	106	109
E. coli	742	252	2180			
Hardness mg/L				212	197	200
Iron ug/L				91.6	115	73.1
Lead ug/L				<2	<2	<2
Magnesium mg/L				16	15.4	15.4
Manganese ug/L				16.4	18.4	14.5
Nickel ug/L				2.85	2.96	2.66
Nitrate, nitrite mg/L				.508	.17	.222
Nitrite mg/L				<.02	<.02	<.02
Ortho-P mg/L				.0358	.0257	.0244
pH su				8.37	8.65	8.29
Phosphorus mg/L				.0413	.0356	.0297
Potassium mg/L				4.93	4.67	4.45
Selenium ug/L				<2	<2	<2
Sodium mg/L				160	145	140
Spcond umhos/cm				1310	1220	1150
Strontium ug/L				294	273	275
Sulfate mg/L				80.4	75.1	79.4
TDS mg/L				722	660	654
TempC deg C				26.4	26.5	21.8
TKN mg/L				.718	.625	.34
TOC mg/L						
TSS mg/L				<5	<5	<5
Zinc ug/L				<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P10		WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	0.19	13	41.41470	-81.64780	04110002-06-04

Inorganic Parameters	8/7/18	8/8/18	8/13/18	8/22/18	8/30/18	9/5/18
Alkalinity mg/L	88.6	108	127	106	99.4	119
Aluminum ug/L	1240	415	<200	221	203	<200
Ammonia mg/L	.0889	.0551	<.05	<.05	<.05	<.05
Arsenic ug/L	2.72	2.21	2.36	<2	<2	2.21
Barium ug/L	25.2	23.3	33.9	22.7	24.6	31.3
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	36.1	41.8	63.5	42.2	42.7	56
CBOD20 mg/L	16.5		9.26	10.1	11	8.77
Chloride mg/L		150	285	139	142	216
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	39.8	28.8	158	<20	28	<20
Copper ug/L	6.35	6.22	4.66	5.1	3.72	3.19
DO mg/L	8.07	6.25	8.76	8.11	8.56	9.6
DOC mg/L	5.89			3.44		
DOsat percent	93.2	74.7	100	93.1	100	122
E. coli						
Hardness mg/L	128	148	228	149	155	206
Iron ug/L	2290	386	<50	271	347	55
Lead ug/L	2.9	<2	<2	<2	<2	<2
Magnesium mg/L	9.09	10.7	16.9	10.6	11.8	16
Manganese ug/L	42.1	12.4	14.9	15.2	14	12.2
Nickel ug/L	5	3.49	2.93	2.48	2.4	2.36
Nitrate, nitrite mg/L	1.29	.912	.241	.6	.602	.218
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0398	.0378	.019	.0368	.0343	.0246
pH su	8.02	8.03	7.99	8.14	8.03	8.38
Phosphorus mg/L	.114	.048	.0241	.05	.0553	.0322
Potassium mg/L	4.19	3.95	4.96	3.71	4.01	4.9
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	76.1	102	161	105	98.1	134
Spcond umhos/cm		833	1220	779	857	1080
Strontium ug/L	168	197	305	201	208	285
Sulfate mg/L	52.7	61.5	85.9	55.1	58.8	78.3
TDS mg/L	366	466	728	438	482	592
TempC deg C	22.4	24.2	21.7	22.1	23.1	27.6
TKN mg/L	.825	.648	.498	.885	.471	.599
TOC mg/L	5.71					
TSS mg/L	34	<5	<5	<5	5.5	<5
Zinc ug/L	11.7	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P10		WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	0.19	13	41.41470	-81.64780	04110002-06-04

Inorganic Parameters	9/12/18	9/20/18	9/24/18	10/9/18	10/18/18	5/6/19
Alkalinity mg/L	135	119	133	154	132	142
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	.107	<.05	<.05
Arsenic ug/L	2.48	<2	<2	2.79	<2	<2
Barium ug/L	32.9	30.3	32.3	39.7	30.4	33.1
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	59.8	56.6	61.3	68.4	62	69.2
CBOD20 mg/L	11	12.1	8.56	9.72	12.1	9.85
Chloride mg/L	259	212	256	233	263	302
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	41.4	<20	<20	<20	<20	<20
Copper ug/L	4.79	3.33	2.97	4.08	2.97	3.54
DO mg/L	8.13	8.74	11.2	6.91	13.23	12.77
DOC mg/L	3.72	2.4	<2	3.52	<2	
DOsat percent	92.4	98.5	119	80.3	115.1	130
E. coli						
Hardness mg/L	214	207	228	245	229	256
Iron ug/L	98.9	68.9	<50	412	69.7	160
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	15.8	15.9	18.3	18	17.9	20.2
Manganese ug/L	11.6	10.9	11.3	103	17.6	28.9
Nickel ug/L	2.99	2.64	2.79	3.45	2.72	5.2
Nitrate, nitrite mg/L	1.01	.269	.293	.336	.251	.298
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0528		.0282	.0374	.0384	.0325
pH su	8.18	8.29		8	8.14	8.72
Phosphorus mg/L	.0619	.0274	.0236	.0493	.0393	.0376
Potassium mg/L	4.72	4.76	4.84	5.45	4.46	5.03
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	162	141	154	154	153	178
Spcond umhos/cm	1320	1040	1190	1180	1214	1120
Strontium ug/L	303	281	309	333	302	334
Sulfate mg/L	94.2	75	75.2	80.9	82.5	115
TDS mg/L	712	566	636	664	674	742
TempC deg C	21.5	21.6	17.9	22.6	9.1	16.1
TKN mg/L	.662	.48	.406	.834	.524	.846
TOC mg/L						
TSS mg/L	<5	<5	<5	10	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P10		WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	0.19	13	41.41470	-81.64780	04110002-06-04

Inorganic Parameters	5/16/19	5/23/19	5/30/19	6/12/19	6/18/19	6/26/19
Alkalinity mg/L	141	121	114	223	158	147
Aluminum ug/L	<200	287	1640	<200	474	<200
Ammonia mg/L	<.05	.0527	.123	.513	<.05	.055
Arsenic ug/L	<2	<2	2.37	2.09	<2	<2
Barium ug/L	34.1	27.1	33.1	61.8	34.7	34.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	70.1	51.4	45.8	82.4	62.9	61.6
CBOD20 mg/L	12.8	9.75	18.2	13	10.4	9.81
Chloride mg/L	296	157	174	198	204	220
Chromium ug/L	<2	<2	2.59	<2	<2	<2
COD mg/L	25.5	<20	26.5	23.9	22.2	20.6
Copper ug/L	3.73	4.51	6.65	17.1	4.34	3.56
DO mg/L	14.2	12.1	8.57	9.09	8.26	7.59
DOC mg/L	3.46	5.2	5.02	5.6	4.77	4.47
DOsat percent	148	131	88.6	100	86.1	90.2
E. coli						
Hardness mg/L	263	197	172	288	229	220
Iron ug/L	148	386	2680	1180	847	249
Lead ug/L	<2	<2	2.51	<2	<2	<2
Magnesium mg/L	21.4	16.7	13.9	20	17.4	16.1
Manganese ug/L	28.9	30	64	121	34.9	23.1
Nickel ug/L	4.18	3.63	5.29	5.4	5.13	4.09
Nitrate, nitrite mg/L	.219	.5	.849	.983	.913	.855
Nitrite mg/L	<.02	.0335	<.02	.106	<.02	<.02
Ortho-P mg/L	.0401	<.01	.0596	.0638	.0477	.0349
pH su	8.96	8.78	8.01	8.3	8.11	7.99
Phosphorus mg/L	.068	.0917	.0741	.0587	.0656	.0499
Potassium mg/L	5.37	4.69	4.81	7.96	5.42	6.17
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	181	147	118	128	132	137
Spcond umhos/cm	1330	1130	936	1240	113	1150
Strontium ug/L	351	303	257	498	292	293
Sulfate mg/L	102	82	70.9	105	89.5	84.5
TDS mg/L	726	624	522	702	630	646
TempC deg C	17	19	16.8	20.1	17.2	23.9
TKN mg/L	.578	.828	.982	1.31	.637	.437
TOC mg/L						
TSS mg/L	<5	11.5	60	<5	15	<5
Zinc ug/L	<10	<10	19.1	41.1	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P10		WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	0.19	13	41.41470	-81.64780	04110002-06-04

Inorganic Parameters	7/2/19	7/8/19	7/25/19	7/29/19	8/14/19	8/21/19
Alkalinity mg/L	135	132	135	121	112	121
Aluminum ug/L	<200	231	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	2.47	2.38	2.34	2.16	2.28	<2
Barium ug/L	37	37.9	33.9	33.1	32	29.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	64.6	61.9	62	58.4	52.5	51
CBOD20 mg/L	11.1	9.88		8.01	12.6	11.1
Chloride mg/L	261	218	235	255	175	168
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	<20	30.8	<20	<20	<20
Copper ug/L	4.52	5.45	4.04	3.91	3.98	4.13
DO mg/L	9.56	7.46	9.25	11.2	9.17	7.11
DOC mg/L	3.47	3.38	3.52	2.97	3.61	3.53
DOsat percent	113	89.7	108	140	108	82.2
E. coli						
Hardness mg/L	239	224	225	216	194	185
Iron ug/L	113	382	115	71.2	194	162
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	18.8	16.8	17.1	17	15.2	14.1
Manganese ug/L	16	25.3	13.3	13.3	13.3	10.4
Nickel ug/L	4.4	4.48	3.17	3.09	3.26	2.97
Nitrate, nitrite mg/L	.415	.76	.395	<.1	.393	.531
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0298	.0838	.0349	.0225	.0367	.0374
pH su	8.24	7.95	8.17	8.49	8.31	7.91
Phosphorus mg/L	.0462	.0923	.0384	.0338	.0457	.0451
Potassium mg/L	6.49	5.78	5.36	5.51	4.69	4.63
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	155	133	144	148	118	115
Spcond umhos/cm	1210	1180	1150	1190	949	988
Strontium ug/L	322	304	305	305	269	264
Sulfate mg/L	94.8	88.1	79.9	86.4	76.4	70.9
TDS mg/L	728	624	654	650	556	568
TempC deg C	23.6	24.5	22.7	27	23.4	22.4
TKN mg/L	<.6	.563	.614	.489	.482	.438
TOC mg/L						
TSS mg/L	<5	8.5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P10		WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-004	0.19	13	41.41470	-81.64780	04110002-06-04

Inorganic Parameters	8/29/19	9/18/19	9/24/19	10/8/19	10/24/19
Alkalinity mg/L	120	121	115	114	113
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	.0518	<.05	.0504	<.05
Arsenic ug/L	2.32	2.44	2.46	<2	<2
Barium ug/L	30.9	31.6	27.7	27.6	28.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	57.3	59	55.7	53.1	57.3
CBOD20 mg/L	10.7	13.3	12.9	18.1	6.22
Chloride mg/L	200	188	173	158	161
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	<20	<20	<20
Copper ug/L	3.64	3.22	2.78	2.86	2.23
DO mg/L	10	8.59	9.74	10.8	9.71
DOC mg/L	3.09	2.9	2.96	2.56	2.35
DOsat percent	114	94.6	107	106	87.9
E. coli					
Hardness mg/L	210	216	204	200	213
Iron ug/L	78.9	90.1	51.5	88.4	69.6
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	16.3	16.6	15.8	16.4	16.9
Manganese ug/L	15.2	15.1	12.8	15.1	15.1
Nickel ug/L	2.93	3.21	3.31	3.27	3.1
Nitrate, nitrite mg/L	.226	.291	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0373	.0406	.0373	.0476	.0589
pH su	8.31	8.07	8.21	8.3	7.91
Phosphorus mg/L	.0369	.066	.0439	.0655	.0697
Potassium mg/L	4.73	4.91	4.37	4.1	4.15
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	129	125	109	107	110
Spcond umhos/cm	1060	987	1170	911	943
Strontium ug/L	292	293	271	279	286
Sulfate mg/L	80.6	75.8	71.4	80.2	71.6
TDS mg/L	626	578	546	506	524
TempC deg C	21.9	19.9	19.8	14.1	10.8
TKN mg/L	.621	.343	.552	.409	.466
TOC mg/L					
TSS mg/L	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P13 CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-009-000	0.36	18	41.31712	-81.59210	04110002-05-03

Inorganic Parameters	6/5/18	6/20/18	6/29/18	7/6/18	7/9/18	7/19/18
Alkalinity mg/L					175	168
Aluminum ug/L					<200	<200
Ammonia mg/L					<.05	<.1
Arsenic ug/L					<2	<2
Barium ug/L					33.8	43.4
Cadmium ug/L					<.2	<.2
Calcium mg/L					64.6	80.2
CBOD20 mg/L						13
Chloride mg/L					132	
Chlorophyll ug/L						1.23
Chromium ug/L					<2	<2
COD mg/L					66.6	22.3
Copper ug/L					3.66	3.23
DO mg/L					7.62	6.41
DOC mg/L					3.65	2.6
DOsat percent					86.8	73.2
E. coli	389	569	123	8160		
Hardness mg/L					231	291
Iron ug/L					75	79
Lead ug/L					<2	<2
Magnesium mg/L					17	22.1
Manganese ug/L					15.5	30.4
Nickel ug/L					2.5	2.74
Nitrate, nitrite mg/L					.325	<.1
Nitrite mg/L					<.02	<.02
Ortho-P mg/L					.0121	<.01
pH su					7.67	7.6
Pheophytin ug/L						<1.4
Phosphorus mg/L					<.02	<.02
Potassium mg/L					4.08	4.57
Selenium ug/L					<2	<2
Sodium mg/L					85.3	103
Spcond umhos/cm					924	1050
Strontium ug/L					313	390
Sulfate mg/L					92.9	128
TDS mg/L					532	636
TempC deg C					21.7	21.8
TKN mg/L					.75	.4
TOC mg/L						2.64
TSS mg/L					<5	<5
Zinc ug/L					<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P13		CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-009-000	0.36	18	41.31712	-81.59210	04110002-05-03

Inorganic Parameters	7/26/18	8/16/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	153		114	155	168
Aluminum ug/L	<200		562	<200	<200
Ammonia mg/L	<.05		<.05	<.05	<.05
Arsenic ug/L	<2		<2	<2	<2
Barium ug/L	36.3		25.9	31.8	36.7
Cadmium ug/L	<.2		<.2	<.2	<.2
Calcium mg/L	67.8		45	63.2	73.6
CBOD20 mg/L					
Chloride mg/L	158		93.9	131	154
Chlorophyll ug/L					
Chromium ug/L	<2		<2	<2	<2
COD mg/L	<20		27.3	27.1	<20
Copper ug/L	3.55		4.19	3.65	2.81
DO mg/L	6.59		6.37	9.5	9.29
DOC mg/L	2.92		4.85	4.37	2.29
DOsat percent	77		71.3	108	96.9
E. coli		297			
Hardness mg/L	250		161	233	278
Iron ug/L	60.2		661	63.9	<50
Lead ug/L	<2		<2	<2	<2
Magnesium mg/L	19.6		11.8	18.4	23
Manganese ug/L	20.1		23.9	<10	17.7
Nickel ug/L	3.1		2.32	2.93	2.91
Nitrate, nitrite mg/L	<.1		.422	.583	<.1
Nitrite mg/L	<.02		<.02	<.02	<.02
Ortho-P mg/L	<.01		.0107	.0125	<.01
pH su	7.82		7.89		7.87
Pheophytin ug/L					
Phosphorus mg/L	<.02		.0359	.0224	<.02
Potassium mg/L	3.97		3.65	4.19	4.23
Selenium ug/L	<2		<2	<2	<2
Sodium mg/L	95.8		70.5	93.5	106
Spcond umhos/cm	1040		662	948	1000
Strontium ug/L	344		225	340	396
Sulfate mg/L	117		58.5	98	123
TDS mg/L	636		376	530	602
TempC deg C	22.9		20.8	19.6	17.2
TKN mg/L	.455		.67	<.6	.529
TOC mg/L					
TSS mg/L	<5		7.5	<5	<5
Zinc ug/L	<10		<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-000	0.27	20	41.20152	-81.57335	04110002-04-03

Inorganic Parameters	6/13/18	6/25/18	6/28/18	7/5/18	7/19/18	8/2/18
Alkalinity mg/L			157		203	202
Aluminum ug/L			706		<200	<200
Ammonia mg/L			<.05		<.05	<.05
Arsenic ug/L			2.38		<2	<2
Barium ug/L			33.5		43.7	48.1
Cadmium ug/L			<.2		<.2	<.2
Calcium mg/L			48.5		73.1	83.2
CBOD20 mg/L					7.46	
Chloride mg/L			150			212
Chlorophyll ug/L					.406	
Chromium ug/L			<2		<2	<2
COD mg/L			25.2		<20	<20
Copper ug/L			4.74		2.69	2.21
DO mg/L			9.78		7.1	6.84
DOC mg/L			5.8		2.1	2.01
DOsat percent			109		78.9	78
E. coli	448	399		2480		
Hardness mg/L			162		244	277
Iron ug/L			1390		55.6	121
Lead ug/L			<2		<2	<2
Magnesium mg/L			10		14.9	16.8
Manganese ug/L			30		36	49.3
Nickel ug/L			3.38		2.47	2.85
Nitrate, nitrite mg/L			.259		<.1	<.1
Nitrite mg/L			<.02		<.02	<.02
Ortho-P mg/L			<.01		<.01	<.01
pH su			8.13		7.63	7.98
Pheophytin ug/L					<1.4	
Phosphorus mg/L			.043		<.02	<.02
Potassium mg/L			3.13		3.39	3.64
Selenium ug/L			<2		<2	<2
Sodium mg/L			98.9		101	116
Spcond umhos/cm			775		1046	1190
Strontium ug/L			217		273	298
Sulfate mg/L			43.6		74.4	78
TDS mg/L			480		596	618
TempC deg C			20.4		20.4	21.7
TKN mg/L			.809		.557	.62
TOC mg/L					2.22	
TSS mg/L			25.5		<5	<5
Zinc ug/L			47.6		<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P14		FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-020-000	0.27	20	41.20152	-81.57335	04110002-04-03

Inorganic Parameters	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	173	185	200
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05
Arsenic ug/L	<2	<2	<2
Barium ug/L	46.2	44	44.2
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	78.2	73.7	73.7
CBOD20 mg/L			
Chloride mg/L	191	173	132
Chlorophyll ug/L			
Chromium ug/L	<2	<2	<2
COD mg/L	<200	21.8	36.1
Copper ug/L	2.29	2.36	2.08
DO mg/L	6.5	8.17	7.5
DOC mg/L	2.33	2.01	2.62
DOsat percent	74	95	80.9
E. coli			
Hardness mg/L	260	250	249
Iron ug/L	149	195	92.3
Lead ug/L	<2	<2	<2
Magnesium mg/L	15.6	16	15.9
Manganese ug/L	61.3	18.5	32.2
Nickel ug/L	2.64	2.71	2.36
Nitrate, nitrite mg/L	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	<.01	<.01	<.01
pH su	7.97	8.2	8
Pheophytin ug/L			
Phosphorus mg/L	<.02	<.02	<.02
Potassium mg/L	3.56	3.73	3.85
Selenium ug/L	<2	<2	<2
Sodium mg/L	114	110	93.5
Spcond umhos/cm	1110	1060	899
Strontium ug/L	287	316	304
Sulfate mg/L	75.9	73.1	67.1
TDS mg/L	606	596	504
TempC deg C	21.6	22.9	18.9
TKN mg/L	.634	.441	.651
TOC mg/L			
TSS mg/L	<5	<5	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-021-000	0.14	31	41.16353	-81.57627	04110002-04-02

Inorganic Parameters	6/13/18	6/25/18	6/28/18	7/5/18	7/19/18	8/2/18
Alkalinity mg/L			149		197	205
Aluminum ug/L			960		<200	<200
Ammonia mg/L			.0596		<.05	<.05
Arsenic ug/L			3.88		<2	<2
Barium ug/L			54.4		70.4	69.2
Cadmium ug/L			<.2		<.2	<.2
Calcium mg/L			50.8		83.3	82.8
CBOD20 mg/L					10.6	
Chloride mg/L			117			169
Chlorophyll ug/L					3.44	
Chromium ug/L			2.03		<2	<2
COD mg/L			36.7		25.2	<20
Copper ug/L			5.68		3.03	<2
DO mg/L			8.41		9.17	8.35
DOC mg/L			6.73		2.9	2.62
DOsat percent			93.5		106	94.7
E. coli	450	189		1380		
Hardness mg/L			171		285	283
Iron ug/L			2470		111	129
Lead ug/L			<2		<2	<2
Magnesium mg/L			10.8		18.6	18.5
Manganese ug/L			97.4		29.1	35.2
Nickel ug/L			4.2		2.72	2.78
Nitrate, nitrite mg/L			.115		<.1	<.1
Nitrite mg/L			<.02		<.02	<.02
Ortho-P mg/L			.0179		<.01	<.01
pH su			8.09		8.28	8.18
Pheophytin ug/L					<1.4	
Phosphorus mg/L			.12		<.02	<.02
Potassium mg/L			2.97		2.99	2.78
Selenium ug/L			<2		<2	<2
Sodium mg/L			68.3		87	88.3
Spcond umhos/cm			643		964	1050
Strontium ug/L			176		256	250
Sulfate mg/L			31.6		65.7	65.9
TDS mg/L			432		548	566
TempC deg C			20.4		22.4	21.4
TKN mg/L			1.22		.697	.694
TOC mg/L					3.08	
TSS mg/L			59		<5	<5
Zinc ug/L			<10		<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P15		YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-021-000	0.14	31	41.16353	-81.57627	04110002-04-02

Inorganic Parameters	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	190	197	182
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05
Arsenic ug/L	<2	2.21	<2
Barium ug/L	69.7	70.5	64.9
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	84.5	83.1	72
CBOD20 mg/L			
Chloride mg/L	155	156	118
Chlorophyll ug/L			
Chromium ug/L	<2	<2	<2
COD mg/L	<20	20.8	27.7
Copper ug/L	2.2	2.74	2.38
DO mg/L	8.55	8.42	7.86
DOC mg/L	2.62	2.74	3.88
DOsat percent	97.4	95.3	85.1
E. coli			
Hardness mg/L	288	283	245
Iron ug/L	196	361	389
Lead ug/L	<2	<2	<2
Magnesium mg/L	18.6	18.3	15.9
Manganese ug/L	42.7	43.7	43.2
Nickel ug/L	2.68	3.07	2.5
Nitrate, nitrite mg/L	<.1	<.1	.242
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	<.01	<.01	.0153
pH su	8.13	8.22	8.05
Pheophytin ug/L			
Phosphorus mg/L	<.02	<.02	.0282
Potassium mg/L	2.88	3.25	3.79
Selenium ug/L	<2	<2	<2
Sodium mg/L	84.3	86.3	71.1
Spcond umhos/cm	983	999	785
Strontium ug/L	254	264	235
Sulfate mg/L	66	64.9	49.5
TDS mg/L	556	556	448
TempC deg C	21.7	20.9	19.1
TKN mg/L	.749	<.6	.631
TOC mg/L			
TSS mg/L	<5	5	<5
Zinc ug/L	<10	10.4	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P16 YELLOW CREEK DST. GHENT @ YELLOW CREEK RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-021-000	4.08	23	41.15721	-81.63044	04110002-04-02

Inorganic Parameters	6/28/18	7/19/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	144	194	202	184	192	173
Aluminum ug/L	517	<200	<200	<200	<200	<200
Ammonia mg/L	.0633	<.05	<.05	<.05	<.05	<.05
Arsenic ug/L	2.74	2.18	<2	2.16	2.24	2.09
Barium ug/L	56	83.2	84	82.1	80.8	72.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	46.9	80.3	79.5	78.3	76.3	65.7
CBOD20 mg/L		19.4				
Chloride mg/L	103		130	132	127	104
Chlorophyll ug/L		6.44				
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	31.1	30	<20	<20	<20	27.6
Copper ug/L	5.4	2.83	<2	2.72	2.15	2.34
DO mg/L	8.28	10.5	8.99	7.97	8.22	8.39
DOC mg/L	7.21	3.73	2.99	2.99	3.32	5.27
DOsat percent	92.2	122	101	91	91.8	90.4
Hardness mg/L	159	276	271	268	261	225
Iron ug/L	1510	366	325	330	779	527
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	10.1	18.2	17.6	17.6	17.1	14.8
Manganese ug/L	89.1	57	52.6	66.7	66.9	50.2
Nickel ug/L	3.02	2.8	2.73	2.49	2.99	2.38
Nitrate, nitrite mg/L	.341	.11	.141	.225	.185	.276
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0215	<.01	.0112	<.01	.0145	.0204
pH su	7.97	8.31	8.16	8.18	8.24	7.99
Pheophytin ug/L		<1.4				
Phosphorus mg/L	.0922	.0229	<.02	<.02	.0337	.0389
Potassium mg/L	2.9	3.01	2.74	2.78	3.4	3.74
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	59.7	73.8	70.7	69.2	70.6	59.5
Spcond umhos/cm	639	851	917	879	838	709
Strontium ug/L	163	263	250	247	255	221
Sulfate mg/L	25.5	52.1	51.4	52.6	45.8	39.7
TDS mg/L	390	492	488	500	506	412
TempC deg C	20.5	22.8	21	21.8	20.9	18.9
TKN mg/L	1.13	.799	<.6	.796	.598	.645
TOC mg/L		3.92				
TSS mg/L	27.5	5	<5	<5	10.5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P21 N. FK. YELLOW CREEK AT GHENT, UPST. YELLOW CREEK RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-022-000	0.10	10	41.15920	-81.63830	04110002-04-02

Inorganic Parameters	6/28/18	7/19/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	145	238	249	234	208	208
Aluminum ug/L	416	<200	<200	330	<200	<200
Ammonia mg/L	<.05	<.05	<.05	<.05	<.05	.0539
Arsenic ug/L	2.43	<2	<2	2.47	<2	<2
Barium ug/L	39.7	59.7	62.5	69.5	62.8	62.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	44.9	92.5	98.4	103	80.9	79.4
CBOD20 mg/L		13.2				
Chloride mg/L	110		155	156	143	126
Chlorophyll ug/L		2.01				
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	28	<20	<20	<20	<20	31.4
Copper ug/L	3.99	2.26	<2	<2	<2	<2
DO mg/L	6.75	9.65	9.61	9.07	9.25	7.52
DOC mg/L	8.39	2.2	2.08	<2	2.49	3.13
DOsat percent	75.9	108	104	98.5	102	79.8
Hardness mg/L	152	319	340	355	277	275
Iron ug/L	1190	347	619	1800	410	439
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	9.7	21.3	22.8	23.8	18.2	18.7
Manganese ug/L	65.3	53.6	78	257	40.8	52
Nickel ug/L	2.72	2.77	3.37	3.41	2.74	2.34
Nitrate, nitrite mg/L	.166	<.1	<.1	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0275	<.01	<.01	<.01	.0103	.0116
pH su	7.79	8.02	7.89	7.95	8.24	7.8
Pheophytin ug/L		<1.4				
Phosphorus mg/L	.0805	<.02	<.02	.0327	<.02	.0232
Potassium mg/L	2.97	3.01	3.08	3.23	3.72	4.01
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	67.1	80.5	82.8	84	84.3	76.4
Spcond umhos/cm	741	1030	1130	1080	889	887
Strontium ug/L	181	424	429	459	308	337
Sulfate mg/L	25.7	71.3	74.2	74.8	45.7	51.1
TDS mg/L	390	592	602	620	548	492
TempC deg C	21	20.7	19.2	19.2	19.9	18.1
TKN mg/L	1.2	<.6	.558	.755	.382	.508
TOC mg/L		2.38				
TSS mg/L	17.5	<5	11	14.5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P23 SAND RUN @ RIVERVIEW RD N OF AKRON

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-014	0.13	3	41.13870	-81.56162	04110002-04-05

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/10/18
Alkalinity mg/L	218	214	203	191	233
Aluminum ug/L	352	<200	<200	<200	<200
Ammonia mg/L	.074	.0561	<.05	.0558	<.05
Arsenic ug/L	2.28	<2	<2	<2	<2
Barium ug/L	81.7	114	117	95.3	112
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	97.9	114	116	99.8	124
Chloride mg/L	122	137	135	110	133
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	22.2	<20	<20	28
Copper ug/L	4.02	<2	<2	2.12	<2
DO mg/L	8.19	8.49	8.64	7.87	9.77
DOsat percent	89.3	95.9	97.6	87.6	104
Hardness mg/L	316	371	379	321	402
Iron ug/L	1070	435	563	553	234
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	17.3	21.4	21.4	17.6	22.4
Manganese ug/L	75.3	71.4	62.8	60.5	48.4
Nickel ug/L	3.81	3.9	3.7	3.48	3.49
Nitrate, nitrite mg/L	.285	<.1	.205	.295	.203
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	8.03	8.1	8.09	8.2	8.12
Phosphorus mg/L	.025	<.02	<.02	<.02	<.02
Potassium mg/L	3	2.77	2.83	2.95	3.42
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	64.2	65.3	65.3	56.8	68.8
Spcond umhos/cm	993	1080	1090	874	1050
Strontium ug/L	256	276	281	249	317
Sulfate mg/L	99.4	123	123	89.9	123
TDS mg/L	576	606	628	522	630
TempC deg C	19.4	21.2	21.2	20.9	18.2
TKN mg/L	.656	.553	.432	.314	.371
TSS mg/L	20.5	7.5	12	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-024-000	0.18	29	41.13889	-81.54826	04110002-04-01

Inorganic Parameters	6/13/18	6/25/18	6/28/18	7/5/18	7/19/18	8/2/18
Alkalinity mg/L			155		220	227
Aluminum ug/L			903		<200	<200
Ammonia mg/L			.0598		<.05	<.05
Arsenic ug/L			3.97		3.36	3.42
Barium ug/L			46.4		43.5	50.8
Cadmium ug/L			<.2		<.2	<.2
Calcium mg/L			50.7		77	87.1
CBOD20 mg/L					12.7	
Chloride mg/L			142			173
Chlorophyll ug/L					1.01	
Chromium ug/L			<2		<2	<2
COD mg/L			38.6		25.9	21.3
Copper ug/L			3.85		2.79	<2
DO mg/L			8.32		8.01	9.06
DOC mg/L			7.8		6	5.82
DOsat percent			97		94.6	110
E. coli	616	226		228		
Hardness mg/L			172		274	306
Iron ug/L			2680		275	366
Lead ug/L			2.16		<2	<2
Magnesium mg/L			11		19.8	21.4
Manganese ug/L			217		50.5	71.3
Nickel ug/L			3.16		2.71	3.11
Nitrate, nitrite mg/L			<.1		<.1	.145
Nitrite mg/L			<.02		<.02	<.02
Ortho-P mg/L			.0161		<.01	.0162
pH su			8.24		8.3	8.32
Pheophytin ug/L					2.13	
Phosphorus mg/L			.14		<.02	.0284
Potassium mg/L			3.15		2.8	3.12
Selenium ug/L			<2		<2	<2
Sodium mg/L			85.6		88.6	97
Spcond umhos/cm			848		1110	1140
Strontium ug/L			302		305	335
Sulfate mg/L			36.6		88.2	83.9
TDS mg/L			478		678	650
TempC deg C			22.9		23.6	25.2
TKN mg/L			1.49		.816	.887
TOC mg/L					6.53	
TSS mg/L			73		<5	<5
Zinc ug/L			10.2		<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P24		MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-024-000	0.18	29	41.13889	-81.54826	04110002-04-01

Inorganic Parameters	8/15/18	8/16/18	9/19/18	10/10/18
Alkalinity mg/L	191	218	177	167
Aluminum ug/L	<200	<200	<200	<200
Ammonia mg/L	<.05	.138	<.05	<.05
Arsenic ug/L	3.26	3.03	2.94	2.75
Barium ug/L	47.5	55.8	46.4	44.1
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	83.2	96	72.1	61
CBOD20 mg/L		12.3		
Chloride mg/L	155		142	115
Chlorophyll ug/L		.683		
Chromium ug/L	<2	<2	<2	<2
COD mg/L	21.7	30.5	45	43.7
Copper ug/L	<2	2.5	2.45	2.31
DO mg/L	8.39	8.81	8.19	8.5
DOC mg/L	4.99	4.94	7.48	8.61
DOsat percent	102	101	97.6	96.5
E. coli				
Hardness mg/L	295	341	249	208
Iron ug/L	382	402	563	682
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	21.2	24.5	16.6	13.6
Manganese ug/L	81.2	98.6	65.8	68.1
Nickel ug/L	2.51	2.32	2.81	2.6
Nitrate, nitrite mg/L	.105	.162	.282	.201
Nitrite mg/L	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0105	.0101	.0213	.0227
pH su	8.3	8.04	8.2	8.19
Pheophytin ug/L		2.56		
Phosphorus mg/L	<.02	<.02	.0325	.0768
Potassium mg/L	3.06	3.3	3.79	4
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	91	102	89.2	75.3
Spcond umhos/cm	1030	1140	881	762
Strontium ug/L	316	350	335	331
Sulfate mg/L	83	92.8	60	49.6
TDS mg/L	602	652	554	440
TempC deg C	25	21.8	23.9	21.5
TKN mg/L	.64	.657	.75	1.2
TOC mg/L		5.49		
TSS mg/L	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P25 MUD BROOK AT STOW @ SEASONS RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-024-000	8.34	15	41.20299	-81.47295	04110002-04-01

Inorganic Parameters	6/13/18	6/25/18	6/28/18	7/5/18	7/19/18	8/2/18
Alkalinity mg/L			136		200	201
Aluminum ug/L			377		<200	<200
Ammonia mg/L			.093		.123	.133
Arsenic ug/L			3.31		5.28	4.44
Barium ug/L			44		52	58.3
Cadmium ug/L			<.2		<.2	<.2
Calcium mg/L			42.2		62.1	69.5
CBOD20 mg/L					17.6	
Chloride mg/L			138			141
Chlorophyll ug/L					4.54	
Chromium ug/L			<2		<2	<2
COD mg/L			37		27.1	151
Copper ug/L			5.2		2.35	<2
DO mg/L			4.32		3.58	5.41
DOC mg/L			14.2		8.19	6.18
DOsat percent			48.9		39.4	62.4
E. coli	495	624		3650		
Hardness mg/L			141		213	238
Iron ug/L			1530		821	664
Lead ug/L			<2		<2	<2
Magnesium mg/L			8.71		14.1	15.6
Manganese ug/L			137		318	214
Nickel ug/L			2.69		2.41	2.62
Nitrate, nitrite mg/L			.102		.126	<.1
Nitrite mg/L			<.02		<.02	<.02
Ortho-P mg/L			.0623		.0295	.0322
pH su			7.46		7.33	7.59
Pheophytin ug/L					<1.4	
Phosphorus mg/L			.172		.0933	.0833
Potassium mg/L			3.6		2.61	2.85
Selenium ug/L			<2		<2	<2
Sodium mg/L			91.1		79.5	82.5
Spcond umhos/cm			778		907	950
Strontium ug/L			234		252	259
Sulfate mg/L			22		41.9	45.3
TDS mg/L			430		550	540
TempC deg C			21.3		19.9	22.3
TKN mg/L			1.54		1.34	1.08
TOC mg/L					9	
TSS mg/L			16.5		<5	6
Zinc ug/L			<10		<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P25		MUD BROOK AT STOW @ SEASONS RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-024-000	8.34	15	41.20299	-81.47295	04110002-04-01

Inorganic Parameters	8/15/18	8/16/18	9/19/18	10/10/18
Alkalinity mg/L	212	213	157	154
Aluminum ug/L	<200	209	<200	314
Ammonia mg/L	.0971	.0861	.0967	.109
Arsenic ug/L	5.14	5.2	3.74	3.72
Barium ug/L	70.9	68.8	49.5	48.9
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	86.2	81.4	54.9	49.2
CBOD20 mg/L		12		
Chloride mg/L	145		126	102
Chlorophyll ug/L		7.76		
Chromium ug/L	<2	<2	<2	<2
COD mg/L	<20	41.8	53.6	49.7
Copper ug/L	<2	2.92	2.49	2.44
DO mg/L	4.93	3.54	5.45	5.06
DOC mg/L	4.82	4.87	12.5	14.5
DOsat percent	57.6	40.9	62.9	56.7
E. coli				
Hardness mg/L	298	283	183	164
Iron ug/L	674	797	1240	2010
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	20.1	19.4	11	10
Manganese ug/L	212	254	217	429
Nickel ug/L	2.53	2.17	2.82	2.87
Nitrate, nitrite mg/L	.132	.211	<.1	.175
Nitrite mg/L	<.02	<.02	<.02	<.02
Ortho-P mg/L	.027	.0286	.0538	.06
pH su	7.76	7.41	7.74	7.49
Pheophytin ug/L		6.66		
Phosphorus mg/L	.0841	.0762	.106	.124
Potassium mg/L	3.25	3.21	4.28	4.25
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	89.9	84.7	82.3	70.4
Spcond umhos/cm	969	975	745	662
Strontium ug/L	297	276	301	274
Sulfate mg/L	53.6	54.1	29.9	23.5
TDS mg/L	560	546	438	384
TempC deg C	23	22.4	21.9	20.8
TKN mg/L	.856	.929	1.13	1.23
TOC mg/L		5.56		
TSS mg/L	6	5.5	<5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P29 CUYAHOGA R. DST. LAKE ROCKWELL @ RAVENNA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	57.67	208	41.18030	-81.33580	04110002-02-03

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	95.8			110	118	113
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.0727			.125	.0818	.0602
Arsenic ug/L	<2			3.72	3.8	3.43
Barium ug/L	39.1			41.7	42.5	48.2
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	35.1			35.1	35.5	35.3
CBOD20 mg/L						
Chloride mg/L	43.2			46.8	51.8	50
Chlorophyll ug/L						
Chromium ug/L	<2			<2	<2	<2
COD mg/L	22.1			24.9	32.6	<20
Copper ug/L	<2			2.16	4.96	2
DO mg/L	6.33			5.2	5.58	6.3
DOC mg/L						
DOsat percent	75.1			64.3	67.2	76.5
E. coli		10	365		15.3	36.9
Hardness mg/L	119			121	123	123
Iron ug/L	345			357	179	181
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	7.69			8.03	8.38	8.57
Manganese ug/L	201			342	171	210
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	.106			<.1	.122	.109
Nitrite mg/L	<.02			<.02	<.02	<.02
Ortho-P mg/L						
pH su	8.32			8.19	7.99	8.03
Pheophytin ug/L						
Phosphorus mg/L	.0336			.065	.0598	.0628
Potassium mg/L	2.2			2.05	2.05	2.06
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	27.3			28	29.2	28.9
Spcond umhos/cm	350.1			354	419.3	371.6
Strontium ug/L	88.6			92.4	93.5	94.4
Sulfate mg/L	15.7			16.5	18.1	19.2
TDS mg/L	200			218	244	228
TempC deg C	24.4			26	24.7	25.1
TKN mg/L	.617			.666	.68	.606
TOC mg/L						
TSS mg/L	<5			5	7.5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P29		CUYAHOGA R. DST. LAKE ROCKWELL @ RAVENNA RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	57.67	208	41.18030	-81.33580	04110002-02-03

Inorganic Parameters	9/18/17	9/4/19
Alkalinity mg/L	112	103
Aluminum ug/L	<200	<200
Ammonia mg/L	.0745	.113
Arsenic ug/L	2.33	2.93
Barium ug/L	45	56.4
Cadmium ug/L	<.2	<.2
Calcium mg/L	36	90.9
CBOD20 mg/L		11
Chloride mg/L	53.6	
Chlorophyll ug/L		27.4
Chromium ug/L	<2	<2
COD mg/L	24	<20
Copper ug/L	2.79	<2
DO mg/L	7.45	6.23
DOC mg/L		5.25
DOsat percent	84	72.1
E. coli		
Hardness mg/L	127	331
Iron ug/L	153	438
Lead ug/L	<2	<2
Magnesium mg/L	8.93	25.2
Manganese ug/L	117	114
Nickel ug/L	<2	<2
Nitrate, nitrite mg/L	.168	.194
Nitrite mg/L	<.02	<.02
Ortho-P mg/L		<.01
pH su	7.45	7.38
Pheophytin ug/L		8.48
Phosphorus mg/L	.0426	.0397
Potassium mg/L	2.33	3.74
Selenium ug/L	<2	<2
Sodium mg/L	31.7	158
Spcond umhos/cm	382.3	359
Strontium ug/L	96.8	504
Sulfate mg/L	22.3	18.1
TDS mg/L	254	222
TempC deg C	21.3	22.5
TKN mg/L	.674	.768
TOC mg/L		5.93
TSS mg/L	5.5	6
Zinc ug/L	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-002	0.39	6	41.15166	-81.27950	04110002-02-02

Inorganic Parameters	6/19/18	7/19/18	7/24/18	8/14/18	8/16/18	9/17/18
Alkalinity mg/L	101	133	107	119	109	151
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.102	.0622	.0928	<.05	<.05	.0991
Arsenic ug/L	2.56	2.42	2.47	2.42	2.5	2.63
Barium ug/L	25	30.9	29.6	25.2	26.6	44.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	56.4	73	73.7	71.6	77.2	81.3
CBOD20 mg/L		11.9			10.2	
Chloride mg/L	176		227	222		214
Chlorophyll ug/L		.567			1.08	
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	33.5	26.6	30.8	52.5	29.3	31.2
Copper ug/L	6.31	7.09	5.32	6.5	6.35	5.41
DO mg/L	7.91	10.1	6.44	6.16	7.15	5
DOC mg/L	10.3	6.54	7.34	5.98	6.55	5.61
DOsat percent	90.8	116	75.7	64.7	83.1	55.9
Hardness mg/L	189	249	249	242	261	277
Iron ug/L	270	132	204	137	117	250
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	11.6	16.1	15.8	15.3	16.4	18
Manganese ug/L	40.7	49.3	66.9	23.1	21.3	69
Nickel ug/L	3.17	4.11	4.43	3.87	3.36	3.85
Nitrate, nitrite mg/L	9.73	18.2	16.9	17.4	20.7	11.4
Nitrite mg/L	.0906	.0563	.0675	.0544	.0623	.0404
Ortho-P mg/L	.118	.238	.208	.273	.457	.318
pH su	7.52	7.75	7.82	7.81	7.43	7.67
Pheophytin ug/L		4.78			2.41	
Phosphorus mg/L	.19	.285	.302	.312	.555	.378
Potassium mg/L	7.39	14.7	10.6	9.69	14	9.04
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	115	151	133	118	155	142
Spcond umhos/cm	933	1370	1170	1020	1320	1230
Strontium ug/L	169	184	174	162	171	248
Sulfate mg/L	62.6	98.4	87.2	85.5	94.8	74.5
TDS mg/L	588	810	728	732	770	702
TempC deg C	22.1	21.7	22.7	17.6	22.7	20.7
TKN mg/L	1.9	1.43	1.87	1.78	1.07	1.26
TOC mg/L		6.9			7.27	
TSS mg/L	<5	<5	<5	<5	<5	<5
Zinc ug/L	15.2	20.7	16.2	13.1	17.7	12.5

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P32		WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-002	0.39	6	41.15166	-81.27950	04110002-02-02

Inorganic Parameters	10/1/18
Alkalinity mg/L	166
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.22
Barium ug/L	42.6
Cadmium ug/L	<.2
Calcium mg/L	74.3
CBOD20 mg/L	
Chloride mg/L	190
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	28.4
Copper ug/L	3.79
DO mg/L	6.28
DOC mg/L	6.53
DOsat percent	65.9
Hardness mg/L	254
Iron ug/L	271
Lead ug/L	<2
Magnesium mg/L	16.7
Manganese ug/L	65.4
Nickel ug/L	3.36
Nitrate, nitrite mg/L	10.4
Nitrite mg/L	.0342
Ortho-P mg/L	.283
pH su	7.52
Pheophytin ug/L	
Phosphorus mg/L	.306
Potassium mg/L	13.2
Selenium ug/L	<2
Sodium mg/L	134
Spcond umhos/cm	1090
Strontium ug/L	242
Sulfate mg/L	76.6
TDS mg/L	648
TempC deg C	17.5
TKN mg/L	1.56
TOC mg/L	
TSS mg/L	<5
Zinc ug/L	10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-027-000	0.15	13	41.14060	-81.37280	04110002-03-04

Inorganic Parameters	6/14/18	6/26/18	6/28/18	7/5/18	7/10/18	7/19/18
Alkalinity mg/L		187			159	204
Aluminum ug/L		<200			<200	<200
Ammonia mg/L		.0552			.0536	.0608
Arsenic ug/L		2.77			3.15	3.97
Barium ug/L		71.7			63.5	82.1
Cadmium ug/L		<.2			<.2	<.2
Calcium mg/L		67.3			52.1	66.2
CBOD20 mg/L						12.2
Chloride mg/L		94.4			75.4	
Chlorophyll ug/L						1.51
Chromium ug/L		<2			<2	<2
COD mg/L		20.2			28.3	20.1
Copper ug/L		<2			<2	<2
DO mg/L		6.81			6.81	7.76
DOC mg/L		5.02			6.66	4.02
DOsat percent		83.2			83.2	92
E. coli	244	288	285	15500		
Hardness mg/L		234			179	231
Iron ug/L		529			774	892
Lead ug/L		<2			<2	<2
Magnesium mg/L		15.9			11.8	16
Manganese ug/L		131			190	245
Nickel ug/L		<2			2.11	2.14
Nitrate, nitrite mg/L		.121			.184	.122
Nitrite mg/L		<.02			<.02	<.02
Ortho-P mg/L		.0191			.0197	.0115
pH su		7.89			7.89	7.96
Pheophytin ug/L						1.99
Phosphorus mg/L		.036			.0508	.0426
Potassium mg/L		2.28			2.81	2.28
Selenium ug/L		<2			<2	<2
Sodium mg/L		50.8			39.1	42.4
Spcond umhos/cm		572			572	719
Strontium ug/L		172			142	161
Sulfate mg/L		38.2			28.4	39.9
TDS mg/L		418			336	434
TempC deg C		25.5			25.5	23.7
TKN mg/L		.58			.702	.693
TOC mg/L						4.27
TSS mg/L		6			<5	9
Zinc ug/L		<10			<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P34		PLUM CREEK DST. KENT WTP @ CHERRY ST.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-027-000	0.15	13	41.14060	-81.37280	04110002-03-04

Inorganic Parameters	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	161	91.4	109
Aluminum ug/L	246	507	345
Ammonia mg/L	.0567	<.05	<.05
Arsenic ug/L	3.09	2.34	2.42
Barium ug/L	72.5	50.8	48.9
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	56.3	36.7	38.2
CBOD20 mg/L			
Chloride mg/L	79.8	45.6	44.8
Chlorophyll ug/L			
Chromium ug/L	<2	<2	<2
COD mg/L	157	38.6	41.2
Copper ug/L	<2	2.74	2.38
DO mg/L	7.61	8.1	8.08
DOC mg/L	5.57	9.38	11.2
DOsat percent	87.4	85.1	83
E. coli			
Hardness mg/L	194	123	128
Iron ug/L	789	1740	1290
Lead ug/L	<2	<2	<2
Magnesium mg/L	12.9	7.7	8
Manganese ug/L	165	111	91.1
Nickel ug/L	2.41	2.37	2.44
Nitrate, nitrite mg/L	.132	.501	.39
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	.0159	.0336	.0329
pH su	7.89	7.51	7.5
Pheophytin ug/L			
Phosphorus mg/L	.0429	.104	.0868
Potassium mg/L	2.97	4.05	3.98
Selenium ug/L	<2	<2	<2
Sodium mg/L	41.8	28.8	27.5
Spcond umhos/cm	619	397	381
Strontium ug/L	153	118	117
Sulfate mg/L	29.5	31	26.6
TDS mg/L	354	250	244
TempC deg C	22.1	17.7	16.6
TKN mg/L	.65	.683	.798
TOC mg/L			
TSS mg/L	11	17	9.5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P35 BRANDYWINE CREEK NEAR NORTHFIELD CENTER @ ST. RT. 8

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-010-000	4.27	16	41.29451	-81.51236	04110002-04-04

Inorganic Parameters	7/9/18	7/19/18	7/26/18	8/16/18	8/22/18	9/12/18
Alkalinity mg/L	143	160	165	164	116	124
Aluminum ug/L	352	217	277	264	342	1130
Ammonia mg/L	.109	.0723	<.05	.0775	.0516	.087
Arsenic ug/L	3.73	4.38	4.21	3.84	3.68	3.26
Barium ug/L	40.8	46.1	45.6	53.9	39.2	43.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	45.3	54.7	52.9	61.7	40.6	42.8
CBOD20 mg/L		18.4		14.5		
Chloride mg/L	112		198		132	122
Chlorophyll ug/L		7.91		13.3		
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	51.4	41.3	30.5	37	33.6	70.8
Copper ug/L	4.71	4.34	4.99	3.55	2.77	4.67
DO mg/L	5.73	5.97	5.74	4.68	6.19	7.14
DOC mg/L	9.46	8.84	8.42	7.4	7.48	7.56
DOsat percent	65	67.5	67.1	53.9	71.6	77.1
Hardness mg/L	150	185	181	215	139	145
Iron ug/L	2110	2080	1800	1260	1100	2070
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	8.91	11.7	11.9	14.8	9.12	9.14
Manganese ug/L	153	111	109	161	103	91.5
Nickel ug/L	3.02	2.97	3.39	2.5	<2	3.31
Nitrate, nitrite mg/L	.311	.114	.14	.107	<.1	.401
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0386	.0223	.0159	.0137	.0144	.0245
pH su	7.66	7.52	7.9	7.35	7.86	
Pheophytin ug/L		6.72		6.04		
Phosphorus mg/L	.0983	.0757	.0802	.0553	.102	.111
Potassium mg/L	3.73	3.63	3.48	4.47	3.81	4.26
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	71.4	96.2	116	115	91.3	85
Spcond umhos/cm	686	846	1010	999	747	749
Strontium ug/L	538	663	635	718	478	567
Sulfate mg/L	29.2	35	34.4	40.8	25.9	41.6
TDS mg/L	392	488	574	528	406	406
TempC deg C	21.5	21.3	23	22.3	22.5	18.9
TKN mg/L	1.19	.986	1.06	1.01	1.39	.834
TOC mg/L		9.32		8.2		
TSS mg/L	19	7.5	17	6.5	23	45.5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P35		BRANDYWINE CREEK NEAR NORTHFIELD CENTER @ ST. RT. 8			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-010-000	4.27	16	41.29451	-81.51236	04110002-04-04

Inorganic Parameters	9/24/18
Alkalinity mg/L	175
Aluminum ug/L	<200
Ammonia mg/L	.075
Arsenic ug/L	3.42
Barium ug/L	48
Cadmium ug/L	<.2
Calcium mg/L	56.3
CBOD20 mg/L	
Chloride mg/L	155
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	35.9
Copper ug/L	3.6
DO mg/L	5.47
DOC mg/L	6.9
DOsat percent	56.5
Hardness mg/L	194
Iron ug/L	1440
Lead ug/L	<2
Magnesium mg/L	12.8
Manganese ug/L	114
Nickel ug/L	3.09
Nitrate, nitrite mg/L	.159
Nitrite mg/L	<.02
Ortho-P mg/L	.0227
pH su	7.72
Pheophytin ug/L	
Phosphorus mg/L	.0461
Potassium mg/L	4.13
Selenium ug/L	<2
Sodium mg/L	100
Spcond umhos/cm	860
Strontium ug/L	722
Sulfate mg/L	38.6
TDS mg/L	488
TempC deg C	16.8
TKN mg/L	.842
TOC mg/L	
TSS mg/L	6.5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P44 BEAVER MEADOW RUN DST. SOLON WWTP @ OLD COCHRAN RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-010	0.11	6	41.36128	-81.46979	04110002-05-04

Inorganic Parameters	6/28/18	8/2/18	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	132	166	101	123	131	126
Aluminum ug/L	<200	<200	269	<200	<200	<200
Ammonia mg/L	.0706	<.05	.054	<.05	<.05	<.05
Arsenic ug/L	<2	2.17	2	2.15	4.07	2.05
Barium ug/L	25.4	25	23.7	27.5	29.8	29
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	45.9	63.6	38.6	59.3	72.2	65.5
CBOD20 mg/L			15.1			
Chloride mg/L	225	282		266	290	241
Chlorophyll ug/L			7.16			
Chromium ug/L	<2	<2	<2	<2	2.08	<2
COD mg/L	20.7	39.2	35.9	27.1	37.1	71.8
Copper ug/L	7.76	6.31	5.97	5.54	4.83	4.08
DO mg/L	7.28	9.82	7.81	7.33	10.4	10.6
DOC mg/L	6.81	7.1	6.38	5.92	5.5	5.38
DOsat percent	80.8	115	91.1	85.3	120	117
Hardness mg/L	154	217	128	210	244	228
Iron ug/L	474	208	599	189	114	162
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	9.64	14.2	7.71	15.1	15.5	15.5
Manganese ug/L	31.2	<10	29.1	10.7	<10	<10
Nickel ug/L	4.05	9.38	3.57	9.71	6.12	6.27
Nitrate, nitrite mg/L	2.65	8.71	2.47	8.92	9.11	12
Nitrite mg/L	.0226	.0374	<.02	.0295	.0221	<.02
Ortho-P mg/L	.161	.228	.075	.223	.25	.279
pH su	7.9	8.33	7.84	8	8.28	8.06
Pheophytin ug/L			<1.4			
Phosphorus mg/L	.224	.294	.131	.287	.282	.294
Potassium mg/L	6.75	13.8	5.3	13	11	12.4
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	133	190	96.7	176	180	149
Spcond umhos/cm	1020	1410	770	1330	1390	1180
Strontium ug/L	296	383	292	387	453	409
Sulfate mg/L	57.4	101	45.6	102	90.9	72.1
TDS mg/L	592	790	430	766	802	696
TempC deg C	20.3	22.9	22.9	22.7	21.9	19.9
TKN mg/L	1.16	1.79	.945	1.67	<.6	1.4
TOC mg/L			7.07			
TSS mg/L	<5	<5	10	<5	<5	<5
Zinc ug/L	34.4	70.7	15.6	36.9	36.4	29.8

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P44		BEAVER MEADOW RUN DST. SOLON WWTP @ OLD COCHRAN RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-010	0.11	6	41.36128	-81.46979	04110002-05-04

Inorganic Parameters	9/4/19
Alkalinity mg/L	107
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.08
Barium ug/L	20.6
Cadmium ug/L	<.2
Calcium mg/L	58.7
CBOD20 mg/L	12.3
Chloride mg/L	
Chlorophyll ug/L	2.13
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	7.45
DO mg/L	9.99
DOC mg/L	5.92
DOsat percent	120
Hardness mg/L	207
Iron ug/L	110
Lead ug/L	<2
Magnesium mg/L	14.7
Manganese ug/L	<10
Nickel ug/L	6.84
Nitrate, nitrite mg/L	10.3
Nitrite mg/L	<.02
Ortho-P mg/L	.197
pH su	8.57
Pheophytin ug/L	<1.4
Phosphorus mg/L	.225
Potassium mg/L	13.1
Selenium ug/L	<2
Sodium mg/L	150
Spcond umhos/cm	1170
Strontium ug/L	346
Sulfate mg/L	78
TDS mg/L	664
TempC deg C	24.3
TKN mg/L	1.49
TOC mg/L	6.14
TSS mg/L	<5
Zinc ug/L	40.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P51 CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	90.86	19	41.50183	-81.09629	04110002-01-03

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	67.4			77.6	81.6	85.4
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.207			.196	<.05	.0887
Arsenic ug/L	2.18			4.24	2.49	3.31
Barium ug/L	24.4			44.4	25.5	46.8
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	23.5			23.5	23.9	24.5
CBOD20 mg/L						
Chloride mg/L	21			22	22.5	23.2
Chlorophyll ug/L						
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			22.7	<20	22.6
Copper ug/L	<2			<2	<2	<2
DO mg/L	6.88			1.86	6.23	3.31
DOC mg/L						
DOsat percent	76.6			22.3	72.9	39.4
E. coli		28	115		177.3	15.3
Hardness mg/L	79.3			79.2	80.7	83.1
Iron ug/L	674			526	484	430
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	4.98			4.97	5.11	5.32
Manganese ug/L	346			824	235	376
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	<.1			<.1	<.1	<.2
Nitrite mg/L	<.02			<.02	<.02	<.02
Ortho-P mg/L						
pH su	7.49			7.34	7.52	7.45
Pheophytin ug/L						
Phosphorus mg/L	.035			.0562	.0429	.0673
Potassium mg/L	2.09			2.21	2.06	2.15
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	13.6			12.9	12.8	13.4
Spcond umhos/cm	214.3			214	241.9	228.6
Strontium ug/L	61.2			62.5	63.5	67.5
Sulfate mg/L	7.35			7.32	8.02	7.43
TDS mg/L	130			132	138	138
TempC deg C	20.3			23.2	23.2	24
TKN mg/L	.773			.682	.538	.687
TOC mg/L						
TSS mg/L	5.5			5	7.5	5.5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P51		CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	90.86	19	41.50183	-81.09629	04110002-01-03

Inorganic Parameters	9/18/17	6/19/18	7/24/18	8/14/18	8/16/18	9/17/18
Alkalinity mg/L	84	71.2	156	193	80.7	158
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.063	.0649	.486	1.35	.455	.994
Arsenic ug/L	2.25	2.34	5.27	6.09	4.56	9.56
Barium ug/L	29.6	19.7	122	120	115	134
Cadmium ug/L	<.2	<.2	<.2	<1	<.2	<.2
Calcium mg/L	25.1	22.2	50.8	63.3	26.3	55.2
CBOD20 mg/L					28.1	
Chloride mg/L	25	29	222	534		240
Chlorophyll ug/L					64.7	
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	22.1	30.2	27	82.7	37.8	85.7
Copper ug/L	<2	<2	2.96	4.73	<2	<2
DO mg/L	4.15	6.52	.38	.41	1.36	.11
DOC mg/L			11.4	13.8	7.45	14.4
DOsat percent	45.6	78.8	4.3	4.6	16.8	1.2
E. coli						
Hardness mg/L	85.5	74.1	159	197	88.4	177
Iron ug/L	356	379	11300	2640	720	24200
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	5.5	4.52	7.89	9.6	5.54	9.53
Manganese ug/L	190	207	4860	4070	452	3970
Nickel ug/L	<2	<2	<2	2.01	<2	<2
Nitrate, nitrite mg/L	.137	<.1	<.1	<.1	<.1	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L		<.01	.0164	<.01	.0107	.0536
pH su	7.64	7.67	6.95	7.23	7.08	7.29
Pheophytin ug/L					25.1	
Phosphorus mg/L	.0533	.0458	.126	.0977	.165	.251
Potassium mg/L	2.22	<2	<2	3.43	2.7	4.33
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	14.3	16.4	134	310	17.1	159
Spcond umhos/cm	237.4	234	1300	1960	283	1170
Strontium ug/L	68.7	56.6	174	241	68.2	185
Sulfate mg/L	8.88	8.5	11.3	7.28	9.2	<5
TDS mg/L	154	146	540	1060	166	574
TempC deg C	20.1	24.9	20.9	20.2	26	19.7
TKN mg/L	.698	.464	1.74	3.37	2.21	3.01
TOC mg/L					9.3	
TSS mg/L	5.5	7.5	25	8.5	13	55
Zinc ug/L	10.1	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01P51		CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	90.86	19	41.50183	-81.09629	04110002-01-03

Inorganic Parameters	10/10/18
Alkalinity mg/L	153
Aluminum ug/L	<200
Ammonia mg/L	.709
Arsenic ug/L	5.41
Barium ug/L	93
Cadmium ug/L	<.2
Calcium mg/L	42.8
CBOD20 mg/L	
Chloride mg/L	167
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	57.6
Copper ug/L	<2
DO mg/L	.39
DOC mg/L	12.2
DOsat percent	3.8
E. coli	
Hardness mg/L	138
Iron ug/L	10900
Lead ug/L	<2
Magnesium mg/L	7.45
Manganese ug/L	3310
Nickel ug/L	<2
Nitrate, nitrite mg/L	<.1
Nitrite mg/L	<.02
Ortho-P mg/L	.0226
pH su	7.28
Pheophytin ug/L	
Phosphorus mg/L	.146
Potassium mg/L	3.36
Selenium ug/L	<2
Sodium mg/L	117
Spcond umhos/cm	1000
Strontium ug/L	145
Sulfate mg/L	<5
TDS mg/L	440
TempC deg C	19
TKN mg/L	2.14
TOC mg/L	
TSS mg/L	20
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01P53 TRIB. TO CUYAHOGA R. (65.19) E OF STREETSBORO, NEAR COIT RD

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-023	0.30	3	41.25310	-81.27060	04110002-02-03

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	141	186	186	154	176
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.14	.0638	<.05	.0518	.0566
Arsenic ug/L	3.62	<2	<2	2.07	2.25
Barium ug/L	22.5	31.9	35.9	33.2	28.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	50.9	75.4	81.9	57	59.7
Chloride mg/L	57	82.1	93	66.3	76.2
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	32.6	<20	34.6	39.7	20.7
Copper ug/L	<2	<2	<2	2.29	<2
DO mg/L	4.21	4.86	5.47	6.57	6.03
DOsat percent	48.8	54.4	58.9	71.4	63.8
Hardness mg/L	170	257	276	189	198
Iron ug/L	930	213	167	366	375
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	10.5	16.6	17.3	11.3	11.9
Manganese ug/L	71.9	60.8	26.3	16.6	37.9
Nickel ug/L	2.19	2.93	2.48	2.56	2.57
Nitrate, nitrite mg/L	.172	.135	.186	<.1	.493
Nitrite mg/L	.0641	<.02	<.02	<.02	<.02
pH su	7.42	7.72	7.63	7.65	7.66
Phosphorus mg/L	.161	.0523	.0341	.109	.0942
Potassium mg/L	3.86	2.31	3.27	4.93	4.88
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	37.8	51.5	58.9	48.9	51.2
Spcond umhos/cm	496	659	792	581	672
Strontium ug/L	104	140	147	126	129
Sulfate mg/L	33.6	69.2	88.2	49.6	51.9
TDS mg/L	304	434	518	352	384
TempC deg C	22.6	20.8	18.9	15.3	17.9
TKN mg/L	.697	.574	.549	.884	.892
TSS mg/L	<5	<5	<5	<5	5
Zinc ug/L	<10	<10	<10	<10	11.2

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	7.00	56	41.13940	-81.27080	04110002-02-02

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	199	202	204	147	171
Aluminum ug/L	629	259	244	335	224
Ammonia mg/L	.0915	.0555	<.05	.083	<.05
Arsenic ug/L	4.87	4.75	5.34	5.03	3.93
Barium ug/L	83.8	82	77.9	83.6	73.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	72.5	70.3	72.1	60.9	62.7
Chloride mg/L	49.8	43.2	45.6	49.7	49.8
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	32.5	25.6	39.5	56.4
Copper ug/L	<2	<2	<2	2.45	<2
DO mg/L	5.53	6.7	7.39	6.39	7.47
DOsat percent	66.5	79.2	85.1	72.2	76
Hardness mg/L	251	245	253	210	217
Iron ug/L	1420	669	419	1350	1270
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	17	16.9	17.8	14.1	14.6
Manganese ug/L	288	254	235	347	245
Nickel ug/L	3	2.68	2.54	3.04	2.8
Nitrate, nitrite mg/L	.518	.284	.13	.526	.485
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.76	7.89	8.08	7.8	7.59
Phosphorus mg/L	.116	.0958	.0641	.128	.102
Potassium mg/L	3.21	3	2.9	5.26	4.9
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	24.2	20.5	20.2	27.1	27
Spcond umhos/cm	593	568	644	521	525
Strontium ug/L	156	152	154	146	150
Sulfate mg/L	53.9	48.8	53.6	47.9	48.4
TDS mg/L	404	360	402	360	362
TempC deg C	24.6	23.6	22.3	21.3	16.1
TKN mg/L	.712	.689	.497	1.21	.994
TSS mg/L	26.5	9.5	5	14	5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S09 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	9.70	744	41.42690	-81.66580	04110002-06-04

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	152			147	148	144
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.0871			.0657	.0511	.0961
Arsenic ug/L	2.31			2.5	2.22	2.51
Barium ug/L	47.3			41.2	40.2	39
BOD 5-Day mg/L	3.26			2.88	2.09	2.42
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	69.1			62.1	65.1	62
CBOD20 mg/L						
Chloride mg/L	151			132	157	151
Chlorophyll ug/L	9.5			11.5	7.02	7
Chromium ug/L	<2			<2	<2	<2
COD mg/L	26.3			<20	<20	<20
Copper ug/L	4.1			3.56	3.16	3.87
DO mg/L				6.89	12.25	12.84
DOC mg/L	6.34			6.69	5.49	6.64
DOsat percent				83.9	139.5	153.2
E. coli		2450	145		137	186
Hardness mg/L	241			217	227	219
Iron ug/L	509			434	249	351
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	16.5			15.1	15.7	15.6
Manganese ug/L	57			47.3	44.5	40.9
Nickel ug/L	4			3.42	4.62	4.23
Nitrate, nitrite mg/L	6.07			4.62	6.34	7.48
Nitrite mg/L	.135			.023	<.02	.087
Ortho-P mg/L	.086			.0859	.201	.202
pH su	7.83			7.98	7.87	7.83
Pheophytin ug/L	2.62			4.27	5.1	5.02
Phosphorus mg/L	.131			.14	.225	.405
Potassium mg/L	6.61			6.5	6.54	7.58
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	101			93.3	97.2	97.9
Spcond umhos/cm	883			835	1188	894
Strontium ug/L	251			229	244	239
Sulfate mg/L	69.2			58.7	67.4	70.1
TDS mg/L	570			510	550	552
TempC deg C	24			25.2	21.7	24.32
TKN mg/L	.393			2.62	.668	.29
TOC mg/L	5.99			6.21	5.47	5.83
TSS mg/L	12			15	<5	10
Zinc ug/L	13.1			10.9	<10	14.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S09		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	9.70	744	41.42690	-81.66580	04110002-06-04

Inorganic Parameters	9/18/17	7/9/18	7/26/18	8/8/18	8/22/18	8/30/18
Alkalinity mg/L	147	150	137	124	101	128
Aluminum ug/L	<200	382	<200	662	815	934
Ammonia mg/L	<.05	.0615	<.05	.0973	.0774	.0925
Arsenic ug/L	2.47	3.02	2.34	2.49	2.51	3.15
Barium ug/L	36.6	38.7	39.5	39.5	36.3	46.8
BOD 5-Day mg/L	2.15					
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	65.8	52.2	58.5	54.6	45.3	56
CBOD20 mg/L		10.6	18.2	12.7	10.6	12.4
Chloride mg/L	166	131	142	138	104	127
Chlorophyll ug/L	8.51	6.39	13.7	11	5.9	12.3
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	32.2	31	35.5	26.3	47.8
Copper ug/L	3.18	5.59	4.6	5.55	5.4	5.14
DO mg/L		8.23	7.36	7.57	7.03	6.88
DOC mg/L	5.47	5.82	5.29		3.7	
DOsat percent		96.1	88.6	89.3	81.3	82.5
E. coli						
Hardness mg/L	232	183	201	186	154	195
Iron ug/L	260	1080	315	962	1970	2480
Lead ug/L	<2	<2	<2	<2	2.73	2.97
Magnesium mg/L	16.5	12.9	13.5	12	10	13.3
Manganese ug/L	37.6	73.1	50	55.5	104	115
Nickel ug/L	5.27	4.13	4.41	4.28	4.08	4.51
Nitrate, nitrite mg/L	8.58	2.98	4.68	3.35	2.44	3.8
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	.0251
Ortho-P mg/L	.18	.065	.026	.0521	.0624	.0965
pH su	7.81	7.63	7.83	7.63	7.74	7.98
Pheophytin ug/L	3.39	3.11	3.31	3.92	4.76	6.6
Phosphorus mg/L	.227	.123	.162	.163	.157	.21
Potassium mg/L	9.04	4.93	6.45	5.98	4.79	6.33
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	110	82.1	96.6	92.5	74.3	85.8
Spcond umhos/cm	1014	841	932	850	818	800
Strontium ug/L	241	233	228	241	201	217
Sulfate mg/L	80.6	52	60.7	58.1	44	58
TDS mg/L	610	472	538	486	382	514
TempC deg C	21.49	23	24.6	23.5	22.5	24.4
TKN mg/L	.96	.977	1.1	1.1	1.23	1.04
TOC mg/L	5.25					
TSS mg/L	8.5	31.5	8.5	23	69.5	71
Zinc ug/L	10.2	10.1	<10	11.3	18.4	21

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S09		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	9.70	744	41.42690	-81.66580	04110002-06-04

Inorganic Parameters	9/12/18	9/24/18	10/9/18	5/16/19	5/30/19	6/12/19
Alkalinity mg/L	116	148	126	150	142	132
Aluminum ug/L	1780	261	548	211	648	747
Ammonia mg/L	.0649	.0606	.0503	.0883	.134	.112
Arsenic ug/L	4.25	2.68	2.87	2	2.28	2.77
Barium ug/L	50.3	46.9	44.5	41.5	39.5	39.9
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	44.7	65.3	51.1	60.3	51.7	48.6
CBOD20 mg/L	12.2	11.8	18.5	13.2	13.1	11.2
Chloride mg/L	96	140	98.8	136	132	103
Chlorophyll ug/L	11.4	2.73	7.11	4.16	5.88	3.31
Chromium ug/L	2.36	<2	<2	<2	<2	<2
COD mg/L	41.2	25	34.3	30.3	<20	24.4
Copper ug/L	6.76	3.67	4.02	34.3	4.72	4.74
DO mg/L	8.34	8.51	9.04	9.04	7.67	8.17
DOC mg/L	6.5	5.37	6.3	5.54	3.64	6.56
DOsat percent	90.7	91.7	102	91	83.6	88.2
E. coli						
Hardness mg/L	154	227	176	209	185	167
Iron ug/L	3840	805	1600	730	1330	2270
Lead ug/L	5.74	<2	2.12	<2	2.16	2.89
Magnesium mg/L	10.4	15.6	11.8	14.1	13.5	11.2
Manganese ug/L	194	63.1	82.4	62.7	84.6	122
Nickel ug/L	5.12	3.99	3.78	3.96	4.74	4.45
Nitrate, nitrite mg/L	1.72	4.85	2.8	3.5	3.19	1.97
Nitrite mg/L	<.02	<.02	<.02	.0268	.0321	<.02
Ortho-P mg/L	.0891	.0862	.0927	.0635	.0485	.0318
pH su	7.76		8.01	7.76	7.68	7.68
Pheophytin ug/L	5.63	2.87	3.27	3.1	5.02	5.12
Phosphorus mg/L	.241	.112	.153	.135	.132	.137
Potassium mg/L	4.75	7.18	5.56	4.76	5.3	3.9
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	62.4	97.4	67.9	87.2	88	65.2
Spcond umhos/cm	783	840	679	815	870	678
Strontium ug/L	210	264	216	237	252	202
Sulfate mg/L	41.7	60.1	42.1	56.7	52.8	41.5
TDS mg/L	366	504	382	466	466	384
TempC deg C	19.3	18.9	21.3	15.6	19.5	19
TKN mg/L	1.03	.607	1.01	.786	1.28	.916
TOC mg/L						
TSS mg/L	111	15	40	13.5	40	62.5
Zinc ug/L	22	10.3	13.4	10.3	14.3	16.4

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S09		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	9.70	744	41.42690	-81.66580	04110002-06-04

Inorganic Parameters	6/26/19	7/8/19	7/25/19	8/14/19	8/29/19	9/18/19
Alkalinity mg/L	116	131	136	139	142	134
Aluminum ug/L	1510	852	356	331	<200	273
Ammonia mg/L	.06	.154	<.05	.0539	.0578	.0715
Arsenic ug/L	3.62	3.21	3.22	2.81	2.65	3.17
Barium ug/L	45.6	48.6	39.6	46.1	48	47.5
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	43.8	53.3	51.1	64.5	63.6	66.6
CBOD20 mg/L	9.77	10.5		14.6	8.72	12.9
Chloride mg/L	73.1	105	98.4	128	130	131
Chlorophyll ug/L	4.22	3.32	9.87	3.56	3.47	3.09
Chromium ug/L	2.17	<2	<2	<2	<2	<2
COD mg/L	32.9	21.2	24.2	30.4	<20	<20
Copper ug/L	5.28	5.87	4.11	4.15	3.51	4.06
DO mg/L	7.45	6.76	7.44	6.7	7.69	7.54
DOC mg/L	6.87	5.48	6.42	5.53	5.53	5.3
DOsat percent	85.3	80	85.6	76.6	87.6	84.4
E. coli						
Hardness mg/L	150	185	175	223	221	233
Iron ug/L	4520	2350	1200	936	449	693
Lead ug/L	5.28	2.72	<2	<2	<2	<2
Magnesium mg/L	9.86	12.5	11.6	15.1	15	16.1
Manganese ug/L	156	104	113	69.7	58.4	69.6
Nickel ug/L	4.95	5.46	3.47	4.27	4.36	4.62
Nitrate, nitrite mg/L	1.4	3.47	2.43	4.11	5.49	5.39
Nitrite mg/L	<.02	.0864	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0391	.0437	.0731	.0829	.0553	.0845
pH su	7.63	7.68	7.77	7.78	7.82	7.79
Pheophytin ug/L	4.4	1.75	3.24	3.63	2.88	3.69
Phosphorus mg/L	.164	.13	.176	.132	.0683	.905
Potassium mg/L	4	4.65	4.4	5.51	6.59	7.26
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	48.5	68.7	63.5	88.8	93.1	93.6
Spcond umhos/cm	539	720	726	818	885	862
Strontium ug/L	175	223	195	254	238	251
Sulfate mg/L	31.8	49	41.3	59.5	62	64.5
TDS mg/L	316	418	404	506	548	514
TempC deg C	22	23.7	22.2	21.9	21.7	20.8
TKN mg/L	.751	1.01	1.14	1.12	.859	.906
TOC mg/L						
TSS mg/L	135	63.5	39	21.5	8.5	16.5
Zinc ug/L	26.8	18.3	12.3	13.4	12.8	14.9

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S09		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	9.70	744	41.42690	-81.66580	04110002-06-04

Inorganic Parameters	10/24/19
Alkalinity mg/L	144
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.08
Barium ug/L	44.7
BOD 5-Day mg/L	
Cadmium ug/L	<.2
Calcium mg/L	72.6
CBOD20 mg/L	6.87
Chloride mg/L	141
Chlorophyll ug/L	4.38
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	2.61
DO mg/L	9.03
DOC mg/L	4.92
DOsat percent	87.7
E. coli	
Hardness mg/L	254
Iron ug/L	258
Lead ug/L	<2
Magnesium mg/L	17.7
Manganese ug/L	40.2
Nickel ug/L	4.8
Nitrate, nitrite mg/L	5.24
Nitrite mg/L	<.02
Ortho-P mg/L	.0235
pH su	7.89
Pheophytin ug/L	3.31
Phosphorus mg/L	.0697
Potassium mg/L	7.88
Selenium ug/L	<2
Sodium mg/L	107
Spcond umhos/cm	943
Strontium ug/L	263
Sulfate mg/L	68.2
TDS mg/L	536
TempC deg C	13.9
TKN mg/L	1.02
TOC mg/L	
TSS mg/L	<5
Zinc ug/L	12.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	11.33	730	41.41780	-81.64170	04110002-06-04

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	160			152	158	113
Aluminum ug/L	<200			<200	<200	1980
Ammonia mg/L	<.05			<.05	<.05	.116
Arsenic ug/L	<2			2.39	2.24	3.34
Barium ug/L	53.4			45.4	46	65.8
BOD 5-Day mg/L	2.84			3.07	2.17	8.42
Cadmium ug/L	<.2			<.2	<.2	.268
Calcium mg/L	71.3			62.7	67.3	71.5
Chloride mg/L	145			121	159	253
Chlorophyll ug/L	11.6			13.4	9.61	7.08
Chromium ug/L	<2			<2	<2	9.39
COD mg/L	<20			<20	<20	67.1
Copper ug/L	3.67			3.12	3.16	18.7
DO mg/L	8.48			7.33	13.91	7.15
DOC mg/L	6.33			7.04	5.62	9.37
DOsat percent	103.5			90.5	161	87
E. coli		6870	137		210	298
Hardness mg/L	246			217	233	239
Iron ug/L	447			363	367	4290
Lead ug/L	<2			<2	<2	28.5
Magnesium mg/L	16.5			14.6	15.7	14.6
Manganese ug/L	60.8			45.1	54.7	213
Nickel ug/L	2.92			2.53	2.97	8.36
Nitrate, nitrite mg/L	3.53			2.39	3.51	3.6
Nitrite mg/L	.0806			<.02	.0231	.0568
Ortho-P mg/L	<.01			.0165	.0368	.131
pH su	8.14			8.16	8.23	8.25
Pheophytin ug/L	2.98			3.86	5.34	5.89
Phosphorus mg/L	.0315			.06	.0702	.34
Potassium mg/L	5.14			4.82	5.3	5.46
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	94.9			81.5	96.7	123
Spcond umhos/cm	854			750	1183	884
Strontium ug/L	249			220	241	263
Sulfate mg/L	64.6			50.3	66.2	73.8
TDS mg/L	550			466	542	642
TempC deg C	26.6			26	22.54	24.62
TKN mg/L	.486			.769	.669	1.51
TOC mg/L	5.98			6.34	5.44	8.14
TSS mg/L	9.5			12	8.5	168
Zinc ug/L	10.9			17.7	<10	120

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S10		CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	11.33	730	41.41780	-81.64170	04110002-06-04

Inorganic Parameters	9/18/17
Alkalinity mg/L	164
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.36
Barium ug/L	46.6
BOD 5-Day mg/L	<2
Cadmium ug/L	<.2
Calcium mg/L	73.9
Chloride mg/L	179
Chlorophyll ug/L	6.65
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	3.01
DO mg/L	
DOC mg/L	5.53
DOsat percent	
E. coli	
Hardness mg/L	259
Iron ug/L	281
Lead ug/L	<2
Magnesium mg/L	18.1
Manganese ug/L	41.8
Nickel ug/L	3.7
Nitrate, nitrite mg/L	6.43
Nitrite mg/L	.0235
Ortho-P mg/L	.0932
pH su	8.03
Pheophytin ug/L	3.75
Phosphorus mg/L	.122
Potassium mg/L	7.53
Selenium ug/L	<2
Sodium mg/L	114
Spcond umhos/cm	1082
Strontium ug/L	251
Sulfate mg/L	76.3
TDS mg/L	634
TempC deg C	21.65
TKN mg/L	.836
TOC mg/L	5.24
TSS mg/L	8
Zinc ug/L	13.3

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S11 CUYAHOGA R. @ HILLSIDE RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	15.61	698	41.37326	-81.61479	04110002-06-02

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	159			159	160	156
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	<.05			<.05	<.05	<.05
Arsenic ug/L	<2			2.33	2.1	2.5
Barium ug/L	53.8			46	46.5	41.8
BOD 5-Day mg/L	2.72			2.56	2.19	2.26
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	72.1			62.8	68.2	62.2
Chloride mg/L	146			124	154	132
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			<20	<20	<20
Copper ug/L	3.28			2.95	2.83	3.08
DO mg/L	8.2			8.83	11.56	3.46
DOC mg/L	6.52			7.08	5.84	6.24
DOsat percent	99.1			109.6	133.8	41.9
E. coli		276	119		201	155
Hardness mg/L	248			217	236	218
Iron ug/L	352			275	291	444
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	16.6			14.7	15.9	15.1
Manganese ug/L	55.7			40.7	58.2	51.9
Nickel ug/L	2.78			2.46	2.82	3.1
Nitrate, nitrite mg/L	3.9			2.55	3.51	2.63
Nitrite mg/L	.0297			<.02	.0221	.0247
Ortho-P mg/L	<.01			.0182	.036	.0995
pH su	8.15			8.23	8.13	8.12
Phosphorus mg/L	.0274			.0572	.0638	.143
Potassium mg/L	5.34			4.93	5.13	4.43
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	95.4			83.7	90	84.5
Spcond umhos/cm	852			776	1172	792
Strontium ug/L	241			217	229	210
Sulfate mg/L	61.2			51	65.1	57.2
TDS mg/L	550			482	536	486
TempC deg C	25.4			26.3	22.56	24.98
TKN mg/L	.536			.826	.771	.403
TOC mg/L	6.24			6.51	5.28	5.28
TSS mg/L	5.5			8.5	7	12.5
Zinc ug/L	10.4			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S11		CUYAHOGA R. @ HILLSIDE RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	15.61	698	41.37326	-81.61479	04110002-06-02

Inorganic Parameters	9/18/17
Alkalinity mg/L	168
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.46
Barium ug/L	47
BOD 5-Day mg/L	<2
Cadmium ug/L	<.2
Calcium mg/L	74.5
Chloride mg/L	173
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	2.7
DO mg/L	
DOC mg/L	5.48
DOsat percent	
E. coli	
Hardness mg/L	261
Iron ug/L	301
Lead ug/L	<2
Magnesium mg/L	18.1
Manganese ug/L	51
Nickel ug/L	3.42
Nitrate, nitrite mg/L	5.7
Nitrite mg/L	.0234
Ortho-P mg/L	.0863
pH su	8.05
Phosphorus mg/L	.127
Potassium mg/L	6.76
Selenium ug/L	<2
Sodium mg/L	112
Spcond umhos/cm	1083
Strontium ug/L	230
Sulfate mg/L	73.7
TDS mg/L	620
TempC deg C	21.92
TKN mg/L	1.09
TOC mg/L	5.31
TSS mg/L	7.5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S12 CUYAHOGA R. @ FITZWATER RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	17.30	597	41.35670	-81.59810	04110002-05-05

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	152			153	155	155
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	<.05			<.05	<.05	<.05
Arsenic ug/L	<2			2.42	2.11	2.57
Barium ug/L	53.3			47.6	46.8	44.6
BOD 5-Day mg/L	2.74			2.42	<2	2.33
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	70.6			64.4	65.6	63.4
Chloride mg/L	138			118	146	131
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			<20	<20	<20
Copper ug/L	2.97			2.77	2.73	2.98
DO mg/L	8.69			8.72	10.96	3.16
DOC mg/L	6.58			6.47	6.76	6.28
DOsat percent	110.2			107.8	126.2	38.2
E. coli		126	105		205	120
Hardness mg/L	243			222	227	222
Iron ug/L	500			399	331	545
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	16.1			15	15.4	15.5
Manganese ug/L	63.1			49	64.6	62
Nickel ug/L	2.71			2.34	2.73	2.95
Nitrate, nitrite mg/L	4.05			2.12	3.22	3.86
Nitrite mg/L	.0833			<.02	.0216	.0397
Ortho-P mg/L	<.01			.0222	.0405	.178
pH su	8.09			8.18	8.06	8.11
Phosphorus mg/L	.0344			.0649	.0719	.225
Potassium mg/L	4.92			4.75	4.91	4.53
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	89.8			79.9	87.7	82.4
Spcond umhos/cm	824			726	1132	808
Strontium ug/L	218			196	207	196
Sulfate mg/L	61			51	62.8	61.4
TDS mg/L	534			476	524	494
TempC deg C	25.4			26	22.59	24.82
TKN mg/L	.394			.702	.548	.66
TOC mg/L	6.29			6.31	5.48	5.49
TSS mg/L	6			13.5	6	16.5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S12		CUYAHOGA R. @ FITZWATER RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	17.30	597	41.35670	-81.59810	04110002-05-05

Inorganic Parameters	9/18/17
Alkalinity mg/L	159
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.44
Barium ug/L	44
BOD 5-Day mg/L	<2
Cadmium ug/L	<.2
Calcium mg/L	72.3
Chloride mg/L	183
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	3.35
DO mg/L	
DOC mg/L	4.92
DOsat percent	
E. coli	
Hardness mg/L	253
Iron ug/L	331
Lead ug/L	<2
Magnesium mg/L	17.5
Manganese ug/L	44.7
Nickel ug/L	4.08
Nitrate, nitrite mg/L	6.12
Nitrite mg/L	.022
Ortho-P mg/L	.088
pH su	8.07
Phosphorus mg/L	.132
Potassium mg/L	7.05
Selenium ug/L	<2
Sodium mg/L	114
Spcond umhos/cm	1054
Strontium ug/L	240
Sulfate mg/L	76.9
TDS mg/L	640
TempC deg C	22.16
TKN mg/L	.921
TOC mg/L	5.26
TSS mg/L	8
Zinc ug/L	12.7

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S13 CUYAHOGA R. AT JAITE @ HIGHLAND RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	24.10	555	41.28876	-81.56504	04110002-05-05

Inorganic Parameters	6/13/17	7/19/17	7/20/17	8/7/17	8/22/17	9/18/17
Alkalinity mg/L	154		152	156	154	170
Aluminum ug/L	<200		<200	<200	225	<200
Ammonia mg/L	<.05		<.05	.0513	<.05	<.05
Arsenic ug/L	<2		2.41	2.29	2.89	2.28
Barium ug/L	52		45.3	48.1	47.9	47.1
BOD 5-Day mg/L	2.95		55.2	2.4	2.08	<2
Cadmium ug/L	<.2		<.2	<.2	<.2	<.2
Calcium mg/L	74.4		61.4	68	69.3	74.7
Chloride mg/L	141		122	158	145	173
Chromium ug/L	<2		<2	<2	<2	<2
COD mg/L	<20		<20	<20	20.5	25.4
Copper ug/L	2.62		2.78	2.86	3.22	3.07
DO mg/L	11.43		9.23	9.04	9.11	7.41
DOC mg/L	6.67		6.76	6.05	6.54	5.75
DOsat percent	137.7		112.6	103.9	108.5	80.7
E. coli		150		432	206.4	
Hardness mg/L	255		212	237	242	259
Iron ug/L	315		320	406	776	252
Lead ug/L	<2		<2	<2	<2	<2
Magnesium mg/L	16.9		14.3	16.2	16.7	17.6
Manganese ug/L	50.1		45.4	64.8	76.9	41.6
Nickel ug/L	2.37		2.32	2.81	3.27	3.74
Nitrate, nitrite mg/L	4.44		2.68	6.37	6.24	6.75
Nitrite mg/L	.083		<.02	.0757	.0629	.0255
Ortho-P mg/L	<.01		.0284	.0612	.269	.0998
pH su	8.46		8.18	8.12	8.16	7.94
Phosphorus mg/L	.0319		.091	.112	.362	.154
Potassium mg/L	5.28		4.53	5.85	5.59	7.12
Selenium ug/L	<2		<2	<2	<2	<2
Sodium mg/L	95.3		78.4	102	99.7	111
Spcond umhos/cm	874		795	946	879	1066
Strontium ug/L	224		189	216	211	221
Sulfate mg/L	60.8		49.8	68.2	64.6	73.6
TDS mg/L	532		464	564	552	620
TempC deg C	24.6		25.1	22	24.4	20.8
TKN mg/L	.821		.743	1.21	.543	.986
TOC mg/L	6.37		6.38	5.91	5.72	5.78
TSS mg/L	<5		10	8.5	13	6.5
Zinc ug/L	35.2		<10	13.5	14.4	23

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S15		CUYAHOGA R. AT BOTZUM @ BATH RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	37.22	443	41.16220	-81.57440	04110002-04-05

Inorganic Parameters	9/4/19
Alkalinity mg/L	145
Aluminum ug/L	<200
Ammonia mg/L	.0512
Arsenic ug/L	2.58
Barium ug/L	48.2
Cadmium ug/L	<.2
Calcium mg/L	63.7
CBOD20 mg/L	15.8
Chlorophyll ug/L	2.15
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	2.65
DO mg/L	8.74
DOC mg/L	5.16
DOsat percent	102
Hardness mg/L	219
Iron ug/L	195
Lead ug/L	<2
Magnesium mg/L	14.7
Manganese ug/L	47
Nickel ug/L	2.52
Nitrate, nitrite mg/L	3.34
Nitrite mg/L	<.02
Ortho-P mg/L	.0426
pH su	7.84
Pheophytin ug/L	2.94
Phosphorus mg/L	.09
Potassium mg/L	5.12
Selenium ug/L	<2
Sodium mg/L	80.4
Spcond umhos/cm	808
Strontium ug/L	192
Sulfate mg/L	52.6
TDS mg/L	492
TempC deg C	22.7
TKN mg/L	.919
TOC mg/L	5.26
TSS mg/L	<5
Zinc ug/L	16

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S17 CUYAHOGA R. UPST. KENT WWTP @ FULLER PARK

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	54.32	293	41.14940	-81.36750	04110002-03-05

Inorganic Parameters	5/17/17	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17
Alkalinity mg/L	90.7	120			118	128
Aluminum ug/L	<200	<200			<200	<200
Ammonia mg/L	.0512	.0547			.0742	<.05
Arsenic ug/L	<2	2.18			3.34	3.03
Barium ug/L	33.5	49			44.1	49
Cadmium ug/L	<.2	<.2			<.2	<.2
Calcium mg/L	31.2	47.6			40.6	42.8
CBOD20 mg/L						
Chloride mg/L	45.1	57			54.3	64.4
Chlorophyll ug/L						
Chromium ug/L	<2	<2			<2	<2
COD mg/L	<20	<20			<20	<20
Copper ug/L	<2	2.2			2.3	3.58
DO mg/L		7.57			6.98	7.11
DOC mg/L						
DOsat percent		90.5			85.4	83.1
E. coli			334	61		344.1
Hardness mg/L	108	164			140	149
Iron ug/L	520	367			364	333
Lead ug/L	<2	<2			<2	<2
Magnesium mg/L	7.28	10.9			9.37	10.3
Manganese ug/L	106	125			209	145
Nickel ug/L	<2	<2			<2	<2
Nitrate, nitrite mg/L	.206	.942			.617	1.17
Nitrite mg/L	<.02	<.02			<.02	<.02
Ortho-P mg/L	.0127					
pH su		8.03			7.99	7.94
Pheophytin ug/L						
Phosphorus mg/L	.0592	.0368			.067	.0655
Potassium mg/L	2.04	2.93			2.5	2.72
Selenium ug/L	<2	<2			<2	<2
Sodium mg/L	26	35.3			32.3	36.5
Spcond umhos/cm		465.8			410	511
Strontium ug/L	83.1	117			104	111
Sulfate mg/L	18.1	26.7			21.5	27.2
TDS mg/L	210	278			258	300
TempC deg C		24.6			25.6	23
TKN mg/L	.715	.588			.612	.605
TOC mg/L						
TSS mg/L	5	<5			5.5	<5
Zinc ug/L	<10	<10			<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S17		CUYAHOGA R. UPST. KENT WWTP @ FULLER PARK			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	54.32	293	41.14940	-81.36750	04110002-03-05

Inorganic Parameters	8/22/17	9/18/17	9/4/19
Alkalinity mg/L	124	128	113
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	.0525	<.05	.066
Arsenic ug/L	3.27	2.47	2.84
Barium ug/L	54	52.1	47.4
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	41.9	45.8	41.7
CBOD20 mg/L			14.7
Chloride mg/L	60.6	73.7	
Chlorophyll ug/L			10.6
Chromium ug/L	<2	<2	<2
COD mg/L	<20	<20	<20
Copper ug/L	2.41	2.69	<2
DO mg/L	7.28	8.46	7.46
DOC mg/L			5.13
DOsat percent	87.4	93.7	86
E. coli	260.1		
Hardness mg/L	147	161	145
Iron ug/L	250	209	288
Lead ug/L	<2	<2	<2
Magnesium mg/L	10.3	11.3	9.82
Manganese ug/L	161	109	149
Nickel ug/L	<2	2.3	<2
Nitrate, nitrite mg/L	1.17	2.5	.858
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L			.0239
pH su	7.98	8.06	7.55
Pheophytin ug/L			8.11
Phosphorus mg/L	.079	.0731	.0632
Potassium mg/L	2.63	3.6	2.68
Selenium ug/L	<2	<2	<2
Sodium mg/L	36	45.7	31.9
Spcond umhos/cm	455.7	522.1	444
Strontium ug/L	110	118	108
Sulfate mg/L	25.7	33	23.5
TDS mg/L	284	330	270
TempC deg C	24.5	20.7	22.4
TKN mg/L	.583	.448	.707
TOC mg/L			5.61
TSS mg/L	6	<5	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	64.30	178	41.24500	-81.28600	04110002-02-03

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	116			108	101	112
Aluminum ug/L	<200			244	<200	<200
Ammonia mg/L	<.05			.0569	<.05	<.05
Arsenic ug/L	<2			2.34	<2	<2
Barium ug/L	46.2			41.5	41.8	42.4
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	44.1			32.6	33	35.7
Chloride mg/L	55.4			42.2	46.2	49.6
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			24.2	<20	<20
Copper ug/L	<2			<2	<2	<2
DO mg/L	7.54			6.14	6.99	6.69
DOsat percent	90.6			73.2	78.4	79.2
E. coli		146	104		116.9	195.6
Hardness mg/L	152			112	114	124
Iron ug/L	352			1130	504	322
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	10.2			7.37	7.62	8.46
Manganese ug/L	92.6			154	118	95.3
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	.469			.2	.288	.274
Nitrite mg/L	<.02			<.02	<.02	<.02
pH su	7.77			7.55	7.55	7.75
Phosphorus mg/L	.0279			.0982	.0488	.0506
Potassium mg/L	2.31			<2	2.51	2.32
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	35.2			25.7	26.9	30.5
Spcond umhos/cm	428.6			341	378.3	371
Strontium ug/L	108			85	87	94.4
Sulfate mg/L	23.2			12.3	20.2	16.5
TDS mg/L	266			204	218	224
TempC deg C	24.5			24.1	21	23.8
TKN mg/L	.457			.6	.451	.399
TSS mg/L	<5			12	9.5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S19		CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	64.30	178	41.24500	-81.28600	04110002-02-03

Inorganic Parameters	9/18/17
Alkalinity mg/L	116
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	<2
Barium ug/L	42.8
Cadmium ug/L	<.2
Calcium mg/L	34.9
Chloride mg/L	52.5
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	7.89
DOsat percent	86.2
E. coli	
Hardness mg/L	120
Iron ug/L	165
Lead ug/L	<2
Magnesium mg/L	8.06
Manganese ug/L	62.2
Nickel ug/L	<2
Nitrate, nitrite mg/L	.213
Nitrite mg/L	<.02
pH su	7.8
Phosphorus mg/L	.0538
Potassium mg/L	2.45
Selenium ug/L	<2
Sodium mg/L	30.2
Spcond umhos/cm	383.9
Strontium ug/L	89.2
Sulfate mg/L	17.2
TDS mg/L	238
TempC deg C	19.5
TKN mg/L	.592
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S20 BIG CREEK @ USGS GAGE

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	2.40	35	41.45060	-81.72140	04110002-06-03

Inorganic Parameters	7/9/18	7/26/18	8/7/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	150	135	55.9	93.4	146	157
Aluminum ug/L	<200	<200	1240	408	398	<200
Ammonia mg/L	.106	.0722	.0804	<.05	<.05	.0992
Arsenic ug/L	2.31	2.8	2.34	<2	2.45	2.2
Barium ug/L	36.8	33.9	21	26.6	38.9	42
Cadmium ug/L	<.2	<.2	.271	<.2	<.2	<.2
Calcium mg/L	59.1	54	20.4	37.5	56.5	64.8
CBOD20 mg/L			17.6			
Chloride mg/L	195	165		84.9	177	174
Chromium ug/L	<2	<2	3.05	<2	2.18	<2
COD mg/L	37.7	23.8	38.1	24.5	37.7	<20
Copper ug/L	5.94	4.68	7.99	4.72	7.95	3.88
DO mg/L	10.7	10.1	8.2	8.71	8.6	12.8
DOC mg/L	4.61	4.66	5.27	4.1	5.18	3.23
DOsat percent	128	122	95.3	99	98.2	132
Hardness mg/L	204	186	67.2	128	193	231
Iron ug/L	172	128	2320	467	609	124
Lead ug/L	<2	<2	8.58	<2	5.21	<2
Magnesium mg/L	13.8	12.5	3.94	8.37	12.6	16.9
Manganese ug/L	24.7	16.4	62.9	22.4	17.3	11.3
Nickel ug/L	3.79	3.18	4.31	2.84	5.39	3.36
Nitrate, nitrite mg/L	.514	.208	.657	.435	.9	<.1
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0491	.0438	.0543	.0371	.0511	.0232
pH su	8.13	8.44	7.87	7.95	8.17	
Phosphorus mg/L	.0721	.0739	.14	.0656	.0783	.0453
Potassium mg/L	4.57	4.17	2.78	3.3	4.65	5.53
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	124	113	35.2	65.4	122	122
Spcond umhos/cm	1050	965		300	1060	1000
Strontium ug/L	364	350	142	227	367	410
Sulfate mg/L	68.6	61.1	22.5	42.6	79.3	74.8
TDS mg/L	572	522	196	318	572	546
TempC deg C	24.4	25.3	22.7	21.7	21.8	16.9
TKN mg/L	.807	.623	.715	.688	.708	.627
TOC mg/L			5.14			
TSS mg/L	<5	<5	48	5	13	<5
Zinc ug/L	<10	<10	33.3	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S21 BIG CREEK @ BIG CREEK PARKWAY

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	7.80	11	41.40890	-81.75500	04110002-06-03

Inorganic Parameters	6/13/18	6/25/18	7/5/18	7/9/18	7/26/18	8/7/18
Alkalinity mg/L				149	132	102
Aluminum ug/L				<200	<200	505
Ammonia mg/L				.0591	<.05	.0786
Arsenic ug/L				<2	<2	2.5
Barium ug/L				26.5	22.9	22.8
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				57.7	53.4	37.3
CBOD20 mg/L						16
Chloride mg/L				130	115	
Chromium ug/L				<2	<2	<2
COD mg/L				26.3	20.9	60.2
Copper ug/L				3.99	3.33	4.52
DO mg/L				6.75	8.57	7.79
DOC mg/L				3.99	3.37	7.29
DOsat percent				77.7	104	90.7
E. coli	145	806	4090			
Hardness mg/L				207	193	134
Iron ug/L				96.3	83.9	918
Lead ug/L				<2	<2	<2
Magnesium mg/L				15.4	14.4	9.79
Manganese ug/L				<10	<10	43.6
Nickel ug/L				2.83	2.41	3.65
Nitrate, nitrite mg/L				.586	.293	<.1
Nitrite mg/L				<.02	<.02	.0221
Ortho-P mg/L				.0736	.0673	.0372
pH su				7.69	8.66	8.05
Phosphorus mg/L				.0851	.0891	.0901
Potassium mg/L				3.98	3.39	3.86
Selenium ug/L				<2	<2	<2
Sodium mg/L				84.1	74.3	54.5
Spcond umhos/cm				1090	796	
Strontium ug/L				246	228	161
Sulfate mg/L				69	67.1	54.5
TDS mg/L				476	466	340
TempC deg C				22.2	25.1	22.8
TKN mg/L				.681	.477	.933
TOC mg/L						7.56
TSS mg/L				<5	<5	14
Zinc ug/L				<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S21		BIG CREEK @ BIG CREEK PARKWAY			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-005-000	7.80	11	41.40890	-81.75500	04110002-06-03

Inorganic Parameters	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	99.7	143	136
Aluminum ug/L	561	<200	<200
Ammonia mg/L	.254	<.05	<.05
Arsenic ug/L	<2	<2	<2
Barium ug/L	19	26.2	27.6
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	35.8	54.4	59.1
CBOD20 mg/L			
Chloride mg/L	64.4	122	115
Chromium ug/L	<2	<2	<2
COD mg/L	26.6	22	<20
Copper ug/L	4.79	4.09	2.11
DO mg/L	8.9	9.53	10.9
DOC mg/L	5.46	4.91	2.09
DOsat percent	101	106	112
E. coli			
Hardness mg/L	129	199	217
Iron ug/L	559	150	68.7
Lead ug/L	<2	<2	<2
Magnesium mg/L	9.73	15.3	16.9
Manganese ug/L	20.5	<10	<10
Nickel ug/L	2.77	2.94	2.39
Nitrate, nitrite mg/L	.502	.796	.223
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	.0346	.0539	.0875
pH su	7.98	8.2	
Phosphorus mg/L	.0711	.0682	.0899
Potassium mg/L	3.37	4.1	3.73
Selenium ug/L	<2	<2	<2
Sodium mg/L	48.6	87.3	78.4
Spcond umhos/cm	503	908	755
Strontium ug/L	155	248	255
Sulfate mg/L	43.3	79.5	68.9
TDS mg/L	296	478	438
TempC deg C	21.5	20.4	16.9
TKN mg/L	.69	.64	.33
TOC mg/L			
TSS mg/L	<5	<5	<5
Zinc ug/L	31.3	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	0.10	96	41.36489	-81.60862	04110002-05-04

Inorganic Parameters	6/5/18	6/20/18	6/28/18	6/29/18	7/6/18	8/2/18
Alkalinity mg/L			127			159
Aluminum ug/L			664			<200
Ammonia mg/L			.0551			<.05
Arsenic ug/L			2.72			2.6
Barium ug/L			39			46.1
Cadmium ug/L			<.2			<.2
Calcium mg/L			52.6			71.3
CBOD20 mg/L						
Chloride mg/L			213			263
Chromium ug/L			<2			<2
COD mg/L			<20			22.5
Copper ug/L			7.63			6.07
DO mg/L			7.55			7.54
DOC mg/L			6.27			5.23
DOsat percent			85			84.8
E. coli	357	1930		1150	13000	
Hardness mg/L			177			246
Iron ug/L			1660			241
Lead ug/L			2.86			<2
Magnesium mg/L			11.1			16.5
Manganese ug/L			108			32.7
Nickel ug/L			5.15			5.22
Nitrate, nitrite mg/L			2.62			5.74
Nitrite mg/L			<.02			.0322
Ortho-P mg/L			.0442			.102
pH su			8.09			7.98
Phosphorus mg/L			.137			.128
Potassium mg/L			5.14			8.02
Selenium ug/L			<2			<2
Sodium mg/L			126			155
Spcond umhos/cm			957			1260
Strontium ug/L			349			423
Sulfate mg/L			47.5			71.9
TDS mg/L			562			690
TempC deg C			21.1			21
TKN mg/L			1.38			1.27
TOC mg/L						
TSS mg/L			59			5
Zinc ug/L			21.5			10.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S24		TINKERS CREEK AT MOUTH @ CANAL RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	0.10	96	41.36489	-81.60862	04110002-05-04

Inorganic Parameters	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	88.4	123	144	164
Aluminum ug/L	1560	<200	<200	
Ammonia mg/L	.0932	<.05	<.05	<.05
Arsenic ug/L	3.32	2.38	2.54	
Barium ug/L	32.3	36.4	44.3	
Cadmium ug/L	<.2	<.2	<.2	
Calcium mg/L	36.1	58.5	68	
CBOD20 mg/L	16.9			
Chloride mg/L		193	232	173
Chromium ug/L	2.62	<2	<2	
COD mg/L	152	23.2	36.9	52.5
Copper ug/L	8.1	4.83	5.23	
DO mg/L	7.67	11.1	11.2	9.8
DOC mg/L	5.94	5.08	5.44	3.53
DOsat percent	90.7	133	134	108
E. coli				
Hardness mg/L	121	200	235	
Iron ug/L	3360	327	452	
Lead ug/L	3.92	<2	<2	
Magnesium mg/L	7.37	13.2	15.8	
Manganese ug/L	138	32.9	30.5	
Nickel ug/L	5.77	3.92	4.78	
Nitrate, nitrite mg/L	1.8	4.61	5.18	3.5
Nitrite mg/L	<.02	.0205	<.02	<.02
Ortho-P mg/L	.0498	.0421	.0473	.0322
pH su	7.99	8.45	8.56	8.22
Phosphorus mg/L	.187	.0646	.0618	.0659
Potassium mg/L	4.37	6.16	7.31	
Selenium ug/L	<2	<2	<2	
Sodium mg/L	73.6	124	139	
Spcond umhos/cm	636	1010	1180	942
Strontium ug/L	220	347	447	
Sulfate mg/L	37.9	58.8	79.9	55.7
TDS mg/L	354	572	678	562
TempC deg C	23.7	24.3	23.9	20
TKN mg/L	1.18	1.03	.753	.977
TOC mg/L	6.11			
TSS mg/L	95	6.5	9.5	<5
Zinc ug/L	21.1	<10	<10	

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S25 TINKERS CREEK UPST. WOOD CREEK, ADJ. BUTTON RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	2.50	91	41.37440	-81.57340	04110002-05-04

Inorganic Parameters	6/5/18	6/20/18	6/28/18	6/29/18	7/6/18	8/2/18
Alkalinity mg/L			123			160
Aluminum ug/L			1020			<200
Ammonia mg/L			.0967			<.05
Arsenic ug/L			3.21			2.46
Barium ug/L			36.5			44.3
Cadmium ug/L			<.2			<.2
Calcium mg/L			42.9			71.2
CBOD20 mg/L						
Chloride mg/L			226			277
Chromium ug/L			2.87			<2
COD mg/L			33.1			156
Copper ug/L			12.3			9.6
DO mg/L			8.15			8.95
DOC mg/L			6.53			6.05
DOsat percent			91.6			101
E. coli	288	1660		1350	14100	
Hardness mg/L			145			247
Iron ug/L			2350			89.2
Lead ug/L			3.3			<2
Magnesium mg/L			9.15			16.9
Manganese ug/L			147			<10
Nickel ug/L			5.57			5.88
Nitrate, nitrite mg/L			2.24			6.22
Nitrite mg/L			<.02			.0251
Ortho-P mg/L			.0451			.153
pH su			8.09			8.28
Phosphorus mg/L			.173			.164
Potassium mg/L			4.06			8.41
Selenium ug/L			<2			<2
Sodium mg/L			115			163
Spcond umhos/cm			969			1290
Strontium ug/L			298			438
Sulfate mg/L			43.1			74.6
TDS mg/L			552			712
TempC deg C			21			21.1
TKN mg/L			1.37			1.39
TOC mg/L						
TSS mg/L			67			<5
Zinc ug/L			21.8			11.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S25 TINKERS CREEK UPST. WOOD CREEK, ADJ. BUTTON RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	2.50	91	41.37440	-81.57340	04110002-05-04

Inorganic Parameters	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	86.5	115	153	162
Aluminum ug/L	1360	<200	<200	<200
Ammonia mg/L	.0881	<.05	<.05	<.05
Arsenic ug/L	2.77	2.33	2.56	2.55
Barium ug/L	32	31.5	43.6	38
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	35.8	53.6	70.1	59.7
CBOD20 mg/L	15.8			
Chloride mg/L		191	247	176
Chromium ug/L	2.23	<2	<2	<2
COD mg/L	52.7	24.8	37.8	33.5
Copper ug/L	7.17	4.46	4.56	3.61
DO mg/L	8.08	8.99	8.2	9.67
DOC mg/L	6.4	5.43	6.03	7.64
DOsat percent	95.3	107	96.7	104
E. coli				
Hardness mg/L	119	183	241	207
Iron ug/L	2850	174	206	317
Lead ug/L	3.13	<2	<2	<2
Magnesium mg/L	7.31	11.9	15.9	14
Manganese ug/L	125	<10	10.7	11.7
Nickel ug/L	4.94	3.42	4.5	3.19
Nitrate, nitrite mg/L	1.8	3.84	4.17	3.19
Nitrite mg/L	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0505	.0675	.0601	.0566
pH su	8.12	8.77	8.67	8.35
Phosphorus mg/L	.161	.098	.073	.0769
Potassium mg/L	4.59	6.09	7.2	6.31
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	80.8	122	148	117
Spcond umhos/cm	675	976	1220	936
Strontium ug/L	238	341	466	415
Sulfate mg/L	39.4	54.3	77	53.1
TDS mg/L	374	554	688	558
TempC deg C	23.5	24	22.9	18.9
TKN mg/L	1.19	.878	1.08	1.06
TOC mg/L	6.52			
TSS mg/L	73	<5	<5	<5
Zinc ug/L	19.8	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	13.80	54	41.33702	-81.45662	04110002-05-04

Inorganic Parameters	6/5/18	6/20/18	6/28/18	6/29/18	7/6/18	8/2/18
Alkalinity mg/L			112			179
Aluminum ug/L			1820			<200
Ammonia mg/L			.109			.108
Arsenic ug/L			4.18			2.93
Barium ug/L			41.2			47.2
Cadmium ug/L			<.2			<.2
Calcium mg/L			35.4			80.7
CBOD20 mg/L						
Chloride mg/L			119			282
Chlorophyll ug/L						
Chromium ug/L			2.76			<2
COD mg/L			62			24.8
Copper ug/L			7.71			5.16
DO mg/L			6.82			7.77
DOC mg/L			8.41			5.78
DOsat percent			76.9			89.9
E. coli	399	1200		1200	13000	
Hardness mg/L			121			284
Iron ug/L			3900			308
Lead ug/L			2.97			<2
Magnesium mg/L			7.81			20.1
Manganese ug/L			267			47.7
Nickel ug/L			4.67			4
Nitrate, nitrite mg/L			1.5			7.09
Nitrite mg/L			<.02			.0431
Ortho-P mg/L			.058			.0618
pH su			7.57			7.92
Pheophytin ug/L						
Phosphorus mg/L			.268			.0831
Potassium mg/L			3.65			7.8
Selenium ug/L			<2			<2
Sodium mg/L			76.4			162
Spcond umhos/cm			641			1330
Strontium ug/L			295			471
Sulfate mg/L			23.9			66.4
TDS mg/L			378			736
TempC deg C			21.2			22.4
TKN mg/L			1.48			1.53
TOC mg/L						
TSS mg/L			94			6
Zinc ug/L			45.1			10.6

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S29		TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	13.80	54	41.33702	-81.45662	04110002-05-04

Inorganic Parameters	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	121	131	138	165
Aluminum ug/L	773	<200	329	<200
Ammonia mg/L	.0743	<.05	.113	<.05
Arsenic ug/L	3.14	2.69	2.75	2.6
Barium ug/L	42.1	35.1	43.9	39.3
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	49.8	53.5	60.1	59.9
CBOD20 mg/L	17.8			
Chloride mg/L		168	180	168
Chlorophyll ug/L	5.8			
Chromium ug/L	<2	<2	<2	<2
COD mg/L	35.6	24.6	31.4	33.9
Copper ug/L	4.94	3.67	4.01	3.22
DO mg/L	6.32	6.95	2.95	9.04
DOC mg/L	6.14	6.61	6.21	8.64
DOsat percent	74.4	80.1	33.5	93.7
E. coli				
Hardness mg/L	176	184	206	205
Iron ug/L	1780	421	779	490
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	12.5	12.1	13.7	13.6
Manganese ug/L	144	51.8	71.8	49.2
Nickel ug/L	3.89	2.62	3.26	2.52
Nitrate, nitrite mg/L	2.41	2.81	3.58	2.71
Nitrite mg/L	<.02	<.02	.0257	<.02
Ortho-P mg/L	.0345	.0481	.0472	.0414
pH su	7.5	7.7	7.76	7.87
Pheophytin ug/L	4.82			
Phosphorus mg/L	.112	.0798	.0772	.0642
Potassium mg/L	4.51	5.02	5.01	4.99
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	98.4	109	115	108
Spcond umhos/cm	903	918	963	893
Strontium ug/L	592	391	459	419
Sulfate mg/L	44.1	42.4	43.8	40
TDS mg/L	514	528	552	530
TempC deg C	23.4	22.3	21.9	17
TKN mg/L	1.03	.775	1.22	1.05
TOC mg/L	6.21			
TSS mg/L	47.5	5	11.5	<5
Zinc ug/L	12.3	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S32 TINKERS CREEK @ HUDSON-AURORA RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	25.05	19	41.26190	-81.39420	04110002-05-02

Inorganic Parameters	6/5/18	6/20/18	6/28/18	6/29/18	7/6/18	8/2/18
Alkalinity mg/L			125			245
Aluminum ug/L			434			<200
Ammonia mg/L			.0978			.066
Arsenic ug/L			3.33			4.52
Barium ug/L			30			54.8
Cadmium ug/L			<.2			<.2
Calcium mg/L			37.3			104
CBOD20 mg/L						
Chloride mg/L			87.8			263
Chlorophyll ug/L						
Chromium ug/L			<2			<2
COD mg/L			28.5			24.3
Copper ug/L			4.98			3.85
DO mg/L			4.73			9
DOC mg/L			11.2			4.13
DOsat percent			53			102
E. coli	464	418		697	4610	
Hardness mg/L			125			367
Iron ug/L			1220			140
Lead ug/L			<2			<2
Magnesium mg/L			7.85			26.5
Manganese ug/L			74.1			66.7
Nickel ug/L			2.54			3.71
Nitrate, nitrite mg/L			1.24			8.71
Nitrite mg/L			.0287			<.02
Ortho-P mg/L			.0628			.0783
pH su			7.3			7.98
Pheophytin ug/L						
Phosphorus mg/L			.146			.0966
Potassium mg/L			3.72			8.55
Selenium ug/L			<2			<2
Sodium mg/L			53.2			160
Spcond umhos/cm			549			1440
Strontium ug/L			212			395
Sulfate mg/L			22.1			91.7
TDS mg/L			340			798
TempC deg C			20.9			21.2
TKN mg/L			1.08			1.09
TOC mg/L						
TSS mg/L			12.5			<5
Zinc ug/L			<10			13

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S32		TINKERS CREEK @ HUDSON-AURORA RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	25.05	19	41.26190	-81.39420	04110002-05-02

Inorganic Parameters	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	178	201	197	235
Aluminum ug/L	441	<200	274	<200
Ammonia mg/L	.0855	.0696	.089	.19
Arsenic ug/L	4.87	4.3	4.42	4.13
Barium ug/L	46.9	47.2	53	50.3
Cadmium ug/L	.225	<.2	<.2	<.2
Calcium mg/L	70.2	92.7	77	83.4
CBOD20 mg/L	14.2			
Chloride mg/L		267	176	163
Chlorophyll ug/L	4.28			
Chromium ug/L	<2	<2	<2	<2
COD mg/L	50.2	21.6	32.3	47.1
Copper ug/L	3.42	3.58	2.93	2.22
DO mg/L	6.47	5.74	1.68	7.99
DOC mg/L	5.91	5.28	6.4	7.38
DOsat percent	73.4	63.9	18.6	81.2
E. coli				
Hardness mg/L	244	321	268	292
Iron ug/L	1050	396	776	570
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	16.7	21.7	18.3	20.3
Manganese ug/L	122	94.2	108	99.1
Nickel ug/L	3.13	3.55	3.13	2.93
Nitrate, nitrite mg/L	3.09	7.87	2.83	3.14
Nitrite mg/L	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0537	.0546	.0527	.0322
pH su	7.55	7.72	7.64	7.78
Pheophytin ug/L	<1.4			
Phosphorus mg/L	.111	.0996	.0922	.0583
Potassium mg/L	4.38	6.66	5.27	4.71
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	102	148	112	105
Spcond umhos/cm	1030	1390	1060	1010
Strontium ug/L	419	368	502	376
Sulfate mg/L	60.3	75.9	50.8	58.4
TDS mg/L	584	818	614	620
TempC deg C	21.4	20.5	19.9	16
TKN mg/L	.864	.92	1.26	1.28
TOC mg/L	6.48			
TSS mg/L	10.5	<5	8.5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S36 WOOD CREEK DST. BEDFORD WWTP, NEAR MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-001	0.15	3	41.37754	-81.57543	04110002-05-04

Inorganic Parameters	6/5/18	6/20/18	6/28/18	6/29/18	7/6/18	8/2/18
Alkalinity mg/L			95.7			101
Aluminum ug/L			<200			<200
Ammonia mg/L			.0528			<.05
Arsenic ug/L			<2			<2
Barium ug/L			15.3			28
Cadmium ug/L			<.2			<.2
Calcium mg/L			37.8			73.4
Chloride mg/L			132			225
Chromium ug/L			<2			<2
COD mg/L			23.6			<20
Copper ug/L			6.26			7
DO mg/L			8.49			8.73
DOsat percent			93.1			96.9
E. coli	1030	15500		311	6930	
Hardness mg/L			128			254
Iron ug/L			169			77.5
Lead ug/L			<2			<2
Magnesium mg/L			8.12			17.2
Manganese ug/L			<10			<10
Nickel ug/L			2.44			4.55
Nitrate, nitrite mg/L			5.32			16.7
Nitrite mg/L			<.02			<.02
pH su			7.98			8.09
Phosphorus mg/L			.105			.0957
Potassium mg/L			3.74			7.8
Selenium ug/L			<2			<2
Sodium mg/L			82.1			141
Spcond umhos/cm			736			1150
Strontium ug/L			196			383
Sulfate mg/L			44.1			85.8
TDS mg/L			426			668
TempC deg C			19.8			20.3
TKN mg/L			.81			1.11
TSS mg/L			<5			<5
Zinc ug/L			<10			<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S36		WOOD CREEK DST. BEDFORD WWTP, NEAR MOUTH			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-001	0.15	3	41.37754	-81.57543	04110002-05-04

Inorganic Parameters	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	84.2	97.8	127
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05
Arsenic ug/L	<2	<2	2.07
Barium ug/L	26.5	24.9	28.6
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	70.7	70.2	74.9
Chloride mg/L	226	247	226
Chromium ug/L	<2	<2	<2
COD mg/L	24.4	<20	<20
Copper ug/L	6.78	6.9	7.56
DO mg/L	8.6	8.29	7.8
DOsat percent	99.4	95.2	83.6
E. coli			
Hardness mg/L	245	244	260
Iron ug/L	222	125	112
Lead ug/L	<2	<2	<2
Magnesium mg/L	16.5	16.8	17.6
Manganese ug/L	<10	<10	<10
Nickel ug/L	4.73	4.97	4.63
Nitrate, nitrite mg/L	19.7	16.1	13.2
Nitrite mg/L	<.02	<.02	<.02
pH su	8.23	8.28	8.1
Phosphorus mg/L	.104	.128	.107
Potassium mg/L	7.7	7.88	7.33
Selenium ug/L	<2	<2	<2
Sodium mg/L	126	141	137
Spcond umhos/cm	1190	1260	1160
Strontium ug/L	350	360	371
Sulfate mg/L	87.1	82.9	89.9
TDS mg/L	744	754	706
TempC deg C	22.4	21.9	18.5
TKN mg/L	.63	.381	1.07
TSS mg/L	5	<5	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S40 POND BROOK NEAR AURORA @ ST. RT. 82

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-008-000	1.41	16	41.30500	-81.39970	04110002-05-01

Inorganic Parameters	6/5/18	6/28/18	6/29/18	7/6/18	8/2/18	8/7/18
Alkalinity mg/L		118			126	85
Aluminum ug/L		237			1080	1050
Ammonia mg/L		.118			.1	.0862
Arsenic ug/L		3.74			2.85	2.9
Barium ug/L		29.6			46.4	34.1
Cadmium ug/L		<.2			<.2	<.2
Calcium mg/L		34.7			58.9	37.4
CBOD20 mg/L						18.2
Chloride mg/L		116			168	
Chromium ug/L		<2			<2	<2
COD mg/L		50.3			36.4	29.7
Copper ug/L		4.67			5.8	5.01
DO mg/L		5.43			5.34	5.15
DOC mg/L		11.5			6.3	7.61
DOsat percent		61.3			62.7	59
E. coli	350		350	2180		
Hardness mg/L		117			206	130
Iron ug/L		1200			1640	2010
Lead ug/L		<2			<2	<2
Magnesium mg/L		7.3			14.4	8.86
Manganese ug/L		386			122	152
Nickel ug/L		2.34			5.07	3.9
Nitrate, nitrite mg/L		.981			8.96	3.72
Nitrite mg/L		<.02			.0739	.0277
Ortho-P mg/L		.127			.112	.117
pH su		7.31			7.68	7.1
Phosphorus mg/L		.238			.178	.224
Potassium mg/L		2.99			9.37	6.14
Selenium ug/L		<2			<2	<2
Sodium mg/L		71			111	68.2
Spcond umhos/cm		635			965	641
Strontium ug/L		328			579	367
Sulfate mg/L		17.2			57	41
TDS mg/L		376			548	388
TempC deg C		21.3			23.2	22
TKN mg/L		1.26			1.35	1.14
TOC mg/L						8.15
TSS mg/L		10			29	45
Zinc ug/L		<10			18.2	11.8

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S40		POND BROOK NEAR AURORA @ ST. RT. 82			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-008-000	1.41	16	41.30500	-81.39970	04110002-05-01

Inorganic Parameters	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	130	128	120
Aluminum ug/L	1150	966	499
Ammonia mg/L	.0586	.107	<.05
Arsenic ug/L	2.77	3.32	2.58
Barium ug/L	40.4	43.4	39.1
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	52.2	52.4	41.7
CBOD20 mg/L			
Chloride mg/L	160	134	121
Chromium ug/L	<2	<2	<2
COD mg/L	40.3	53.8	48.7
Copper ug/L	4.99	4.8	2.6
DO mg/L	5.22	4.09	6.7
DOC mg/L	6.55	10.4	10.3
DOsat percent	58.7	45.9	68.2
E. coli			
Hardness mg/L	182	180	141
Iron ug/L	1990	2030	1100
Lead ug/L	<2	<2	<2
Magnesium mg/L	12.6	11.9	9.04
Manganese ug/L	118	141	73.4
Nickel ug/L	4.26	5.14	2.64
Nitrate, nitrite mg/L	3.66	3.8	1.55
Nitrite mg/L	<.02	.0467	<.02
Ortho-P mg/L	.0954	.0783	.0425
pH su	7.69	7.55	7.65
Phosphorus mg/L	.171	.199	.111
Potassium mg/L	6.32	6.94	4.32
Selenium ug/L	<2	<2	<2
Sodium mg/L	97.7	85.2	81
Spcond umhos/cm	891	813	642
Strontium ug/L	473	499	388
Sulfate mg/L	43.5	44.2	24.1
TDS mg/L	528	482	386
TempC deg C	21	20.9	16.1
TKN mg/L	1.01	1.61	1.32
TOC mg/L			
TSS mg/L	42.5	42.5	15.5
Zinc ug/L	10.9	10.4	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S46 POWERS BROOK DST. HUDSON #6 WWTP @ SOD FARM RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-025-000	0.30	7	41.21390	-81.46610	04110002-04-01

Inorganic Parameters	6/13/18	6/25/18	6/28/18	7/5/18	8/2/18	8/15/18
Alkalinity mg/L			146		188	188
Aluminum ug/L			590		<200	<200
Ammonia mg/L			.145		.101	<.05
Arsenic ug/L			3.9		4.92	5.75
Barium ug/L			49.9		68.5	66.8
Cadmium ug/L			<.2		<.2	<.2
Calcium mg/L			48.1		63.6	74.8
Chloride mg/L			140		154	163
Chromium ug/L			<2		<2	<2
COD mg/L			28.5		150	34.5
Copper ug/L			4.69		<2	<2
DO mg/L			7.08		5.35	2.59
DOsat percent			82		65.4	29.8
E. coli	330	306		1140		
Hardness mg/L			163		219	259
Iron ug/L			1560		400	422
Lead ug/L			<2		<2	<2
Magnesium mg/L			10.5		14.6	17.6
Manganese ug/L			217		133	162
Nickel ug/L			2.3		2.69	2.31
Nitrate, nitrite mg/L			.144		<.1	<.1
Nitrite mg/L			<.02		<.02	<.02
pH su			7.69		7.74	7.56
Phosphorus mg/L			.116		.0647	.0662
Potassium mg/L			3.01		3.14	3.37
Selenium ug/L			<2		<2	<2
Sodium mg/L			86.3		88.8	100
Spcond umhos/cm			791		980	1180
Strontium ug/L			232		248	280
Sulfate mg/L			29.4		42.3	46.3
TDS mg/L			454		534	566
TempC deg C			22.5		25.4	22.2
TKN mg/L			1.25		1.28	1.29
TSS mg/L			23		7	10
Zinc ug/L			<10		<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S46		POWERS BROOK DST. HUDSON #6 WWTP @ SOD FARM RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-025-000	0.30	7	41.21390	-81.46610	04110002-04-01

Inorganic Parameters	9/19/18	10/10/18
Alkalinity mg/L	154	123
Aluminum ug/L	<200	<200
Ammonia mg/L	.071	.0863
Arsenic ug/L	2.66	2.2
Barium ug/L	48.6	35.7
Cadmium ug/L	<.2	<.2
Calcium mg/L	56	39.6
Chloride mg/L	110	81.4
Chromium ug/L	<2	<2
COD mg/L	42.2	40.3
Copper ug/L	2.56	2.79
DO mg/L	7.07	6.3
DOsat percent	84.5	74
E. coli		
Hardness mg/L	188	133
Iron ug/L	463	501
Lead ug/L	<2	<2
Magnesium mg/L	11.7	8.25
Manganese ug/L	128	78.1
Nickel ug/L	2.17	<2
Nitrate, nitrite mg/L	<.1	.318
Nitrite mg/L	<.02	<.02
pH su	8.3	7.92
Phosphorus mg/L	.0513	.0657
Potassium mg/L	3.93	3.91
Selenium ug/L	<2	<2
Sodium mg/L	71.7	52.8
Spcond umhos/cm	723	539
Strontium ug/L	270	226
Sulfate mg/L	35.2	22.4
TDS mg/L	410	292
TempC deg C	23.9	23.3
TKN mg/L	1.18	.809
TSS mg/L	6.5	<5
Zinc ug/L	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-010-000	0.26	27	41.28590	-81.56150	04110002-04-04

Inorganic Parameters	6/13/18	6/25/18	7/5/18	7/9/18	7/19/18	7/26/18
Alkalinity mg/L				154	160	156
Aluminum ug/L				<200	<200	<200
Ammonia mg/L				<.05	<.05	<.05
Arsenic ug/L				2.45	2.01	2.08
Barium ug/L				37.6	39.5	38.5
Cadmium ug/L				<.2	<.2	<.2
Calcium mg/L				52.2	58.7	57.7
CBOD20 mg/L					12.8	
Chloride mg/L				147		184
Chlorophyll ug/L					2.36	
Chromium ug/L				<2	<2	<2
COD mg/L				53.2	23.2	<20
Copper ug/L				4.51	4.64	4.32
DO mg/L				8.25	9.76	7.75
DOC mg/L				7.42	6.27	6
DOsat percent				94.7	110	91.4
E. coli	222	166	3080			
Hardness mg/L				175	200	197
Iron ug/L				700	164	215
Lead ug/L				<2	<2	<2
Magnesium mg/L				10.8	13	12.8
Manganese ug/L				35	15.4	50.1
Nickel ug/L				2.89	2.83	3.06
Nitrate, nitrite mg/L				.316	<.1	<.1
Nitrite mg/L				<.02	<.02	<.02
Ortho-P mg/L				.0248	<.01	<.01
pH su				8.09	8.21	8.12
Pheophytin ug/L					<1.4	
Phosphorus mg/L				.0466	<.02	<.02
Potassium mg/L				3.9	3.76	3.59
Selenium ug/L				<2	<2	<2
Sodium mg/L				89.3	114	115
Spcond umhos/cm				844	977	986
Strontium ug/L				503	567	568
Sulfate mg/L				41.7	48	46.7
TDS mg/L				474	566	568
TempC deg C				22.1	21.2	23.5
TKN mg/L				1.25	.796	.781
TOC mg/L					6.62	
TSS mg/L				<5	<5	<5
Zinc ug/L				<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S49		BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-010-000	0.26	27	41.28590	-81.56150	04110002-04-04

Inorganic Parameters	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	109	131	173
Aluminum ug/L	554	365	<200
Ammonia mg/L	<.05	<.05	<.05
Arsenic ug/L	2.82	2.34	<2
Barium ug/L	36.9	37.1	41.8
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	39.4	48.1	59.1
CBOD20 mg/L			
Chloride mg/L	127	137	182
Chlorophyll ug/L			
Chromium ug/L	<2	<2	<2
COD mg/L	45	36.5	24.1
Copper ug/L	3.74	3.9	3.24
DO mg/L	8.26	9.76	9.83
DOC mg/L	6.48	6.74	5.01
DOsat percent	94.1	107	101
E. coli			
Hardness mg/L	134	163	204
Iron ug/L	948	662	255
Lead ug/L	<2	<2	<2
Magnesium mg/L	8.56	10.4	13.6
Manganese ug/L	55.5	29.4	58.6
Nickel ug/L	2.43	2.75	2.86
Nitrate, nitrite mg/L	.125	.423	<.1
Nitrite mg/L	<.02	<.02	<.02
Ortho-P mg/L	.016	.0183	<.01
pH su	8.07		8.04
Pheophytin ug/L			
Phosphorus mg/L	.0769	.0475	<.02
Potassium mg/L	3.58	4.04	3.96
Selenium ug/L	<2	<2	<2
Sodium mg/L	91.3	97.3	117
Spcond umhos/cm	726	841	952
Strontium ug/L	423	539	629
Sulfate mg/L	34	52.7	49
TDS mg/L	394	448	540
TempC deg C	21.7	19.7	16.5
TKN mg/L	1.18	.645	.63
TOC mg/L			
TSS mg/L	22.5	7	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S51 BREAKNECK CREEK @ POWDER MILL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	3.08	61	41.14450	-81.30773	04110002-02-02

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/19/18
Alkalinity mg/L		183				212
Aluminum ug/L		275				<200
Ammonia mg/L		.081				<.05
Arsenic ug/L		4.02				4.79
Barium ug/L		71.8				74.3
Cadmium ug/L		<.2				<.2
Calcium mg/L		73.6				74.1
CBOD20 mg/L						14.1
Chloride mg/L		91.6				
Chlorophyll ug/L						1.28
Chromium ug/L		<2				<2
COD mg/L		<20				<20
Copper ug/L		2.7				<2
DO mg/L		5.38				8.76
DOC mg/L		6.07				4.58
DOsat percent		63.1				99.6
E. coli	328		637	1500	5480	
Hardness mg/L		254				259
Iron ug/L		706				417
Lead ug/L		<2				<2
Magnesium mg/L		17.1				18
Manganese ug/L		165				148
Nickel ug/L		2.82				2.74
Nitrate, nitrite mg/L		3.37				2.19
Nitrite mg/L		.0272				<.02
Ortho-P mg/L		.0657				.101
pH su		7.72				8.12
Pheophytin ug/L						3.32
Phosphorus mg/L		.137				.108
Potassium mg/L		4.56				4.18
Selenium ug/L		<2				<2
Sodium mg/L		52				36
Spcond umhos/cm		712				715
Strontium ug/L		173				166
Sulfate mg/L		61.2				64.2
TDS mg/L		480				444
TempC deg C		23.2				21.6
TKN mg/L		.9				.713
TOC mg/L						4.65
TSS mg/L		13				8
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S51		BREAKNECK CREEK @ POWDER MILL RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	3.08	61	41.14450	-81.30773	04110002-02-02

Inorganic Parameters	7/24/18	8/14/18	8/16/18	9/17/18	10/1/18
Alkalinity mg/L	180	177	183	145	167
Aluminum ug/L	<200	<200	<200	223	<200
Ammonia mg/L	<.05	<.05	<.05	.165	.0599
Arsenic ug/L	4.5	4.71	4.72	4.38	3.92
Barium ug/L	67.9	69.8	71.5	77.1	69.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	67.7	72.8	75.1	62.6	62.7
CBOD20 mg/L			12.2		
Chloride mg/L	80.1	93.2		63.5	64.3
Chlorophyll ug/L			2.05		
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	32.1	44.5	27	87.2	41.4
Copper ug/L	2.5	2.82	2.47	2.5	2.36
DO mg/L	6.95	6.09	7.85	6.95	7.9
DOC mg/L	6.34	4.36	4.23	10.5	11.1
DOsat percent	80.4	68.3	90.7	77.6	80.1
E. coli					
Hardness mg/L	235	254	263	216	217
Iron ug/L	398	291	269	1010	1090
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	16.1	17.6	18.2	14.5	14.7
Manganese ug/L	106	108	110	231	176
Nickel ug/L	2.74	2.89	2.3	2.86	2.72
Nitrate, nitrite mg/L	3.98	5.6	4.64	1.51	1.34
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0699	.108	.117	.0813	.0727
pH su	7.65	7.9	7.82	7.75	7.52
Pheophytin ug/L			1.51		
Phosphorus mg/L	.114	.139	.144	.138	.129
Potassium mg/L	4.38	5.74	5.43	5.61	5.77
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	43.5	53.6	53.8	38.6	39.5
Spcond umhos/cm	676	821	781	593	570
Strontium ug/L	158	163	169	158	162
Sulfate mg/L	57.7	62.5	65.1	50.2	46.3
TDS mg/L	422	478	440	392	378
TempC deg C	22.5	20.9	22.4	20.7	16
TKN mg/L	.894	.87	.793	1.17	.953
TOC mg/L			4.79		
TSS mg/L	<5	<5	5	8	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S53 WAHOO DITCH AT RAVENNA @ MAIN ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-002	1.22	4	41.15863	-81.26826	04110002-02-02

Inorganic Parameters	6/19/18	7/19/18	7/24/18	8/14/18	8/16/18	9/17/18
Alkalinity mg/L	127	249	230	230	227	235
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.114	.0938	.0558	.051	<.05	.314
Arsenic ug/L	2.61	2.37	2.83	2.74	2.87	2.7
Barium ug/L	40.8	69.8	66.5	76.4	73.3	98.3
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	49	91.2	90.3	100	95.5	106
CBOD20 mg/L		13.9			8.88	
Chloride mg/L	173		219	221		214
Chlorophyll ug/L		1.48			.599	
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	26.6	<20	28.7	63.7	<20	<20
Copper ug/L	4.08	2.74	2.91	2.3	2.75	2.06
DO mg/L	6.96	8.27	9.63	4.48	9.15	5.28
DOC mg/L	7.63	2.4	3.88	2.28	2.39	2.24
DOsat percent	77.6	85.1	109	48.3	102	57.1
Hardness mg/L	161	309	304	339	323	359
Iron ug/L	457	309	256	243	276	580
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	9.49	19.8	19.1	21.4	20.6	23.2
Manganese ug/L	55.8	106	87.1	97.8	84.7	180
Nickel ug/L	2.11	2.76	2.73	2.6	2.08	3.12
Nitrate, nitrite mg/L	.505	.473	.478	.221	<.1	.499
Nitrite mg/L	.029	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0408	.0384	.0351	.0196	.0165	.0246
pH su	7.63	7.83	7.88	7.8	7.98	7.74
Pheophytin ug/L		<1.4			3.01	
Phosphorus mg/L	.102	.0571	.0574	.0329	.0251	.0471
Potassium mg/L	2.96	3.11	3.21	3.12	3.09	4.01
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	111	108	110	115	109	134
Spcond umhos/cm	969	1220	1180	1880	1180	1940
Strontium ug/L	174	227	229	243	225	320
Sulfate mg/L	30	54.6	54.4	56	53	62.2
TDS mg/L	492	678	646	662	650	680
TempC deg C	20.6	16.6	21.4	18.8	20.7	18.9
TKN mg/L	.863	.598	.689	.478	.521	.638
TOC mg/L		2.7			2.79	
TSS mg/L	<5	<5	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S53		WAHOO DITCH AT RAVENNA @ MAIN ST.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-002	1.22	4	41.15863	-81.26826	04110002-02-02

Inorganic Parameters	10/1/18
Alkalinity mg/L	256
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.33
Barium ug/L	84.4
Cadmium ug/L	<.2
Calcium mg/L	106
CBOD20 mg/L	
Chloride mg/L	183
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	6.29
DOC mg/L	3.4
DOsat percent	62.6
Hardness mg/L	350
Iron ug/L	425
Lead ug/L	<2
Magnesium mg/L	21
Manganese ug/L	168
Nickel ug/L	3.04
Nitrate, nitrite mg/L	.493
Nitrite mg/L	<.02
Ortho-P mg/L	.0144
pH su	7.59
Pheophytin ug/L	
Phosphorus mg/L	.0251
Potassium mg/L	3.59
Selenium ug/L	<2
Sodium mg/L	107
Spcond umhos/cm	1080
Strontium ug/L	311
Sulfate mg/L	63.8
TDS mg/L	642
TempC deg C	15
TKN mg/L	.754
TOC mg/L	
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S59 CHIPPEWA CREEK UPST. BROADVIEW HEIGHTS LANDFILL

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-009-000	6.03	6	41.32433	-81.67205	04110002-05-03

Inorganic Parameters	7/9/18	7/26/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	207	211	126	198	240
Aluminum ug/L	<200	<200	542	<200	<200
Ammonia mg/L	.059	<.05	<.05	.0558	.0631
Arsenic ug/L	<2	<2	2.32	<2	<2
Barium ug/L	37.4	36	27.7	34.4	36.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	74.7	87.6	46.3	81.7	98.1
Chloride mg/L	94.3	91.5	70.4	80.4	92.7
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	32.1	<20	43.7	25.8	<20
Copper ug/L	3.53	2.59	4.47	3.07	<2
DO mg/L	6.98	8.9	8.11	8.53	9.69
DOsat percent	74.9	96.7	89.7	90.4	95.5
Hardness mg/L	264	325	158	301	369
Iron ug/L	249	137	799	227	222
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	18.9	25.8	10.4	23.5	30.1
Manganese ug/L	72.5	91.7	42.1	129	121
Nickel ug/L	2.31	2.95	<2	2.61	3.17
Nitrate, nitrite mg/L	.408	<.1	.518	.463	.104
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.87	7.91	7.86	7.59	7.83
Phosphorus mg/L	.0328	<.02	.0761	.0411	<.02
Potassium mg/L	3.63	3.1	3.81	3.75	3.77
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	60	54.6	52.2	56.7	59
Spcond umhos/cm	826	904	568	776	920
Strontium ug/L	413	577	233	632	723
Sulfate mg/L	85	121	46.5	119	149
TDS mg/L	492	568	332	516	596
TempC deg C	18.7	19.3	20.2	17.6	14.6
TKN mg/L	.759	.444	.845	.622	.36
TSS mg/L	<5	<5	7	<5	<5
Zinc ug/L	10.8	<10	20.7	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	5.11	47	41.07329	-81.48453	04110002-03-04

Inorganic Parameters	6/26/18	7/10/18	7/19/18	8/1/18	8/16/18	9/11/18
Alkalinity mg/L	186	202	209	193	201	128
Aluminum ug/L	<200	<200	<200	<200	<200	222
Ammonia mg/L	.0754	.0996	<.05	<.05	<.05	.0506
Arsenic ug/L	2.26	2.3	2.57	2.12	2.46	2.35
Barium ug/L	71.7	73.9	75	78.1	80.5	72
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	71.8	74.3	79	79.9	85.4	53.8
CBOD20 mg/L			11		9.43	
Chloride mg/L	132	146		147		79.4
Chlorophyll ug/L			.386		1.86	
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	22	33.5	<20	<20	<20	37.3
Copper ug/L	2.09	2.65	2.7	2.63	2.94	3.09
DO mg/L	8.92	8.92	7.64	8.32	8.11	9.94
DOC mg/L	3.37	3.19	3.08	4.03	3.04	5.84
DOsat percent	102	102	89.6	93.1	93.5	105
Hardness mg/L	244	252	271	270	289	183
Iron ug/L	460	333	211	220	212	734
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	15.8	16.2	17.9	17	18.5	11.9
Manganese ug/L	120	88.7	65.6	54.7	54.2	125
Nickel ug/L	2.42	2.47	2.53	2.86	2.19	2.06
Nitrate, nitrite mg/L	.499	.666	.593	.479	.46	.604
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0273	.0289	.0239	.0177	.0189	.0172
pH su	8.06	8.06	8.12	8.04	8.01	7.92
Pheophytin ug/L			1.64		<1.4	
Phosphorus mg/L	.0581	.0598	.0357	.0306	.0228	.0854
Potassium mg/L	2.69	2.98	3.14	3.31	3.56	3.48
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	75	77.9	87.7	91.7	92.6	51
Spcond umhos/cm	926	926	1005	870	1010	594
Strontium ug/L	225	236	253	272	276	200
Sulfate mg/L	53.4	60.5	62.3	56.8	60.9	38.6
TDS mg/L	504	526	568	526	568	358
TempC deg C	21.8	21.8	23.2	20.8	22.3	18
TKN mg/L	.67	.864	.642	.816	.648	.797
TOC mg/L			3.45		3.38	
TSS mg/L	6.5	<5	<5	<5	<5	18.5
Zinc ug/L	<10	<10	<10	<10	<10	12.1

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S82		L. CUYAHOGA R. AT AKRON @ BANK ST.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	5.11	47	41.07329	-81.48453	04110002-03-04

Inorganic Parameters	9/27/18
Alkalinity mg/L	145
Aluminum ug/L	<200
Ammonia mg/L	.0839
Arsenic ug/L	2.47
Barium ug/L	62.3
Cadmium ug/L	<.2
Calcium mg/L	52
CBOD20 mg/L	
Chloride mg/L	76.7
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	33.9
Copper ug/L	2.12
DO mg/L	9.72
DOC mg/L	6.58
DOsat percent	101
Hardness mg/L	179
Iron ug/L	397
Lead ug/L	<2
Magnesium mg/L	11.9
Manganese ug/L	76.2
Nickel ug/L	<2
Nitrate, nitrite mg/L	.523
Nitrite mg/L	.0297
Ortho-P mg/L	.0141
pH su	8
Pheophytin ug/L	
Phosphorus mg/L	.0591
Potassium mg/L	3.32
Selenium ug/L	<2
Sodium mg/L	47.3
Spcond umhos/cm	561
Strontium ug/L	186
Sulfate mg/L	33.8
TDS mg/L	344
TempC deg C	16.9
TKN mg/L	.871
TOC mg/L	
TSS mg/L	5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S84 L. CUYAHOGA R. AT AKRON @ MASSILLON RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	7.15	31	41.06037	-81.46266	04110002-03-03

Inorganic Parameters	6/14/18	6/26/18	6/28/18	7/5/18	7/10/18	8/1/18
Alkalinity mg/L		180			191	191
Aluminum ug/L		<200			<200	<200
Ammonia mg/L		.0536			.0684	<.05
Arsenic ug/L		2.28			2.29	2.06
Barium ug/L		72.7			73.8	77.1
Cadmium ug/L		<.2			<.2	<.2
Calcium mg/L		68.3			67.8	71.6
Chloride mg/L		108			111	116
Chromium ug/L		<2			<2	<2
COD mg/L		<20			21.9	<20
Copper ug/L		<2			<2	<2
DO mg/L		7.3			7.3	7.59
DOC mg/L		3.38			3.28	3.07
DOsat percent		84.5			84.5	85
E. coli	282	441	1140	19800		
Hardness mg/L		236			233	247
Iron ug/L		350			353	275
Lead ug/L		<2			<2	<2
Magnesium mg/L		15.8			15.4	16.6
Manganese ug/L		102			97.6	67.6
Nickel ug/L		2.1			2.28	2.35
Nitrate, nitrite mg/L		.42			.595	.529
Nitrite mg/L		<.02			<.02	<.02
Ortho-P mg/L		.0325			.0309	.0222
pH su		8.11			8.11	7.85
Phosphorus mg/L		.055			.0565	.0385
Potassium mg/L		2.41			2.36	2.81
Selenium ug/L		<2			<2	<2
Sodium mg/L		59.8			58	67.6
Spcond umhos/cm		790			790	810
Strontium ug/L		196			194	221
Sulfate mg/L		45.3			44.7	44.2
TDS mg/L		438			448	458
TempC deg C		22.5			22.5	20.8
TKN mg/L		.599			.798	.676
TSS mg/L		6			<5	<5
Zinc ug/L		<10			<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S84		L. CUYAHOGA R. AT AKRON @ MASSILLON RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	7.15	31	41.06037	-81.46266	04110002-03-03

Inorganic Parameters	9/11/18	9/27/18
Alkalinity mg/L	123	140
Aluminum ug/L	247	<200
Ammonia mg/L	.0746	.114
Arsenic ug/L	2.52	2.71
Barium ug/L	69.8	61.4
Cadmium ug/L	<.2	<.2
Calcium mg/L	48.7	46.7
Chloride mg/L	60.9	61.1
Chromium ug/L	<2	<2
COD mg/L	29.5	47
Copper ug/L	2.25	<2
DO mg/L	8.87	9.22
DOC mg/L	5.82	6.46
DOsat percent	93.8	95.9
E. coli		
Hardness mg/L	170	165
Iron ug/L	734	383
Lead ug/L	<2	<2
Magnesium mg/L	11.7	11.7
Manganese ug/L	134	86.8
Nickel ug/L	2.08	<2
Nitrate, nitrite mg/L	.573	.469
Nitrite mg/L	<.02	.0416
Ortho-P mg/L	.0223	.0161
pH su	7.75	7.79
Phosphorus mg/L	.0901	.0616
Potassium mg/L	3.27	3.15
Selenium ug/L	<2	<2
Sodium mg/L	37.6	34.9
Spcond umhos/cm	515	490
Strontium ug/L	177	159
Sulfate mg/L	35.2	29.3
TDS mg/L	310	306
TempC deg C	18	17.2
TKN mg/L	.768	.891
TSS mg/L	18	6.5
Zinc ug/L	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S88 L CUYAHOGA R UPST WINGFOOT LAKE OUTLET, DST UNIVERSAL MATRLS

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	11.20	17	41.05826	-81.39887	04110002-03-03

Inorganic Parameters	6/26/18	7/10/18	7/19/18	8/1/18	8/16/18	9/11/18
Alkalinity mg/L	145	158	210	166	203	111
Aluminum ug/L	<200	<200	<200	<200	<200	<200
Ammonia mg/L	.165	.196	<.05	.172	.0635	.141
Arsenic ug/L	2.82	2.92	2.78	2.62	2.9	3.14
Barium ug/L	71.5	74.3	81.9	85.7	90.6	69.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	48.5	50.8	70.4	57	78.2	38.6
CBOD20 mg/L			11.1		12.8	
Chloride mg/L	58.9	67.2		67.3		44.3
Chlorophyll ug/L			.407		.68	
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	<20	22.9	<20	<20	26	33.9
Copper ug/L	<2	<2	<2	<2	9.99	<2
DO mg/L	3.55	3.55	6.46	2.52	7	5.13
DOC mg/L	5.05	5.08	3.08	5.08	3.26	5.58
DOsat percent	42.3	42.3	76	29.1	80	55.5
Hardness mg/L	169	177	245	200	270	142
Iron ug/L	570	504	410	257	591	340
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	11.7	12.3	16.7	14.1	18.2	11.1
Manganese ug/L	277	339	162	551	192	183
Nickel ug/L	<2	<2	2.44	<2	2.05	<2
Nitrate, nitrite mg/L	.115	<.1	<.1	<.1	.454	.161
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.021	.0218	.0253	.0235	.0249	.0119
pH su	7.44	7.44	7.74	7.69	7.74	7.65
Pheophytin ug/L			<1.4		<1.4	
Phosphorus mg/L	.0799	.0682	.0472	.0488	.047	.113
Potassium mg/L	<2	<2	2.27	2.46	2.73	3.27
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	29	33.1	55.9	36.3	59.7	25
Spcond umhos/cm	554	554	825	620	815	406
Strontium ug/L	127	147	178	158	186	117
Sulfate mg/L	24.3	26.1	47.2	23.5	39.9	19.6
TDS mg/L	304	326	468	342	458	238
TempC deg C	24	24	23.3	22.4	21.8	19.1
TKN mg/L	.851	.937	.709	.873	.725	1.03
TOC mg/L			3.46		3.72	
TSS mg/L	7.5	<5	8	<5	12	18.5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01S88		L CUYAHOGA R UPST WINGFOOT LAKE OUTLET, DST UNIVERSAL MATRLS			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	11.20	17	41.05826	-81.39887	04110002-03-03

Inorganic Parameters	9/27/18
Alkalinity mg/L	120
Aluminum ug/L	<200
Ammonia mg/L	.433
Arsenic ug/L	3.59
Barium ug/L	55.4
Cadmium ug/L	<.2
Calcium mg/L	34.4
CBOD20 mg/L	
Chloride mg/L	43.1
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	4.75
DOC mg/L	5.83
DOsat percent	50.9
Hardness mg/L	129
Iron ug/L	195
Lead ug/L	<2
Magnesium mg/L	10.4
Manganese ug/L	147
Nickel ug/L	<2
Nitrate, nitrite mg/L	.293
Nitrite mg/L	.0287
Ortho-P mg/L	.0271
pH su	7.46
Pheophytin ug/L	
Phosphorus mg/L	.0672
Potassium mg/L	2.75
Selenium ug/L	<2
Sodium mg/L	23.1
Spcond umhos/cm	375
Strontium ug/L	106
Sulfate mg/L	16.9
TDS mg/L	224
TempC deg C	18.6
TKN mg/L	1.13
TOC mg/L	
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S90 CHESSIE TRIB. (4.11) AT AKRON @ EASTWOOD AVE.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-004	0.05	5	41.08610	-81.48690	04110002-03-04

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	255	263	257	154	219
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.0854	.0776	.0629	<.05	<.05
Arsenic ug/L	<2	<2	2.51	<2	<2
Barium ug/L	74.3	73.2	83	55.2	63.7
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	114	122	124	73.1	92.3
Chloride mg/L	239	241	226	137	170
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	25.9	33.5	<20	28.5	<20
Copper ug/L	<2	2.29	2.73	2.92	2.04
DO mg/L	9.78	9.78	8.16	9.63	9.34
DOsat percent	102	102	86.6	99.2	92.3
Hardness mg/L	389	402	416	246	312
Iron ug/L	643	948	2110	821	671
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	24.9	24	25.4	15.3	19.7
Manganese ug/L	191	188	314	102	143
Nickel ug/L	3.5	3.88	4.1	3.11	3.22
Nitrate, nitrite mg/L	.172	.177	.163	.495	.365
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.84	7.84	8	7.78	7.75
Phosphorus mg/L	<.02	<.02	<.02	.0583	<.02
Potassium mg/L	3.44	3.43	3.66	4.38	3.97
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	115	116	118	92.7	99.7
Spcond umhos/cm	1270	1270	1020	852	1040
Strontium ug/L	331	327	361	280	304
Sulfate mg/L	108	101	95.1	56.7	71.6
TDS mg/L	788	780	740	484	602
TempC deg C	17.2	17.2	18.1	16.7	14.7
TKN mg/L	.523	.625	.641	.513	.46
TSS mg/L	<5	54.5	18	10	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S92 SPRINGFIELD LAKE OUTLET @ MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-031-000	0.01	13	41.05946	-81.46327	04110002-03-03

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	195	237	200	120	152
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.126	.137	.0635	.108	<.05
Arsenic ug/L	2.09	2.47	2.09	2.3	2.25
Barium ug/L	64.2	81.3	63.1	59	61.5
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	78.3	108	78.3	47.7	57.4
Chloride mg/L	147	159	130	111	115
Chromium ug/L	<2	4.32	<2	<2	<2
COD mg/L	22.5	29.6	22.2	35.4	29.2
Copper ug/L	2.07	3.6	2.91	5.28	4.06
DO mg/L	6.54	6.54	5.23	8.8	9.74
DOsat percent	72	72	56.7	93.8	100
Hardness mg/L	259	341	258	158	189
Iron ug/L	360	658	305	518	399
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	15.5	17.4	15.3	9.56	11.2
Manganese ug/L	139	270	148	69.3	56.6
Nickel ug/L	2.36	3.46	2.63	<2	2.04
Nitrate, nitrite mg/L	.493	.499	.409	.459	.546
Nitrite mg/L	.0208	.0532	<.02	<.02	<.02
pH su	8.21	8.21	7.52	7.83	7.84
Phosphorus mg/L	.0492	.0382	.0337	.0758	.0517
Potassium mg/L	2.5	2.71	2.59	2.86	3.05
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	85.6	89.1	80.3	70.6	74.1
Spcond umhos/cm	1040	1040	852	707	749
Strontium ug/L	219	273	227	192	207
Sulfate mg/L	50.4	61.1	49.2	29.4	30.7
TDS mg/L	538	604	508	384	414
TempC deg C	19.9	19.9	19.1	18.4	16.7
TKN mg/L	.779	1.06	.863	.986	.988
TSS mg/L	6.5	5	<5	11.5	<5
Zinc ug/L	<10	12.6	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S94 WINGFOOT LAKE OUTLET @ UNNAMED ROAD AT MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-032-000	0.05	7	41.05486	-81.39856	04110002-03-03

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	234	249	249	182	163
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	.067	<.05
Arsenic ug/L	2.06	2.12	<2	<2	2.59
Barium ug/L	101	101	98.7	113	86.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	90.9	92.3	92.9	94.9	62
Chloride mg/L	101	105	101	76.6	53.7
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	20.7	23.1	<20	32.3	39.6
Copper ug/L	<2	<2	<2	2.21	<2
DO mg/L	9.4	9.4	8.66	10.7	8.96
DOsat percent	102	102	92.1	110	91.9
Hardness mg/L	311	317	321	316	209
Iron ug/L	429	400	251	586	473
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	20.5	20.9	21.6	19.3	13.1
Manganese ug/L	84	78.9	54.1	101	87.9
Nickel ug/L	2.92	3.01	3.03	3.32	2.2
Nitrate, nitrite mg/L	.665	.724	.679	2.2	.366
Nitrite mg/L	<.02	<.02	<.02	.0353	<.02
pH su	7.94	7.94	7.83	7.78	7.77
Phosphorus mg/L	.0388	.0422	.0314	.0501	.0664
Potassium mg/L	2.37	2.5	2.7	2.8	2.97
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	57.6	56.4	59.5	46.4	32
Spcond umhos/cm	887	887	885	816	513
Strontium ug/L	181	175	191	195	131
Sulfate mg/L	62	64.9	60.2	106	37.7
TDS mg/L	500	528	506	506	332
TempC deg C	19.2	19.2	18.2	16.7	16.6
TKN mg/L	.574	.502	<.6	.976	1.25
TSS mg/L	7	5	5	10	7
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S97 TRIB. TO L. CUYAHOGA R. (11.59) DST. SE AVE. & UNION OIL

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-006	0.50	3	41.06860	-81.39690	04110002-03-03

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	215	239	239	157	178
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	<.05	.509	<.05
Arsenic ug/L	2.38	2.42	2.49	2.15	2.09
Barium ug/L	84.6	92.2	104	75.9	69.4
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	79.3	87.2	94.9	60.4	59.5
Chloride mg/L	117	131	124	99.8	80.8
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	27	<20	22.6	33.1	92.1
Copper ug/L	<2	<2	<2	2.99	2.24
DO mg/L	6.75	6.75	7.63	9.01	9.28
DOsat percent	76.2	76.2	84	94.7	94.9
Hardness mg/L	271	299	325	201	200
Iron ug/L	190	118	117	396	408
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	17.8	19.6	21.3	12.1	12.5
Manganese ug/L	98	58.1	61.1	82.3	78.4
Nickel ug/L	2.26	2.36	2.57	2.1	2.16
Nitrate, nitrite mg/L	.517	.455	.47	1.42	1.21
Nitrite mg/L	<.02	<.02	<.02	.0649	<.02
pH su	7.89	7.89	8.09	7.74	7.73
Phosphorus mg/L	.0363	.0314	.0291	.0646	.0527
Potassium mg/L	<2	2.25	2.53	4.16	3.7
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	60.3	68.8	67.7	68	50.9
Spcond umhos/cm	933	933	910	847	628
Strontium ug/L	314	374	368	314	276
Sulfate mg/L	38	46.9	47.1	47.3	35.2
TDS mg/L	484	540	518	434	380
TempC deg C	21.2	21.2	20	17.6	16.3
TKN mg/L	.564	.564	.448	1.28	.751
TSS mg/L	<5	<5	<5	5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01S99 L. CUYAHOGA R. AT AKRON @ CUYAHOGA ST.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-030-000	2.14	54	41.09250	-81.51690	04110002-03-04

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18
Alkalinity mg/L	197	212	204	134	148
Aluminum ug/L	<200	<200	<200	337	<200
Ammonia mg/L	<.05	.0674	<.05	.0573	.0557
Arsenic ug/L	2.1	2.3	<2	2.36	2.45
Barium ug/L	73.8	78.5	73.6	69.1	57
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	85.4	86.8	83.3	55	51.5
Chloride mg/L	158	179	172	88	84.1
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	20.4	28.4	46	27.2	24.7
Copper ug/L	2.14	3.49	3.19	4.06	2.99
DO mg/L	8.16	8.16	8.32	9.2	9.52
DOC mg/L	3.14	3.1	3.44	5.78	6.17
DOsat percent	92.9	92.9	93	96.9	97.8
Hardness mg/L	289	292	281	187	176
Iron ug/L	197	476	154	870	444
Lead ug/L	<2	<2	<2	2.9	<2
Magnesium mg/L	18.4	18.3	17.7	12.2	11.6
Manganese ug/L	39.4	56.2	17.8	98.3	56.9
Nickel ug/L	2.72	3.13	3.02	2.56	2.3
Nitrate, nitrite mg/L	.464	.597	.458	.615	.5
Nitrite mg/L	<.02	<.02	<.02	<.02	.0212
Ortho-P mg/L	.0193	.0238	.0119	.0178	.0175
pH su	8.08	8.08	8.04	7.96	8.13
Phosphorus mg/L	.0323	<.02	<.02	.107	.0549
Potassium mg/L	3.18	3.28	3.36	3.51	3.21
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	93.2	95.1	97.3	54.3	48.6
Spcond umhos/cm	1120	1120	944	623	592
Strontium ug/L	278	287	290	212	189
Sulfate mg/L	64.2	70.7	63.4	39.8	37.2
TDS mg/L	568	598	582	380	366
TempC deg C	21.6	21.6	20.7	17.8	16.6
TKN mg/L	.78	<.3	.644	.912	.825
TSS mg/L	<5	5	<5	65.5	6
Zinc ug/L	<10	<10	<10	11.1	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01T02 CONGRESS LAKE OUTLET DST. WATERLOO RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-004	11.70	26	41.04400	-81.25745	04110002-02-01

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		213				230
Aluminum ug/L		216				<200
Ammonia mg/L		.133				.052
Arsenic ug/L		4.36				3.96
Barium ug/L		94.6				93.1
Cadmium ug/L		<.2				<.2
Calcium mg/L		84.3				83.6
Chloride mg/L		48.5				47.4
Chromium ug/L		<2				<2
COD mg/L		<20				<20
Copper ug/L		<2				<2
DO mg/L		5.85				7.23
DOsat percent		63.9				77.6
E. coli	493		328	6510	1610	
Hardness mg/L		287				286
Iron ug/L		994				607
Lead ug/L		<2				<2
Magnesium mg/L		18.5				18.7
Manganese ug/L		248				178
Nickel ug/L		2.84				2.79
Nitrate, nitrite mg/L		.679				.492
Nitrite mg/L		.0325				<.02
pH su		7.46				7.66
Phosphorus mg/L		.082				.0481
Potassium mg/L		2.48				2.26
Selenium ug/L		<2				<2
Sodium mg/L		23.3				20
Spcond umhos/cm		711				708
Strontium ug/L		164				156
Sulfate mg/L		68.5				73.2
TDS mg/L		412				402
TempC deg C		19.6				18.7
TKN mg/L		.617				.453
TSS mg/L		13				<5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01T02		CONGRESS LAKE OUTLET DST. WATERLOO RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-004	11.70	26	41.04400	-81.25745	04110002-02-01

Inorganic Parameters	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	220	190	230
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	.05	.0771	.0831
Arsenic ug/L	3.76	5.2	3.79
Barium ug/L	101	99.6	104
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	90.4	84.4	95.3
Chloride mg/L	43.9	45.3	44.8
Chromium ug/L	<2	<2	<2
COD mg/L	<20	27.6	25
Copper ug/L	<2	2.46	<2
DO mg/L	7.06	7.64	7.38
DOsat percent	74.7	82.4	73.6
E. coli			
Hardness mg/L	307	287	323
Iron ug/L	558	822	865
Lead ug/L	<2	<2	<2
Magnesium mg/L	19.7	18.6	20.6
Manganese ug/L	181	196	215
Nickel ug/L	2.51	2.71	2.96
Nitrate, nitrite mg/L	.365	.515	<.1
Nitrite mg/L	<.02	<.02	.0228
pH su	7.8	7.77	7.53
Phosphorus mg/L	.0422	.0972	.0616
Potassium mg/L	2.26	3.83	3.24
Selenium ug/L	<2	<2	<2
Sodium mg/L	19.9	24.3	22.3
Spcond umhos/cm	635	611	578
Strontium ug/L	164	178	191
Sulfate mg/L	70.2	63.3	85.8
TDS mg/L	420	388	428
TempC deg C	18	18.9	15.2
TKN mg/L	.403	.884	.727
TSS mg/L	<5	6	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-010-000	7.02	9	41.26020	-81.48910	04110002-04-04

Inorganic Parameters	7/9/18	7/26/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	140	143	116	112	169
Aluminum ug/L	230	<200	<200	298	<200
Ammonia mg/L	.0876	<.05	.0506	.139	.0618
Arsenic ug/L	3.27	4.27	3.99	2.93	2.97
Barium ug/L	34.8	37.2	32.5	33.3	43.2
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	41.3	42.7	37.5	36.6	50.7
Chloride mg/L	129	134	129	114	209
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	44.5	28.9	37.1	43.4	37.7
Copper ug/L	4.48	4.01	2.01	3.49	3.01
DO mg/L	7.25	7.3	7.15	7.87	7.13
DOsat percent	86.6	87.9	84.2	86.6	74.6
Hardness mg/L	135	142	128	122	171
Iron ug/L	1480	3570	966	812	1180
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	7.64	8.7	8.36	7.53	10.9
Manganese ug/L	239	270	142	79.4	292
Nickel ug/L	2.2	2.23	<2	<2	2.12
Nitrate, nitrite mg/L	.295	<.1	<.1	.453	.312
Nitrite mg/L	<.02	<.02	<.02	.0293	<.02
pH su	7.63	7.83	7.81		7.75
Phosphorus mg/L	.0774	.09	.104	.077	.034
Potassium mg/L	3.51	3.36	3.51	3.46	3.4
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	82.4	89.9	88.9	82.2	130
Spcond umhos/cm	732	715	727	689	960
Strontium ug/L	409	463	418	430	585
Sulfate mg/L	24	19.6	22.8	32.8	31.8
TDS mg/L	408	422	390	366	538
TempC deg C	24.2	24.6	23.5	19.9	17.4
TKN mg/L	1.33	1.07	1.47	1.04	.756
TSS mg/L	<5	10.5	10.5	5.5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W22 CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	69.96	159	41.28260	-81.22000	04110002-02-03

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	107			106	93.1	108
Aluminum ug/L	<200			238	<200	<200
Ammonia mg/L	<.05			<.05	<.05	<.05
Arsenic ug/L	<2			2.44	<2	<2
Barium ug/L	42.9			39	41.8	41.6
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	39.6			31.1	30.1	34.1
Chloride mg/L	45.8			37.6	41.6	46.3
Chromium ug/L	<2			<2	<2	<2
COD mg/L	21.8			26.9	22.4	<20
Copper ug/L	<2			<2	<2	<2
DO mg/L	7.25			5.79	6.54	6.43
DOsat percent	86.5			69.3	73.3	75.9
E. coli		269	101		86.6	187.2
Hardness mg/L	135			106	103	118
Iron ug/L	588			1220	516	284
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	8.82			6.87	6.69	7.95
Manganese ug/L	162			170	126	93.6
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	.338			.128	.211	.227
Nitrite mg/L	<.02			<.02	<.02	<.02
pH su	7.71			7.53	7.4	7.8
Phosphorus mg/L	.0434			.112	.056	.306
Potassium mg/L	2.28			<2	2.43	2.37
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	29.8			23.8	24.1	29.6
Spcond umhos/cm	381.6			293	353.1	349.2
Strontium ug/L	99.2			83.6	78.9	94.2
Sulfate mg/L	16.7			10.1	19.5	14.5
TDS mg/L	226			196	204	206
TempC deg C	24.2			24.3	20.8	23.6
TKN mg/L	.562			.451	.451	.527
TSS mg/L	5.5			10.5	5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W22		CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	69.96	159	41.28260	-81.22000	04110002-02-03

Inorganic Parameters	9/18/17
Alkalinity mg/L	110
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	<2
Barium ug/L	43.3
Cadmium ug/L	<.2
Calcium mg/L	32.7
Chloride mg/L	48.3
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	7.69
DOsat percent	83.9
E. coli	
Hardness mg/L	113
Iron ug/L	197
Lead ug/L	<2
Magnesium mg/L	7.49
Manganese ug/L	87.8
Nickel ug/L	<2
Nitrate, nitrite mg/L	.172
Nitrite mg/L	<.02
pH su	7.77
Phosphorus mg/L	.0521
Potassium mg/L	2.35
Selenium ug/L	<2
Sodium mg/L	28.2
Spcond umhos/cm	358.6
Strontium ug/L	86.4
Sulfate mg/L	15.9
TDS mg/L	224
TempC deg C	19.6
TKN mg/L	.635
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W28 POND BROOK JUST DST. OF TRIB.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-008-000	2.39	11	41.31860	-81.40040	04110002-05-01

Inorganic Parameters	6/28/18	8/2/18	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	108	127	105	122	119	113
Aluminum ug/L	279	345	540	<200	<200	320
Ammonia mg/L	.134	.163	.0691	.0748	.148	<.05
Arsenic ug/L	4.21	2.44	2.54	2.37	2.8	2.74
Barium ug/L	36.6	51.5	38.1	45.8	44.4	41.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	34.8	61.2	42.7	55.6	53.6	39.6
CBOD20 mg/L			19.2			
Chloride mg/L	134	183		177	142	123
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	43.4	27.5	45.5	32.4	40.6	59
Copper ug/L	4.48	5.4	4.67	4.28	3.76	2.34
DO mg/L	4.72		4.72	3.82	3.66	5.14
DOC mg/L	10.9	6.39	7.01	6.56	10.8	10.4
DOsat percent	55.3		55	42.5	40.7	51.9
Hardness mg/L	117	214	148	191	183	134
Iron ug/L	1770	828	1020	493	676	914
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	7.18	14.8	9.91	12.8	11.9	8.44
Manganese ug/L	252	109	76.3	95.4	61.2	67
Nickel ug/L	2.14	4.59	2.6	3.15	4.02	2.44
Nitrate, nitrite mg/L	.597	8.31	1.14	3.58	3.86	.97
Nitrite mg/L	<.02	.133	<.02	.0488	.0725	<.02
Ortho-P mg/L	.0764	.0355	.0866	.0272	.0422	.0277
pH su	7.29		7.06	7.73	8.21	7.42
Phosphorus mg/L	.21	.0844	.172	.0735	.0887	.0964
Potassium mg/L	3.05	7.02	4.01	4.88	6.08	3.66
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	82	112	81.4	106	89.9	80.3
Spcond umhos/cm	666		744	932	830	626
Strontium ug/L	362	747	463	622	636	393
Sulfate mg/L	15.6	56	37.6	43.1	46.9	21.4
TDS mg/L	388	562	428	544	492	374
TempC deg C	23.2		22.9	20.2	20.9	15.8
TKN mg/L	1.1	1.41	.981	.987	1.74	1.28
TOC mg/L			7.58			
TSS mg/L	10	16	19	5.5	<5	6.5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W37 FISH CREEK AT KENT @ N. RIVER RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-026-000	0.38	11	41.14580	-81.39720	04110002-03-05

Inorganic Parameters	6/14/18	6/26/18	6/28/18	7/5/18	7/9/18	7/19/18
Alkalinity mg/L					240	269
Aluminum ug/L					<200	<200
Ammonia mg/L					.053	<.05
Arsenic ug/L					2.3	2.94
Barium ug/L					78.7	93.6
Cadmium ug/L					<.2	<.2
Calcium mg/L					82.3	91.6
CBOD20 mg/L						12.4
Chloride mg/L					143	
Chlorophyll ug/L						<.28
Chromium ug/L					<2	<2
COD mg/L					29.1	<20
Copper ug/L					3	2.15
DO mg/L					8.45	8.99
DOC mg/L					5.92	4.05
DOsat percent					96.9	103
E. coli	281	623	576	6490		
Hardness mg/L					280	318
Iron ug/L					428	635
Lead ug/L					<2	<2
Magnesium mg/L					18	21.7
Manganese ug/L					96.1	138
Nickel ug/L					2.23	2.76
Nitrate, nitrite mg/L					.303	.211
Nitrite mg/L					<.02	<.02
Ortho-P mg/L					.0178	.0149
pH su					7.78	8.11
Pheophytin ug/L						<1.4
Phosphorus mg/L					.034	.0291
Potassium mg/L					2.66	2.81
Selenium ug/L					<2	<2
Sodium mg/L					76.1	71.5
Spcond umhos/cm					978	1020
Strontium ug/L					225	224
Sulfate mg/L					53.1	60.8
TDS mg/L					558	584
TempC deg C					22	21.9
TKN mg/L					.652	.708
TOC mg/L						4.18
TSS mg/L					<5	7.5
Zinc ug/L					<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W37		FISH CREEK AT KENT @ N. RIVER RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-026-000	0.38	11	41.14580	-81.39720	04110002-03-05

Inorganic Parameters	7/26/18	8/22/18	9/12/18	9/24/18
Alkalinity mg/L	259	171	132	249
Aluminum ug/L	<200	<200	<200	<200
Ammonia mg/L	<.05	<.05	.0756	<.05
Arsenic ug/L	2.29	2.2	2.83	2.42
Barium ug/L	89	69	60.2	87.7
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	92.4	65.6	52.8	90.4
CBOD20 mg/L				
Chloride mg/L	140	98.9	83	132
Chlorophyll ug/L				
Chromium ug/L	<2	<2	<2	<2
COD mg/L	23.7	27.9	57.2	40.3
Copper ug/L	<2	<2	3.48	<2
DO mg/L	8.86	7.8	8.4	8.24
DOC mg/L	4.24	4.81	17.2	9.82
DOsat percent	103	87.2	8.4	84.5
E. coli				
Hardness mg/L	318	221	174	304
Iron ug/L	213	417	883	662
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	21.2	14	10.2	19
Manganese ug/L	64.2	53.5	69.7	66.1
Nickel ug/L	2.9	<2	2.74	3.31
Nitrate, nitrite mg/L	.228	.227	.621	.318
Nitrite mg/L	<.02	<.02	.0269	<.02
Ortho-P mg/L	.0159	.0188	.081	.0197
pH su	7.98	7.81		7.84
Pheophytin ug/L				
Phosphorus mg/L	.0205	.0397	.144	.0287
Potassium mg/L	2.65	2.45	4.94	3.35
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	75.9	58.7	48.6	75.1
Spcond umhos/cm	1020	730	635	915
Strontium ug/L	223	180	167	235
Sulfate mg/L	55.9	38.8	49.6	58.4
TDS mg/L	600	436	392	592
TempC deg C	22.7	20.7	18.6	16.4
TKN mg/L	.576	.785	1.59	.894
TOC mg/L				
TSS mg/L	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W43 CUYAHOGA R. @ LTV FOOTBRIDGE

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	5.90	788	41.46330	-81.68060	04110002-06-05

Inorganic Parameters	6/13/17	7/20/17	8/7/17	8/22/17	9/18/17	7/9/18
Alkalinity mg/L	148	149	140	136	148	148
Aluminum ug/L	253	357	<200	319	811	451
Ammonia mg/L	.203	.164	.151	.342	.377	.109
Arsenic ug/L	2.5	2.93	2.44	2.67	2.88	2.95
Barium ug/L	48.6	43.9	38.3	37.6	44.7	38.1
BOD 5-Day mg/L	3.33	2.69	2.18	2.57	4.13	
Cadmium ug/L	<.2	<.2	<.2	<.2	.219	<.2
Calcium mg/L	69.8	64.1	61.8	61.4	70	53.6
CBOD20 mg/L						12.8
Chloride mg/L	153	140	148	147	176	136
Chlorophyll ug/L	8.7	8.55	10.4	13	7.93	5.67
Chromium ug/L	<2	<2	<2	<2	8.8	<2
COD mg/L	<20	<20	<20	23.7	23.4	25.5
Copper ug/L	4.13	3.8	3.36	4.24	8.24	5.69
DO mg/L	5.35	5.51	7.86	13.17		7.39
DOC mg/L	6.2	6.87	5.94	6.79	5.7	5.89
DOsat percent	63.6	67.4	89.7	157.3		87.3
Hardness mg/L	243	223	215	217	246	184
Iron ug/L	741	887	501	837	3040	1210
Lead ug/L	<2	<2	<2	<2	6.97	<2
Magnesium mg/L	16.8	15.2	14.6	15.4	17.2	12.2
Manganese ug/L	100	85.1	65.6	86.2	255	89.6
Nickel ug/L	4.89	4.46	5.23	5.57	8.21	4.55
Nitrate, nitrite mg/L	6.28	4.75	4.86	7.4	7.81	2.83
Nitrite mg/L	.0637	.0317	<.02	.0661	.0226	<.02
Ortho-P mg/L	.0934	.0814	.187	.193	.162	.06
pH su	7.72	7.91	7.91	7.71	7.64	7.64
Pheophytin ug/L	2.34	4.81	4.5	4.41	4.16	2.66
Phosphorus mg/L	.164	.312	.249	.258	.273	.114
Potassium mg/L	6.94	6.57	6.76	7.83	10.7	4.96
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	103	99.2	96	95.9	115	85.5
Spcond umhos/cm	873	857	598	877	1087	828
Strontium ug/L	260	241	244	235	251	241
Sulfate mg/L	71.1	60.5	64.8	75.1	88.3	50.2
TDS mg/L	562	538	522	548	644	472
TempC deg C	24	25.5	22.3	24.85	22.37	23.6
TKN mg/L	.784	.851	.46	.628	1.34	1.17
TOC mg/L	5.96	6.02	5.55	5.93	5.51	
TSS mg/L	11	23	8.5	22.5	66	25.5
Zinc ug/L	14.8	12	10.7	11	70.2	11.8

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W43		CUYAHOGA R. @ LTV FOOTBRIDGE			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	5.90	788	41.46330	-81.68060	04110002-06-05

Inorganic Parameters	7/26/18	8/8/18	8/22/18	8/29/18	9/12/18	9/24/18
Alkalinity mg/L	135	115	98.5	126	115	143
Aluminum ug/L	<200	802	560	<200	1180	295
Ammonia mg/L	.0647	.132	.309	<.05	.0712	.0787
Arsenic ug/L	2.35	2.46	2.29	2.68	3.43	2.59
Barium ug/L	35.9	35.9	31.7	38.2	45.8	45.9
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	53.7	48.6	41.2	54.3	45.1	65.1
CBOD20 mg/L	13.8	10.9	13.3	16	9.85	10.7
Chloride mg/L	142	124	104	140	96.4	142
Chlorophyll ug/L	14.2	9.7	4.91	16.4	10	3.36
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	21.8	25.8	25.9	34	38.9	27.7
Copper ug/L	4.13	5.33	4.2	3.39	5.57	4.67
DO mg/L	6.7	6.8	6.73		8.13	8.59
DOC mg/L	5.37		3.96		6.48	5.2
DOsat percent	81.3	80	78.5		88	93.8
Hardness mg/L	184	165	140	188	155	227
Iron ug/L	312	947	856	447	2440	814
Lead ug/L	<2	<2	<2	<2	3.53	<2
Magnesium mg/L	12.2	10.5	9.03	12.7	10.3	15.7
Manganese ug/L	66.4	56.1	45.4	50.2	133	72.2
Nickel ug/L	5.16	5.17	3.49	4.51	4.15	4.76
Nitrate, nitrite mg/L	4.34	2.92	2.68	4.5	1.53	5.24
Nitrite mg/L	.0299	<.02	.116	<.02	<.02	<.02
Ortho-P mg/L	.0272	.0489	.0706	.104	.0831	.0937
pH su	7.73	7.66	7.77		7.94	
Pheophytin ug/L	2.61	3.38	4.5	5	4.33	2.76
Phosphorus mg/L	.14	.192	.135	.152	.185	.138
Potassium mg/L	6.23	5.5	4.69	6.37	4.63	8.23
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	86.9	81.5	67.6	83	64	101
Spcond umhos/cm	907	766	621		793	851
Strontium ug/L	221	217	178	219	216	268
Sulfate mg/L	56	54.8	44.4	61.9	42.6	58.7
TDS mg/L	524	444	314	504	362	502
TempC deg C	25	23.4	22.9		19.1	19.9
TKN mg/L	1.1	1.17	1.29	.854	.915	<.9
TOC mg/L						
TSS mg/L	9	26	23	13.5	56.5	13
Zinc ug/L	<10	<10	10.4	<10	13	11.3

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W43		CUYAHOGA R. @ LTV FOOTBRIDGE			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	5.90	788	41.46330	-81.68060	04110002-06-05

Inorganic Parameters	10/9/18	5/16/19	5/30/19	6/12/19	6/26/19	7/8/19
Alkalinity mg/L	126	151	139	131	114	127
Aluminum ug/L	303	<200	264	438	658	636
Ammonia mg/L	.0601	.11	.143	.107	.0644	.102
Arsenic ug/L	2.45	2.01	<2	2.35	2.66	2.82
Barium ug/L	40.9	40.7	36.8	36.7	38	39.6
BOD 5-Day mg/L						
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	49.7	61	52.1	48.7	42.2	51.2
CBOD20 mg/L	<3	12.1	13.5	12.8	12.3	12.3
Chloride mg/L	96.1	138	129	97.4	71.8	104
Chlorophyll ug/L	6.29	3.62	4.62	3.14	3.36	3.64
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	27.8	<20	<20	22.5	31.6	23
Copper ug/L	6.1	3.62	3.8	3.82	3.6	5.02
DO mg/L	8.08	8.08	6.56	7.41	7.38	6.19
DOC mg/L	6.25	<2	5.46	6.52	6.77	5.45
DOsat percent	91.8	81.4	72.4	79.9	83.9	73.7
Hardness mg/L	171	210	182	167	143	176
Iron ug/L	882	642	523	1330	1960	1520
Lead ug/L	<2	<2	<2	<2	2.58	<2
Magnesium mg/L	11.3	14.1	12.7	11.1	9.21	11.7
Manganese ug/L	48.3	64.1	47.9	76.7	80.1	60.2
Nickel ug/L	3.52	4.35	4.25	4.15	4.04	5.61
Nitrate, nitrite mg/L	2.28	2.92	2.53	1.95	1.4	2.98
Nitrite mg/L	<.02	.0343	.0387	<.02	<.02	.0334
Ortho-P mg/L	.0738	.053	.0411	.0319	.0372	.0418
pH su	7.85	7.77	7.68	7.68	7.55	7.54
Pheophytin ug/L	2.84	3.91	3.12	1.84	3.17	2.39
Phosphorus mg/L	.122	.125	.0885	.105	.116	.121
Potassium mg/L	5.23	4.75	4.65	3.87	3.75	4.57
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	64.8	89.1	84.3	65.6	46.3	67.9
Spcond umhos/cm	680	932	808	729	493	637
Strontium ug/L	213	244	252	207	171	216
Sulfate mg/L	41.6	57.5	50.1	39.2	31	49
TDS mg/L	366	472	456	376	308	412
TempC deg C	21.5	15.6	20.1	19	21.6	24.1
TKN mg/L	.723	.992	1.16	.837	.651	.861
TOC mg/L						
TSS mg/L	15.5	12.5	11.5	28	54	24
Zinc ug/L	<10	<10	<10	11.1	15.1	10.2

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W43		CUYAHOGA R. @ LTV FOOTBRIDGE			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	5.90	788	41.46330	-81.68060	04110002-06-05

Inorganic Parameters	7/25/19	8/14/19	8/29/19	9/18/19	10/24/19
Alkalinity mg/L	136	137	140	130	144
Aluminum ug/L	263	231	<200	<200	<200
Ammonia mg/L	.075	.0734	.0974	.1	.0797
Arsenic ug/L	3.04	2.81	2.53	2.95	2.11
Barium ug/L	37.6	46.2	51.5	42.7	44.3
BOD 5-Day mg/L					
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	52.6	64.6	66.6	60.9	71
CBOD20 mg/L		13.1	12.1	14.5	9.25
Chloride mg/L	99.2	136	133	129	146
Chlorophyll ug/L	10.6	4.51	3.78	3.52	7.5
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	21.5	25.3	<20	<20	29.9
Copper ug/L	3.81	3.99	3.34	4.28	2.75
DO mg/L	6.72	6.56	6.87	6.86	8.55
DOC mg/L	6.53	5.42	5.39	5.18	5.28
DOsat percent	78.3	75.5	78.5	78.1	84.3
Hardness mg/L	180	224	230	210	248
Iron ug/L	767	623	372	431	380
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	11.8	15.3	15.5	14.1	17.1
Manganese ug/L	71.8	71.1	69.6	71.7	70.9
Nickel ug/L	3.78	4.81	4.52	5.23	5.74
Nitrate, nitrite mg/L	2.49	4.58	5.26	5.03	5.33
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0718	.0712	.0367	.0877	.0271
pH su	7.79	7.78	7.77	7.81	7.6
Pheophytin ug/L	2.52	3.69	1.27	1.99	<1.4
Phosphorus mg/L	.166	.137	.0627	.144	.0759
Potassium mg/L	4.64	5.76	7.06	6.66	8.04
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	66.8	91	97.4	85	106
Spcond umhos/cm	733	887	961	796	
Strontium ug/L	208	265	254	238	264
Sulfate mg/L	42.8	63.1	60.5	63.9	67.2
TDS mg/L	404	514	552	508	560
TempC deg C	22.9	22.2	21.8	21.7	14.6
TKN mg/L	1.04	1.02	1.11	.896	1.23
TOC mg/L					
TSS mg/L	23.5	16	7.5	9.5	<5
Zinc ug/L	<10	12.8	12.7	10.6	10.6

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W57 HAWTHORNE CREEK @ RICHMOND RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-008	0.75	7	41.38330	-81.48890	04110002-05-04

Inorganic Parameters	6/28/18	8/2/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	109	137	129	146	182
Aluminum ug/L	350	<200	<200	<200	<200
Ammonia mg/L	.0758	<.05	<.05	<.05	<.05
Arsenic ug/L	2.09	2.04	2.12	2.18	2.42
Barium ug/L	25	35.1	38.1	43.2	47.9
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	35.9	53.1	56.5	62.6	69.8
Chloride mg/L	232	264	260	273	244
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	28.5	<20	20.9	33.8	29.4
Copper ug/L	8.34	3.33	3.05	3.19	3.41
DO mg/L	7.71	7.76	7.64	4.92	6.86
DOsat percent	84.8	88	88.2	55.7	72.7
Hardness mg/L	115	178	191	211	234
Iron ug/L	718	117	98.6	112	159
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	6.2	11.1	12.2	13.2	14.4
Manganese ug/L	33.1	18.1	16.6	15.7	21.5
Nickel ug/L	2.53	2.54	2.02	2.44	2.43
Nitrate, nitrite mg/L	.452	<.1	<.1	<.1	.229
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02
pH su	7.83	8.2	8.12	8.07	7.93
Phosphorus mg/L	.0881	.151	.154	.141	.106
Potassium mg/L	2.98	3.28	3.71	4.17	4.58
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	137	151	154	169	165
Spcond umhos/cm	957	782	1060	1260	1170
Strontium ug/L	223	307	332	380	414
Sulfate mg/L	36.7	55.9	61.9	64.1	68.8
TDS mg/L	526	618	646	688	664
TempC deg C	19.9	21.4	22.4	20.9	18.1
TKN mg/L	.77	<.6	.548	.45	.71
TSS mg/L	9	<5	<5	<5	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W64 CUYAHOGA R. 0.55 MI. DST. L. CUYAHOGA R. @ GOLF COURSE

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	41.71	402	41.12447	-81.53138	04110002-04-05

Inorganic Parameters	6/26/18	7/10/18	8/1/18	9/11/18	9/27/18	9/4/19
Alkalinity mg/L	135	134	131	98.7	113	136
Aluminum ug/L	<200	<200	<200	515	542	<200
Ammonia mg/L	.0914	.307	.0603	.0716	.056	<.05
Arsenic ug/L	3.07	3.33	2.99	3.16	2.76	2.51
Barium ug/L	42	43.9	53.9	56.4	49.6	52.6
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	49.8	46.4	48.3	39.2	38.8	56.9
CBOD20 mg/L						15.1
Chloride mg/L	86.2	82.8	92.5	60.8	56.8	
Chlorophyll ug/L						6.86
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	21.8	34.8	<20	37.8	34.2	<20
Copper ug/L	4.53	4.98	2.51	4.38	4.09	2.05
DO mg/L	8.16	8.44	8.32	8.05	9.48	8.72
DOC mg/L						4.56
DOsat percent	96.5	105	98.1	88	101	100
Hardness mg/L	170	158	166	136	133	198
Iron ug/L	203	317	337	1560	1490	266
Lead ug/L	<2	<2	<2	2.08	<2	<2
Magnesium mg/L	11.1	10.1	11	9.31	8.71	13.6
Manganese ug/L	52.7	112	105	250	146	77.7
Nickel ug/L	<2	<2	2.37	2.33	2.54	2.15
Nitrate, nitrite mg/L	1.35	.85	1.04	.467	.841	1.34
Nitrite mg/L	.0575	.0522	<.02	<.02	<.02	<.02
Ortho-P mg/L						.0685
pH su	8.15	8.1	8.16	8.01	8.04	7.9
Pheophytin ug/L						7.07
Phosphorus mg/L	.0905	.12	.0819	.133	.114	.0524
Potassium mg/L	3.03	2.94	3.48	3.9	4.62	3.48
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	51.4	46.7	55.1	39.1	35.3	58.4
Spcond umhos/cm	625	568	616	445	419	649
Strontium ug/L	133	125	132	121	118	160
Sulfate mg/L	32.9	27.7	30.1	25.7	24.6	36.7
TDS mg/L	362	334	360	256	264	376
TempC deg C	23.7	26.5	23.5	19.6	18.6	22.3
TKN mg/L	.862	1.24	.837	.897	.786	.578
TOC mg/L						4.91
TSS mg/L	<5	<5	7	34.5	16.5	<5
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W70 CUYAHOGA R. @ STANDING ROCK CEMETERY (FREE FLOWING)

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	55.80	292	41.16500	-81.35170	04110002-03-05

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	112			113	124	125
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.0721			.0965	.0754	.0716
Arsenic ug/L	2.21			3.41	2.93	3.32
Barium ug/L	52.1			44.2	49.4	54.1
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	47			39	42.5	42.1
CBOD20 mg/L						
Chloride mg/L	51.5			51.4	61.3	56.8
Chlorophyll ug/L						
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			23.3	<20	<20
Copper ug/L	<2			2.28	3.34	2.29
DO mg/L	5.7			5.41	5.03	5.05
DOC mg/L						
DOsat percent	68.7			66.4	58.9	60.8
E. coli		225	74		184.2	49
Hardness mg/L	162			134	148	148
Iron ug/L	450			375	261	208
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	10.8			9.01	10.1	10.4
Manganese ug/L	191			251	139	166
Nickel ug/L	<2			<2	<2	<2
Nitrate, nitrite mg/L	.763			.493	1.06	1.07
Nitrite mg/L	<.02			<.02	<.02	<.02
Ortho-P mg/L						
pH su	7.85			7.97	7.81	7.91
Pheophytin ug/L						
Phosphorus mg/L	.039			.0758	.0699	.0761
Potassium mg/L	2.94			2.38	2.67	2.65
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	33.6			30.7	35.1	35
Spcond umhos/cm	427.5			392	494	440.1
Strontium ug/L	115			101	109	110
Sulfate mg/L	23.9			19.9	25.8	23.9
TDS mg/L	264			250	288	276
TempC deg C	24.5			25.7	23.2	24.7
TKN mg/L	.687			.681	.536	.612
TOC mg/L						
TSS mg/L	<5			5	<5	<5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W70		CUYAHOGA R. @ STANDING ROCK CEMETERY (FREE FLOWING)			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	55.80	292	41.16500	-81.35170	04110002-03-05

Inorganic Parameters	9/18/17	9/4/19
Alkalinity mg/L	125	110
Aluminum ug/L	<200	<200
Ammonia mg/L	.0679	.0936
Arsenic ug/L	2.34	3.09
Barium ug/L	52.1	49.9
Cadmium ug/L	<.2	<.2
Calcium mg/L	43.4	41.3
CBOD20 mg/L		7.12
Chloride mg/L	65	
Chlorophyll ug/L		16.2
Chromium ug/L	<2	<2
COD mg/L	<20	<20
Copper ug/L	2.76	<2
DO mg/L	6.58	6.07
DOC mg/L		5.22
DOsat percent	73.2	69.9
E. coli		
Hardness mg/L	152	144
Iron ug/L	206	375
Lead ug/L	<2	<2
Magnesium mg/L	10.7	9.95
Manganese ug/L	139	188
Nickel ug/L	2.03	<2
Nitrate, nitrite mg/L	1.85	.657
Nitrite mg/L	<.02	<.02
Ortho-P mg/L		.0199
pH su	7.92	7.38
Pheophytin ug/L		7.58
Phosphorus mg/L	.082	.0604
Potassium mg/L	3.27	2.75
Selenium ug/L	<2	<2
Sodium mg/L	40.3	30.5
Spcond umhos/cm	477	421
Strontium ug/L	112	107
Sulfate mg/L	29.6	21.3
TDS mg/L	312	250
TempC deg C	20.6	22.3
TKN mg/L	.656	.705
TOC mg/L		5.84
TSS mg/L	<5	6.5
Zinc ug/L	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W71 POTTER CREEK @ TRARES RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-005	1.47	3	41.04280	-81.29580	04110002-02-01

Inorganic Parameters	6/19/18	7/24/18	8/14/18	9/17/18	10/1/18
Alkalinity mg/L	207	225	217	193	217
Aluminum ug/L	<200	<200	<200	<200	<200
Ammonia mg/L	.116	.082	.0819	.248	.0877
Arsenic ug/L	4.93	5.36	5.18	4.57	3.55
Barium ug/L	81.3	88.6	98.9	98.5	91.3
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	75.3	81	86.1	85.5	84
Chloride mg/L	54.6	55.1	54.9	52.9	50.6
Chromium ug/L	<2	<2	<2	<2	<2
COD mg/L	<20	<20	22	30	24.5
Copper ug/L	<2	<2	<2	<2	<2
DO mg/L	6.65	7.6	7.42	7.74	8.02
DOsat percent	72	82.5	78.3	81.6	80.5
Hardness mg/L	256	278	296	294	287
Iron ug/L	706	478	521	793	630
Lead ug/L	<2	<2	<2	<2	<2
Magnesium mg/L	16.5	18.4	19.6	19.6	18.8
Manganese ug/L	203	183	255	194	164
Nickel ug/L	2.37	2.41	2.26	2.6	2.51
Nitrate, nitrite mg/L	1.71	.98	.831	1.22	1.12
Nitrite mg/L	.0533	.0319	.0301	.0624	.035
pH su	7.53	8.04	7.84	7.72	7.52
Phosphorus mg/L	.136	.113	.12	.14	.0945
Potassium mg/L	2.75	3.39	3.2	4.11	3.6
Selenium ug/L	<2	<2	<2	<2	<2
Sodium mg/L	23.9	22.8	22.2	26.5	24.5
Spcond umhos/cm	581	585	663	594	621
Strontium ug/L	151	158	156	171	173
Sulfate mg/L	47.1	49.5	52.9	56.2	58.4
TDS mg/L	388	390	402	410	396
TempC deg C	19.1	19	17.9	17.8	15.5
TKN mg/L	.635	.568	.525	1.01	.872
TSS mg/L	8.5	<5	<5	6	<5
Zinc ug/L	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W72 BLACK BROOK @ FOX RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-033-000	1.78	12	41.35060	-81.19610	04110002-01-05

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		104				120
Aluminum ug/L		248				<200
Ammonia mg/L		.101				.0756
Arsenic ug/L		2.45				3.07
Barium ug/L		45.6				42.5
Cadmium ug/L		<.2				<.2
Calcium mg/L		38.2				41.1
Chloride mg/L		33.1				48.7
Chromium ug/L		<2				<2
COD mg/L		24.6				24
Copper ug/L		<2				<2
DO mg/L		6.06				5.99
DOsat percent		71.1				72
E. coli	136		55	238	41	
Hardness mg/L		130				137
Iron ug/L		1160				613
Lead ug/L		<2				<2
Magnesium mg/L		8.39				8.43
Manganese ug/L		221				152
Nickel ug/L		2.18				<2
Nitrate, nitrite mg/L		.196				<.1
Nitrite mg/L		<.02				<.02
pH su		7.55				7.78
Phosphorus mg/L		.098				.0723
Potassium mg/L		2.39				<2
Selenium ug/L		<2				<2
Sodium mg/L		19				26.3
Spcond umhos/cm		350				404
Strontium ug/L		92				90.1
Sulfate mg/L		22.9				20
TDS mg/L		228				246
TempC deg C		23.3				24.6
TKN mg/L		.498				.597
TSS mg/L		6.5				5.5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W72		BLACK BROOK @ FOX RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-033-000	1.78	12	41.35060	-81.19610	04110002-01-05

Inorganic Parameters	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	115	131	162
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	.077	.0916	.0929
Arsenic ug/L	2.8	2.52	2.24
Barium ug/L	43.5	52.7	59.6
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	42.9	51.9	55.5
Chloride mg/L	49	42.3	37.9
Chromium ug/L	<2	<2	<2
COD mg/L	26.8	34.9	29.6
Copper ug/L	<2	<2	<2
DO mg/L	5.68	5.8	6.2
DOsat percent	67.3	65.5	68
E. coli			
Hardness mg/L	144	175	187
Iron ug/L	508	477	478
Lead ug/L	<2	<2	<2
Magnesium mg/L	8.94	11	11.8
Manganese ug/L	127	135	171
Nickel ug/L	<2	<2	2.59
Nitrate, nitrite mg/L	<.1	.434	.209
Nitrite mg/L	<.02	.021	<.02
pH su	7.59	7.77	7.72
Phosphorus mg/L	.0497	.0682	.046
Potassium mg/L	2.1	2.69	2.75
Selenium ug/L	<2	<2	<2
Sodium mg/L	27.2	24.5	18.7
Spcond umhos/cm	423	373	499
Strontium ug/L	91.9	114	119
Sulfate mg/L	21.9	32.8	39.9
TDS mg/L	268	298	292
TempC deg C	23.7	21.3	19.8
TKN mg/L	.589	.943	.837
TSS mg/L	<5	<5	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W74 BRIDGE CREEK @ TAYLOR MAY RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-035-000	8.46	14	41.37750	-81.26420	04110002-01-04

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		116				158
Aluminum ug/L		419				<200
Ammonia mg/L		.0529				<.05
Arsenic ug/L		2.53				<2
Barium ug/L		45.3				51.8
Cadmium ug/L		<.2				<.2
Calcium mg/L		38.4				54
Chloride mg/L		58.6				56.3
Chromium ug/L		<2				<2
COD mg/L		<20				<20
Copper ug/L		2.2				<2
DO mg/L		7.07				6.05
DOsat percent		84.2				70.6
E. coli	523		344	1330	2140	
Hardness mg/L		128				181
Iron ug/L		1230				211
Lead ug/L		<2				<2
Magnesium mg/L		7.71				11.2
Manganese ug/L		254				85.7
Nickel ug/L		2.04				<2
Nitrate, nitrite mg/L		.361				.447
Nitrite mg/L		<.02				<.02
pH su		7.63				7.59
Phosphorus mg/L		.126				.0391
Potassium mg/L		2.33				<2
Selenium ug/L		<2				<2
Sodium mg/L		33.8				28.6
Spcond umhos/cm		422				508
Strontium ug/L		93.4				113
Sulfate mg/L		14.8				21.5
TDS mg/L		276				304
TempC deg C		24.1				23
TKN mg/L		.736				.504
TSS mg/L		29.5				<5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W74		BRIDGE CREEK @ TAYLOR MAY RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-035-000	8.46	14	41.37750	-81.26420	04110002-01-04

Inorganic Parameters	8/14/18	9/17/18	10/10/18
Alkalinity mg/L	151	135	150
Aluminum ug/L	<200	<200	<200
Ammonia mg/L	<.05	.0799	<.05
Arsenic ug/L	<2	<2	<2
Barium ug/L	53.1	57.8	57.5
Cadmium ug/L	<.2	<.2	<.2
Calcium mg/L	56.7	50.8	51.7
Chloride mg/L	57.1	49.2	52.4
Chromium ug/L	<2	<2	<2
COD mg/L	154	38.3	<20
Copper ug/L	<2	<2	<2
DO mg/L	8.69	7.43	8.51
DOsat percent	100	83	98
E. coli			
Hardness mg/L	191	172	176
Iron ug/L	208	272	150
Lead ug/L	<2	<2	<2
Magnesium mg/L	12.1	11	11.3
Manganese ug/L	68.3	84.3	53.6
Nickel ug/L	<2	<2	<2
Nitrate, nitrite mg/L	.179	.436	.291
Nitrite mg/L	<.02	<.02	<.02
pH su	7.83	7.63	7.77
Phosphorus mg/L	.0313	.0362	.0236
Potassium mg/L	2.09	3.05	2.81
Selenium ug/L	<2	<2	<2
Sodium mg/L	30.3	28.2	28.6
Spcond umhos/cm	508	455	491
Strontium ug/L	115	116	114
Sulfate mg/L	20.9	21.7	20.4
TDS mg/L	314	276	272
TempC deg C	22.5	20.8	22
TKN mg/L	.445	.476	.544
TSS mg/L	<5	<5	<5
Zinc ug/L	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W75 BRIDGE CREEK DST. LADUE RESERVOIR @ STAFFORD RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-035-000	1.32	31	41.41377	-81.17527	04110002-01-04

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		79.9				87.2
Aluminum ug/L		534				<200
Ammonia mg/L		.254				.139
Arsenic ug/L		3.56				3.31
Barium ug/L		42.1				50.7
Cadmium ug/L		<.2				<.2
Calcium mg/L		28.7				30.8
CBOD20 mg/L						
Chloride mg/L		49.9				53.5
Chlorophyll ug/L						
Chromium ug/L		<2				<2
COD mg/L		<20				30.2
Copper ug/L		<2				<2
DO mg/L		6.41				5.86
DOC mg/L		5.62				5.26
DOsat percent		75.8				71
E. coli	54		128	81	85	
Hardness mg/L		94.7				102
Iron ug/L		1360				387
Lead ug/L		<2				<2
Magnesium mg/L		5.62				6.13
Manganese ug/L		574				333
Nickel ug/L		2.04				<2
Nitrate, nitrite mg/L		.223				.116
Nitrite mg/L		.0205				.0426
Ortho-P mg/L		.0158				.0164
pH su		7.51				7.61
Pheophytin ug/L						
Phosphorus mg/L		.0829				.066
Potassium mg/L		<2				2.03
Selenium ug/L		<2				<2
Sodium mg/L		27.6				30.1
Spcond umhos/cm		331				358
Strontium ug/L		67.1				77.8
Sulfate mg/L		14.9				13.3
TDS mg/L		206				210
TempC deg C		23.7				25.1
TKN mg/L		.605				.643
TOC mg/L						
TSS mg/L		35.5				<5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W75		BRIDGE CREEK DST. LADUE RESERVOIR @ STAFFORD RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-035-000	1.32	31	41.41377	-81.17527	04110002-01-04

Inorganic Parameters	8/14/18	8/16/18	9/17/18	10/10/18
Alkalinity mg/L	84.2	84.1	86.7	89.2
Aluminum ug/L	<200	<200	307	<200
Ammonia mg/L	.0889	.0925	.25	.143
Arsenic ug/L	2.79	2.96	3.13	2.55
Barium ug/L	30.8	45.3	63.7	50
Cadmium ug/L	<.2	<.2	<.2	<.2
Calcium mg/L	29.9	30.6	31.7	31.3
CBOD20 mg/L		13.2		
Chloride mg/L	53.7		53	52.1
Chlorophyll ug/L		4.94		
Chromium ug/L	<2	<2	<2	<2
COD mg/L	24.3	<20	31.6	23.5
Copper ug/L	2.66	<2	<2	<2
DO mg/L	7.43	7.54	4.48	5.61
DOC mg/L	5.63	5.55	5.42	5.49
DOsat percent	91.4	91.7	52	64.2
E. coli				
Hardness mg/L	99.8	102	107	105
Iron ug/L	153	121	761	239
Lead ug/L	<2	<2	<2	<2
Magnesium mg/L	6.09	6.23	6.73	6.62
Manganese ug/L	65.6	65.7	285	147
Nickel ug/L	<2	<2	<2	<2
Nitrate, nitrite mg/L	<.1	.157	.131	.15
Nitrite mg/L	.0243	.0524	.0304	<.02
Ortho-P mg/L	<.01	.0115	.0153	<.01
pH su	8.1	7.69	7.52	7.64
Pheophytin ug/L		1.5		
Phosphorus mg/L	.042	<.02	.0715	.0817
Potassium mg/L	<2	<2	2.35	2.12
Selenium ug/L	<2	<2	<2	<2
Sodium mg/L	29	29.9	31.6	29.7
Spcond umhos/cm	362	364	370	373
Strontium ug/L	73.8	75	84.8	82.6
Sulfate mg/L	14.1	12.5	13.1	14.9
TDS mg/L	218	202	216	202
TempC deg C	25.8	25.2	22.7	22
TKN mg/L	.573	.621	1.06	.764
TOC mg/L		6.67		
TSS mg/L	<5	<5	17	<5
Zinc ug/L	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-036-000	0.87	35	41.45060	-81.15890	04110002-01-02

Inorganic Parameters	6/14/18	6/19/18	6/26/18	6/28/18	7/5/18	7/24/18
Alkalinity mg/L		114				113
Aluminum ug/L		<200				<200
Ammonia mg/L		.0706				<.05
Arsenic ug/L		2.05				<2
Barium ug/L		47.4				48.3
Cadmium ug/L		<.2				<.2
Calcium mg/L		38.6				35.5
CBOD20 mg/L						
Chloride mg/L		55.8				43.2
Chlorophyll ug/L						
Chromium ug/L		<2				<2
COD mg/L		<20				34
Copper ug/L		18.1				<2
DO mg/L		5.42				1.77
DOC mg/L		5.2				5.99
DOsat percent		63.5				20.2
E. coli	422		184	2430	244	
Hardness mg/L		130				120
Iron ug/L		688				669
Lead ug/L		<2				<2
Magnesium mg/L		8.18				7.53
Manganese ug/L		203				130
Nickel ug/L		<2				<2
Nitrate, nitrite mg/L		.355				.284
Nitrite mg/L		<.02				<.02
Ortho-P mg/L		.0309				.0403
pH su		7.44				7.46
Pheophytin ug/L						
Phosphorus mg/L		.0723				.0755
Potassium mg/L		<2				<2
Selenium ug/L		<2				<2
Sodium mg/L		31.7				23
Spcond umhos/cm		401				361
Strontium ug/L		92.6				83.9
Sulfate mg/L		13				11.2
TDS mg/L		252				220
TempC deg C		23.2				22.1
TKN mg/L		<.3				.472
TOC mg/L						
TSS mg/L		<5				<5
Zinc ug/L		<10				<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W76		W. BR. CUYAHOGA R.@ RAPIDS RD.			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-036-000	0.87	35	41.45060	-81.15890	04110002-01-02

Inorganic Parameters	8/3/18	8/14/18	8/16/18	9/17/18	10/10/18
Alkalinity mg/L		112	120	113	109
Aluminum ug/L		<200	<200	<200	<200
Ammonia mg/L		.135	<.05	.0546	<.05
Arsenic ug/L		<2	2.25	<2	<2
Barium ug/L		48.8	55.1	55.1	49.3
Cadmium ug/L		<.2	<.2	<.2	<.2
Calcium mg/L		36.9	41.9	39.1	35.7
CBOD20 mg/L			11.5		
Chloride mg/L		47.2		40.5	42.9
Chlorophyll ug/L			1.11		
Chromium ug/L		<2	<2	<2	<2
COD mg/L		35.6	21.9	31.7	25.1
Copper ug/L		<2	<2	<2	<2
DO mg/L		5.37	7.25	6.05	5.38
DOC mg/L		6.28	5.77	5.81	6.49
DOsat percent		60.4	83.6	67.2	59.1
E. coli	304				
Hardness mg/L		125	142	134	122
Iron ug/L		707	589	713	630
Lead ug/L		<2	<2	<2	<2
Magnesium mg/L		7.95	9	8.74	8
Manganese ug/L		141	141	149	84.5
Nickel ug/L		<2	<2	<2	<2
Nitrate, nitrite mg/L		.269	.233	.457	.189
Nitrite mg/L		<.02	<.02	<.02	<.02
Ortho-P mg/L		.0377	.0305	.0421	.0434
pH su		7.51	7.46	7.6	7.53
Pheophytin ug/L			<1.4		
Phosphorus mg/L		.0724	.05	.0665	.0641
Potassium mg/L		<2	<2	2.96	3.28
Selenium ug/L		<2	<2	<2	<2
Sodium mg/L		24.9	28.3	24.8	24.5
Spcond umhos/cm		387	406	369	367
Strontium ug/L		87.8	97.8	96.9	92.3
Sulfate mg/L		10.3	10.8	11	10.5
TDS mg/L		238	228	222	208
TempC deg C		21.1	22.3	20.5	19.9
TKN mg/L		.433	.464	.486	.426
TOC mg/L			6.51		
TSS mg/L		<5	<5	<5	<5
Zinc ug/L		<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W77 CUYAHOGA R. @ RUSSELL PARK

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	83.80	82	41.42500	-81.15670	04110002-01-06

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	115			115	98.6	111
Aluminum ug/L	355			827	900	<200
Ammonia mg/L	.195			.117	<.05	<.05
Arsenic ug/L	2.01			3.11	<2	2
Barium ug/L	59.6			52.8	49.9	44.8
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	39.6			32.6	28.5	31.1
Chloride mg/L	52.1			43.1	42	41.2
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			35.7	26.2	<20
Copper ug/L	<2			2.05	2.14	<2
DO mg/L	3.38			3.26	4.08	3.87
DOsat percent	39.4			39	44.7	45.2
E. coli		399	108		233.4	300.8
Hardness mg/L	137			112	98.4	108
Iron ug/L	1190			2600	1850	722
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	9.17			7.47	6.58	7.26
Manganese ug/L	563			622	197	208
Nickel ug/L	<2			2.42	2.05	<2
Nitrate, nitrite mg/L	.576			.431	.189	.303
Nitrite mg/L	.0464			<.02	<.02	<.02
pH su	7.32			7.49	7.19	7.46
Phosphorus mg/L	.0725			.218	.106	.0772
Potassium mg/L	3.3			2.75	2.61	2.77
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	38.9			29.2	26.1	27.9
Spcond umhos/cm	416.1			314	323.1	327.5
Strontium ug/L	111			93.8	81.8	88.2
Sulfate mg/L	15.3			10.4	15.1	11.1
TDS mg/L	238			208	202	198
TempC deg C	23			24.1	19.8	23.1
TKN mg/L	.743			.991	.611	.434
TSS mg/L	5.5			64.5	37.5	5.5
Zinc ug/L	<10			<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W77		CUYAHOGA R. @ RUSSELL PARK			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	83.80	82	41.42500	-81.15670	04110002-01-06

Inorganic Parameters	9/18/17
Alkalinity mg/L	130
Aluminum ug/L	331
Ammonia mg/L	<.05
Arsenic ug/L	<2
Barium ug/L	52.1
Cadmium ug/L	<.2
Calcium mg/L	37.5
Chloride mg/L	46.7
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	<2
DO mg/L	4.82
DOsat percent	51.6
E. coli	
Hardness mg/L	131
Iron ug/L	906
Lead ug/L	<2
Magnesium mg/L	8.98
Manganese ug/L	230
Nickel ug/L	2.05
Nitrate, nitrite mg/L	.323
Nitrite mg/L	<.02
pH su	7.62
Phosphorus mg/L	.0759
Potassium mg/L	3.25
Selenium ug/L	<2
Sodium mg/L	32.9
Spcond umhos/cm	386.4
Strontium ug/L	102
Sulfate mg/L	15.3
TDS mg/L	238
TempC deg C	18.4
TKN mg/L	.529
TSS mg/L	12.5
Zinc ug/L	45.7

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F01W83 BREAKNECK CREEK NEAR MOUTH

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	0.05	79	41.16949	-81.33769	04110002-02-02

Inorganic Parameters	6/19/18	7/19/18	7/24/18	8/14/18	8/16/18	9/17/18
Alkalinity mg/L	183	195	171	178	178	140
Aluminum ug/L	204	<200	<200	<200	<200	<200
Ammonia mg/L	.0735	<.05	<.05	<.05	<.05	.442
Arsenic ug/L	4.1	4.37	4.07	4.37	4.33	4.03
Barium ug/L	68.6	70	65.8	69.7	67.4	71.8
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	71.2	78.6	66.6	73.2	74.3	61.2
CBOD20 mg/L		12.2			13.4	
Chloride mg/L	88.9		102	105		71.7
Chlorophyll ug/L		1.7			.783	
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	22.3	22	36	30.3	36.3	49.4
Copper ug/L	2.34	2.39	2.97	2.86	2.87	2.5
DO mg/L	5.88	9.71	6.95	6.56	7.62	6.9
DOC mg/L	5.67	5.19	5.74	4.84	4.51	10.2
DOsat percent	69.6	115	80	73.5	88.3	77.4
Hardness mg/L	244	272	231	255	259	211
Iron ug/L	595	276	498	357	219	761
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	16.1	18.3	15.8	17.5	17.8	14.2
Manganese ug/L	177	112	139	120	94.7	172
Nickel ug/L	2.9	2.6	2.86	2.9	2.45	2.72
Nitrate, nitrite mg/L	3.48	4.39	4.98	6.24	5.91	2.19
Nitrite mg/L	<.02	<.02	<.02	.0948	<.02	.02
Ortho-P mg/L	.0852	.125	.105	.161	.164	.0915
pH su	7.69	8.21	7.72	7.82	7.83	7.73
Pheophytin ug/L		<1.4			<1.4	
Phosphorus mg/L	.148	.146	.152	.213	.187	.137
Potassium mg/L	4.19	5.49	4.92	5.51	5.62	5.55
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	51.2	58	62.1	66	67.2	45.9
Spcond umhos/cm	688	793	746	900	845	563
Strontium ug/L	168	180	159	166	167	160
Sulfate mg/L	57.9	63.9	55.1	61.8	59.8	46.8
TDS mg/L	458	476	458	490	474	396
TempC deg C	23.7	23.6	22.1	20.8	22.6	20.9
TKN mg/L	<.6	.934	.957	1.1	.65	1.25
TOC mg/L		5.43			5.03	
TSS mg/L	12.5	<5	<5	<5	<5	6
Zinc ug/L	<10	<10	<10	<10	<10	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F01W83		BREAKNECK CREEK NEAR MOUTH			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-028-000	0.05	79	41.16949	-81.33769	04110002-02-02

Inorganic Parameters	10/1/18
Alkalinity mg/L	160
Aluminum ug/L	<200
Ammonia mg/L	.0556
Arsenic ug/L	3.56
Barium ug/L	63
Cadmium ug/L	<.2
Calcium mg/L	59.4
CBOD20 mg/L	
Chloride mg/L	73.9
Chlorophyll ug/L	
Chromium ug/L	<2
COD mg/L	37.5
Copper ug/L	2.07
DO mg/L	8.21
DOC mg/L	10.3
DOsat percent	85.1
Hardness mg/L	206
Iron ug/L	837
Lead ug/L	<2
Magnesium mg/L	13.9
Manganese ug/L	123
Nickel ug/L	2.59
Nitrate, nitrite mg/L	2.21
Nitrite mg/L	<.02
Ortho-P mg/L	.0877
pH su	7.42
Pheophytin ug/L	
Phosphorus mg/L	.137
Potassium mg/L	5.61
Selenium ug/L	<2
Sodium mg/L	46.6
Spcond umhos/cm	597
Strontium ug/L	158
Sulfate mg/L	45.6
TDS mg/L	388
TempC deg C	17
TKN mg/L	.964
TOC mg/L	
TSS mg/L	<5
Zinc ug/L	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F99Q02 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	10.30	744	41.42122	-81.65907	04110002-06-04

Inorganic Parameters	6/13/17	7/7/17	7/19/17	7/20/17	8/7/17	8/22/17
Alkalinity mg/L	146			152	147	144
Aluminum ug/L	<200			<200	<200	<200
Ammonia mg/L	.0707			.0688	<.05	.084
Arsenic ug/L	2.36			2.51	2.31	2.46
Barium ug/L	42.7			42	39.8	40.7
BOD 5-Day mg/L	3.19			2.92	2.54	2.52
Cadmium ug/L	<.2			<.2	<.2	<.2
Calcium mg/L	68.9			63	64.3	63.8
Chloride mg/L	154			130	157	152
Chlorophyll ug/L	9.34			8.31	6.97	12
Chromium ug/L	<2			<2	<2	<2
COD mg/L	<20			20.8	<20	20.4
Copper ug/L	4.38			3.61	3.43	3.78
DO mg/L	8.25			6.94	12.62	10.42
DOC mg/L	6.1			6.91	5.7	6.52
DOsat percent	98.2			84.9	140.3	124.3
E. coli		5170	140		161	122
Hardness mg/L	242			220	226	225
Iron ug/L	265			357	379	362
Lead ug/L	<2			<2	<2	<2
Magnesium mg/L	17.1			15.3	15.8	15.9
Manganese ug/L	46.2			42.2	47.5	42.8
Nickel ug/L	4.9			3.39	4.56	4.05
Nitrate, nitrite mg/L	7.91			4.93	5.84	7.41
Nitrite mg/L	.0894			.0239	<.02	.0963
Ortho-P mg/L	.137			.0936	.173	.202
pH su	7.8			8.05	7.95	7.91
Pheophytin ug/L	2.77			4.54	5.18	4.21
Phosphorus mg/L	.249			.151	.23	.289
Potassium mg/L	8.14			6.71	6.55	7.14
Selenium ug/L	<2			<2	<2	<2
Sodium mg/L	108			93.7	102	99.6
Spcond umhos/cm	897			835	1191	902
Strontium ug/L	262			230	248	240
Sulfate mg/L	71.5			57.8	68	71
TDS mg/L	572			518	548	560
TempC deg C	24.2			25.4	22.16	24.47
TKN mg/L	.738			.888	.707	.233
TOC mg/L	5.86			6.24	5.4	5.81
TSS mg/L	11			14	8.5	16.5
Zinc ug/L	13.8			11.4	10.7	<10

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

F99Q02		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP			
River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-001-000	10.30	744	41.42122	-81.65907	04110002-06-04

Inorganic Parameters	9/18/17
Alkalinity mg/L	112
Aluminum ug/L	<200
Ammonia mg/L	<.05
Arsenic ug/L	2.33
Barium ug/L	18.2
BOD 5-Day mg/L	2.42
Cadmium ug/L	<.2
Calcium mg/L	54.1
Chloride mg/L	139
Chlorophyll ug/L	1.57
Chromium ug/L	<2
COD mg/L	<20
Copper ug/L	3.52
DO mg/L	
DOC mg/L	5.43
DOsat percent	
E. coli	
Hardness mg/L	196
Iron ug/L	141
Lead ug/L	<2
Magnesium mg/L	14.8
Manganese ug/L	13.2
Nickel ug/L	8.29
Nitrate, nitrite mg/L	14.1
Nitrite mg/L	<.02
Ortho-P mg/L	.363
pH su	7.88
Pheophytin ug/L	<.7
Phosphorus mg/L	.416
Potassium mg/L	14.1
Selenium ug/L	<2
Sodium mg/L	108
Spcond umhos/cm	964
Strontium ug/L	237
Sulfate mg/L	89.3
TDS mg/L	594
TempC deg C	22.21
TKN mg/L	1.01
TOC mg/L	5.7
TSS mg/L	<5
Zinc ug/L	13.9

Appendix Table 1. Inorganic chemistry and field parameter results for the Cuyahoga basin survey 2017 & 18.

Station: F99Q10 TINKERS CREEK SE OF HUDSON @ SEASONS RD.

River Code	River Mile	Drainage Area	Lat	Long	Hydro Unit
19-007-000	28.80	4	41.21573	-81.37301	04110002-05-02

Inorganic Parameters	6/28/18	8/2/18	8/7/18	8/15/18	9/19/18	10/1/18
Alkalinity mg/L	138	261	254	248	226	222
Aluminum ug/L	411	<200	<200	<200	<200	378
Ammonia mg/L	.0825	<.05	.056	<.05	.065	<.05
Arsenic ug/L	3.03	2.67	2.82	2.7	3.7	3.99
Barium ug/L	42.3	85.5	82.9	87.1	81.8	72
Cadmium ug/L	<.2	<.2	<.2	<.2	<.2	<.2
Calcium mg/L	39.6	96.9	93.1	97.1	83.6	74.8
CBOD20 mg/L			10.4			
Chloride mg/L	54.9	83.8		83.4	63	59.1
Chlorophyll ug/L			.581			
Chromium ug/L	<2	<2	<2	<2	<2	<2
COD mg/L	139	<20	<20	<20	35.4	46
Copper ug/L	4.31	<2	<2	<2	<2	<2
DO mg/L	6.02	9.35	7.31	7.48	6.08	5.08
DOC mg/L	13.4	<2	2.26	<2	8.04	10.5
DOsat percent	68.3	103	80.7	77.7	64.2	50.1
Hardness mg/L	134	331	317	332	287	258
Iron ug/L	1580	463	323	463	899	1580
Lead ug/L	<2	<2	<2	<2	<2	<2
Magnesium mg/L	8.48	21.6	20.5	21.7	19	17.3
Manganese ug/L	95.6	112	67	92	138	395
Nickel ug/L	2.42	2.68	2.41	2.69	2.41	2.7
Nitrate, nitrite mg/L	.115	.137	<.1	.158	<.1	.108
Nitrite mg/L	<.02	<.02	<.02	<.02	<.02	<.02
Ortho-P mg/L	.0721	.0119	.0121	<.01	.0277	.029
pH su	7.5	8.1	7.92	8.07	7.55	8.06
Pheophytin ug/L			<1.4			
Phosphorus mg/L	.162	<.02	<.02	.0274	.0545	.0822
Potassium mg/L	2.98	2.46	2.33	2.28	2.76	3.62
Selenium ug/L	<2	<2	<2	<2	<2	<2
Sodium mg/L	30.7	45	41.7	43.3	33.8	34.1
Spcond umhos/cm	442	825	812	825	659	602
Strontium ug/L	117	178	174	178	172	174
Sulfate mg/L	18.2	64.4	63.1	68.2	47.3	40.4
TDS mg/L	268	480	488	506	440	398
TempC deg C	21.5	20	20	17.1	17.9	14.6
TKN mg/L	1.02	.335	.341	.34	.925	.885
TOC mg/L			2.58			
TSS mg/L	11.5	<5	<5	<5	<5	19.5
Zinc ug/L	<10	<10	<10	<10	<10	<10

¡ Deteced in Blank; º Exceeds Calibration; ¿ QC Criteria Not Met; ¹ Invalid Colony Count; ¥ CoAnalyeCorrelation; £ Matrix Interference; ªEstimatedValue; ¯Holding/Shipping Time Exceeded; ¤ PesticideGCDiff

Appendix K - Surface Water Organic Chemistry Results

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

200005 CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	2.74	806.0	04110002-06-05	41.48810	-81.69330

	2017/9/18
4-Chloro-3-methylphenol	<10.4
Acenaphthene	<2.08
Acenaphthylene	<2.08
Acetophenone	<2.08
Acetylaminofluorene, 2-	<2.08
Aldrin	<.0021
Aniline	<2.08
Anthracene	<2.08
Benzo[a]anthracene	<2.08
Benzo[a]pyrene	<2.08
Benzo[b]fluoranthene	<2.08
Benzo[g,h,i]perylene	<2.08
Benzo[k]fluoranthene	<2.08
Benzyl alcohol	<2.08
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.08
bis(2-chloroethyl) ether	<2.08
bis(2-Chloroisopropyl) ether	<2.08
bis(2-ethylhexyl) phthalate (DEHP)	<2.08
bis(n-octyl) phthalate	<2.08
Bromophenyl-4 phenyl ether	<2.08
Butyl benzyl phthalate	<2.08
Chloronaphthalene-2	<2.08
Chlorophenol-2	<2.08
Chlorophenyl-4 phenyl ether	<2.08
Chrysene	<2.08
Cresol, o-	<2.08
Cresol, p-	<2.08
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.08
Dibenzofuran	<2.08
Dibutyl phthalate	<2.08
Dichlorobenzene, 1,2-	<2.08
Dichlorobenzene, 1,3-	<2.08
Dichlorobenzene, 1,4-	<2.08
Dichlorobenzidine, 3,3'-	<2.08
Dichlorophenol, 2,4-	<2.08
Dichlorophenol, 2,6-	<2.08
Dieldrin	<.0021
Diethyl phthalate	<2.08
Dimethyl phthalate	<2.08

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

200005 CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	2.74	806.0	04110002-06-05	41.48810	-81.69330

	2017/9/18
Dimethylaminoazobenzene, 4-	<2.08
Dimethylbenz(a)anthracene, 7,12-	<2.08
Dimethylphenol, 2,4-	<2.08
Dinitrobenzene, m-	<2.08
Dinitro-o-cresol	<10.4
Dinitrophenol, 2,4-	<10.4
Dinitrotoluene, 2,4-	<2.08
Dinitrotoluene, 2,6-	<2.08
Diphenylamine	<2.08
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.08
Endosulfan sulfate	<.0207
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.08
Fluoranthene	<2.08
Fluorene	<2.08
Heptachlor	<.0021
Heptachlor epoxide	.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.08
Hexachlorocyclopentadiene	<2.08
Hexachloroethane	<2.08
Hexachloropropene	<2.08
Indeno[1,2,3-cd]pyrene	<2.08
Isophorone	<2.08
Methoxychlor	<.0104
Methyl methanesulfonate	<2.08
Methylcholanthrene, 3-	<2.08
Methylnaphthalene, 2-	<2.08
Mirex	<.0104
Naphthalene	<2.08
Naphthalenedione, 1,4-	<2.08
Nitroaniline, 2-	<2.08
Nitroaniline, 4-	<2.08
Nitro-benzene	<2.08
Nitrophenol, 2-	<2.08
Nitrophenol, 4-	<10.4
Nitrosodibutylamine, n-	<2.08
Nitrosodipropylamine, n-	<2.08
Nitrosomorpholine, n-	<2.08
Nitrosopiperidine, n-	<2.08
Nitrosopyrrolidine, n-	<2.08
PCB-Aroclor 1016	<.104
PCB-Aroclor 1221	<.104

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

200005		CUYAHOGA R. AT CLEVELAND @ SCRANTON FLATS			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	2.74	806.0	04110002-06-05	41.48810	-81.69330

	2017/9/18
PCB-Aroclor 1232	<.104
PCB-Aroclor 1242	<.104
PCB-Aroclor 1248	<.104
PCB-Aroclor 1254	<.104
PCB-Aroclor 1260	<.104
Pentachlorobenzene	<2.08
Pentachlorophenol (PCP)	<10.4
Phenacetin	<2.08
Phenanthrene	<2.08
Phenol	<2.08
Picoline, 2-	<2.08
Pronamide	<2.08
Pyrene	<2.08
Safrole	<2.08
Tetrachlorobenzene, 1,2,4,5-	<2.08
Tetrachlorophenol, 2,3,4,6-	<2.08
Trichlorobenzene, 1,2,4-	<2.08
Trichlorophenol, 2,4,5-	<2.08
Trichlorophenol, 2,4,6- (TCPh)	<2.08

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	48.70	331.0	04110002-03-05	41.14920	-81.45670

	2017/8/22
4-Chloro-3-methylphenol	<10.4167
Acenaphthene	<2.0833
Acenaphthylene	<2.0833
Acetophenone	<2.0833
Acetylaminofluorene, 2-	<2.0833
Aldrin	<.0021
Aniline	<2.0833
Anthracene	<2.0833
Benzo[a]anthracene	<2.0833
Benzo[a]pyrene	<2.0833
Benzo[b]fluoranthene	<2.0833
Benzo[g,h,i]perylene	<2.0833
Benzo[k]fluoranthene	<2.0833
Benzyl alcohol	<2.0833
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.0833
bis(2-chloroethyl) ether	<2.0833
bis(2-Chloroisopropyl) ether	<2.0833
bis(2-ethylhexyl) phthalate (DEHP)	<2.0833
bis(n-octyl) phthalate	<2.0833
Bromophenyl-4 phenyl ether	<2.0833
Butyl benzyl phthalate	<2.0833
Chloronaphthalene-2	<2.0833
Chlorophenol-2	<2.0833
Chlorophenyl-4 phenyl ether	<2.0833
Chrysene	<2.0833
Cresol, o-	<2.0833
Cresol, p-	<2.0833
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.0833
Dibenzofuran	<2.0833
Dibutyl phthalate	<2.0833
Dichlorobenzene, 1,2-	<2.0833
Dichlorobenzene, 1,3-	<2.0833
Dichlorobenzene, 1,4-	<2.0833
Dichlorobenzidine, 3,3'-	<2.0833
Dichlorophenol, 2,4-	<2.0833
Dichlorophenol, 2,6-	<2.0833
Dieldrin	<.0021
Diethyl phthalate	<2.0833
Dimethyl phthalate	<2.0833

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	48.70	331.0	04110002-03-05	41.14920	-81.45670

	2017/8/22
Dimethylaminoazobenzene, 4-	<2.0833
Dimethylbenz(a)anthracene, 7,12-	<2.0833
Dimethylphenol, 2,4-	<2.0833
Dinitrobenzene, m-	<2.0833
Dinitro-o-cresol	<10.4167
Dinitrophenol, 2,4-	<10.4167
Dinitrotoluene, 2,4-	<2.0833
Dinitrotoluene, 2,6-	<2.0833
Diphenylamine	<2.0833
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.0833
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	.0039
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.0833
Fluoranthene	<2.0833
Fluorene	<2.0833
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.0833
Hexachlorocyclopentadiene	<2.0833
Hexachloroethane	<2.0833
Hexachloropropene	<2.0833
Indeno[1,2,3-cd]pyrene	<2.0833
Isophorone	<2.0833
Methoxychlor	<.0103
Methyl methanesulfonate	<2.0833
Methylcholanthrene, 3-	<2.0833
Methylnaphthalene, 2-	<2.0833
Mirex	<.0103
Naphthalene	<2.0833
Naphthalenedione, 1,4-	<2.0833
Nitroaniline, 2-	<2.0833
Nitroaniline, 4-	<2.0833
Nitro-benzene	<2.0833
Nitrophenol, 2-	<2.0833
Nitrophenol, 4-	<10.4167
Nitrosodibutylamine, n-	<2.0833
Nitrosodipropylamine, n-	<2.0833
Nitrosomorpholine, n-	<2.0833
Nitrosopiperidine, n-	<2.0833
Nitrosopyrrolidine, n-	<2.0833
PCB-Aroclor 1016	<.1031
PCB-Aroclor 1221	<.1031

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	48.70	331.0	04110002-03-05	41.14920	-81.45670

	2017/8/22
PCB-Aroclor 1232	<.1031
PCB-Aroclor 1242	<.1031
PCB-Aroclor 1248	<.1031
PCB-Aroclor 1254	<.1031
PCB-Aroclor 1260	<.1031
Pentachlorobenzene	<2.0833
Pentachlorophenol (PCP)	<10.4167
Phenacetin	<2.0833
Phenanthrene	<2.0833
Phenol	<2.0833
Picoline, 2-	<2.0833
Pronamide	<2.0833
Pyrene	<2.0833
Safrole	<2.0833
Tetrachlorobenzene, 1,2,4,5-	<2.0833
Tetrachlorophenol, 2,3,4,6-	<2.0833
Trichlorobenzene, 1,2,4-	<2.0833
Trichlorophenol, 2,4,5-	<2.0833
Trichlorophenol, 2,4,6- (TCPh)	<2.0833

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	51.00	323.0	04110002-03-05	41.13690	-81.41830

	2017/8/22
4-Chloro-3-methylphenol	<10.6383
Acenaphthene	<2.1277
Acenaphthylene	<2.1277
Acetophenone	<2.1277
Acetylaminofluorene, 2-	<2.1277
Aldrin	<.0021
Aniline	<2.1277
Anthracene	<2.1277
Benzo[a]anthracene	<2.1277
Benzo[a]pyrene	<2.1277
Benzo[b]fluoranthene	<2.1277
Benzo[g,h,i]perylene	<2.1277
Benzo[k]fluoranthene	<2.1277
Benzyl alcohol	<2.1277
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.1277
bis(2-chloroethyl) ether	<2.1277
bis(2-Chloroisopropyl) ether	<2.1277
bis(2-ethylhexyl) phthalate (DEHP)	<2.1277
bis(n-octyl) phthalate	<2.1277
Bromophenyl-4 phenyl ether	<2.1277
Butyl benzyl phthalate	<2.1277
Chloronaphthalene-2	<2.1277
Chlorophenol-2	<2.1277
Chlorophenyl-4 phenyl ether	<2.1277
Chrysene	<2.1277
Cresol, o-	<2.1277
Cresol, p-	<2.1277
DDD	<.0063
DDE	<.0021
DDT	<.0063
Dibenzo[a,h]anthracene	<2.1277
Dibenzofuran	<2.1277
Dibutyl phthalate	<2.1277
Dichlorobenzene, 1,2-	<2.1277
Dichlorobenzene, 1,3-	<2.1277
Dichlorobenzene, 1,4-	<2.1277
Dichlorobenzidine, 3,3'-	<2.1277
Dichlorophenol, 2,4-	<2.1277
Dichlorophenol, 2,6-	<2.1277
Dieldrin	<.0021
Diethyl phthalate	<2.1277
Dimethyl phthalate	<2.1277

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	51.00	323.0	04110002-03-05	41.13690	-81.41830

	2017/8/22
Dimethylaminoazobenzene, 4-	<2.1277
Dimethylbenz(a)anthracene, 7,12-	<2.1277
Dimethylphenol, 2,4-	<2.1277
Dinitrobenzene, m-	<2.1277
Dinitro-o-cresol	<10.6383
Dinitrophenol, 2,4-	<10.6383
Dinitrotoluene, 2,4-	<2.1277
Dinitrotoluene, 2,6-	<2.1277
Diphenylamine	<2.1277
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.1277
Endosulfan sulfate	<.0208
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0063
Ethyl methanesulfonate	<2.1277
Fluoranthene	<2.1277
Fluorene	<2.1277
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.1277
Hexachlorocyclopentadiene	<2.1277
Hexachloroethane	<2.1277
Hexachloropropene	<2.1277
Indeno[1,2,3-cd]pyrene	<2.1277
Isophorone	<2.1277
Methoxychlor	<.0104
Methyl methanesulfonate	<2.1277
Methylcholanthrene, 3-	<2.1277
Methylnaphthalene, 2-	<2.1277
Mirex	<.0104
Naphthalene	<2.1277
Naphthalenedione, 1,4-	<2.1277
Nitroaniline, 2-	<2.1277
Nitroaniline, 4-	<2.1277
Nitro-benzene	<2.1277
Nitrophenol, 2-	<2.1277
Nitrophenol, 4-	<10.6383
Nitrosodibutylamine, n-	<2.1277
Nitrosodipropylamine, n-	<2.1277
Nitrosomorpholine, n-	<2.1277
Nitrosopiperidine, n-	<2.1277
Nitrosopyrrolidine, n-	<2.1277
PCB-Aroclor 1016	<.1042
PCB-Aroclor 1221	<.1042

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	51.00	323.0	04110002-03-05	41.13690	-81.41830

	2017/8/22
PCB-Aroclor 1232	<.1042
PCB-Aroclor 1242	<.1042
PCB-Aroclor 1248	<.1042
PCB-Aroclor 1254	<.1042
PCB-Aroclor 1260	<.1042
Pentachlorobenzene	<2.1277
Pentachlorophenol (PCP)	<10.6383
Phenacetin	<2.1277
Phenanthrene	<2.1277
Phenol	<2.1277
Picoline, 2-	<2.1277
Pronamide	<2.1277
Pyrene	<2.1277
Safrole	<2.1277
Tetrachlorobenzene, 1,2,4,5-	<2.1277
Tetrachlorophenol, 2,3,4,6-	<2.1277
Trichlorobenzene, 1,2,4-	<2.1277
Trichlorophenol, 2,4,5-	<2.1277
Trichlorophenol, 2,4,6- (TCPh)	<2.1277

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

302337 ADAMS RUN AT AKRON @ ESSEX ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-031-001	0.20	1.9	04110002-03-03	41.04780	-81.46584

	2018/10/23
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

302337 ADAMS RUN AT AKRON @ ESSEX ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-031-001	0.20	1.9	04110002-03-03	41.04780	-81.46584

	2018/10/23
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0205
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

302337 ADAMS RUN AT AKRON @ ESSEX ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-031-001	0.20	1.9	04110002-03-03	41.04780	-81.46584

	2018/10/23
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	33.20	480.0	04110002-04-05	41.20190	-81.56860

	2017/8/22
4-Chloro-3-methylphenol	<10.5263
Acenaphthene	<2.1053
Acenaphthylene	<2.1053
Acetophenone	<2.1053
Acetylaminofluorene, 2-	<2.1053
Aldrin	<.0021
Aniline	<2.1053
Anthracene	<2.1053
Benzo[a]anthracene	<2.1053
Benzo[a]pyrene	<2.1053
Benzo[b]fluoranthene	<2.1053
Benzo[g,h,i]perylene	<2.1053
Benzo[k]fluoranthene	<2.1053
Benzyl alcohol	<2.1053
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.1053
bis(2-chloroethyl) ether	<2.1053
bis(2-Chloroisopropyl) ether	<2.1053
bis(2-ethylhexyl) phthalate (DEHP)	<2.1053
bis(n-octyl) phthalate	<2.1053
Bromophenyl-4 phenyl ether	<2.1053
Butyl benzyl phthalate	<2.1053
Chloronaphthalene-2	<2.1053
Chlorophenol-2	<2.1053
Chlorophenyl-4 phenyl ether	<2.1053
Chrysene	<2.1053
Cresol, o-	<2.1053
Cresol, p-	<2.1053
DDD	<.0063
DDE	<.0021
DDT	<.0063
Dibenzo[a,h]anthracene	<2.1053
Dibenzofuran	<2.1053
Dibutyl phthalate	<2.1053
Dichlorobenzene, 1,2-	<2.1053
Dichlorobenzene, 1,3-	<2.1053
Dichlorobenzene, 1,4-	<2.1053
Dichlorobenzidine, 3,3'-	<2.1053
Dichlorophenol, 2,4-	<2.1053
Dichlorophenol, 2,6-	<2.1053
Dieldrin	<.0021
Diethyl phthalate	<2.1053
Dimethyl phthalate	<2.1053

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	33.20	480.0	04110002-04-05	41.20190	-81.56860

	2017/8/22
Dimethylaminoazobenzene, 4-	<2.1053
Dimethylbenz(a)anthracene, 7,12-	<2.1053
Dimethylphenol, 2,4-	<2.1053
Dinitrobenzene, m-	<2.1053
Dinitro-o-cresol	<10.5263
Dinitrophenol, 2,4-	<10.5263
Dinitrotoluene, 2,4-	<2.1053
Dinitrotoluene, 2,6-	<2.1053
Diphenylamine	<2.1053
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.1053
Endosulfan sulfate	<.0211
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	.0044
Endrin aldehyde	<.0063
Ethyl methanesulfonate	<2.1053
Fluoranthene	<2.1053
Fluorene	<2.1053
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.1053
Hexachlorocyclopentadiene	<2.1053
Hexachloroethane	<2.1053
Hexachloropropene	<2.1053
Indeno[1,2,3-cd]pyrene	<2.1053
Isophorone	<2.1053
Methoxychlor	<.0105
Methyl methanesulfonate	<2.1053
Methylcholanthrene, 3-	<2.1053
Methylnaphthalene, 2-	<2.1053
Mirex	<.0105
Naphthalene	<2.1053
Naphthalenedione, 1,4-	<2.1053
Nitroaniline, 2-	<2.1053
Nitroaniline, 4-	<2.1053
Nitro-benzene	<2.1053
Nitrophenol, 2-	<2.1053
Nitrophenol, 4-	<10.5263
Nitrosodibutylamine, n-	<2.1053
Nitrosodipropylamine, n-	<2.1053
Nitrosomorpholine, n-	<2.1053
Nitrosopiperidine, n-	<2.1053
Nitrosopyrrolidine, n-	<2.1053
PCB-Aroclor 1016	<.1053
PCB-Aroclor 1221	<.1053

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	33.20	480.0	04110002-04-05	41.20190	-81.56860

	2017/8/22
PCB-Aroclor 1232	<.1053
PCB-Aroclor 1242	<.1053
PCB-Aroclor 1248	<.1053
PCB-Aroclor 1254	<.1053
PCB-Aroclor 1260	<.1053
Pentachlorobenzene	<2.1053
Pentachlorophenol (PCP)	<10.5263
Phenacetin	<2.1053
Phenanthrene	<2.1053
Phenol	<2.1053
Picoline, 2-	<2.1053
Pronamide	<2.1053
Pyrene	<2.1053
Safrole	<2.1053
Tetrachlorobenzene, 1,2,4,5-	<2.1053
Tetrachlorophenol, 2,3,4,6-	<2.1053
Trichlorobenzene, 1,2,4-	<2.1053
Trichlorophenol, 2,4,5-	<2.1053
Trichlorophenol, 2,4,6- (TCPh)	<2.1053

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	13.08	707.0	04110002-06-02	41.39464	-81.62927

	2017/9/21
4-Chloro-3-methylphenol	<10.6383
Acenaphthene	<2.1277
Acenaphthylene	<2.1277
Acetophenone	<2.1277
Acetylaminofluorene, 2-	<2.1277
Aldrin	<.002
Aniline	<2.1277
Anthracene	<2.1277
Benzo[a]anthracene	<2.1277
Benzo[a]pyrene	<2.1277
Benzo[b]fluoranthene	<2.1277
Benzo[g,h,i]perylene	<2.1277
Benzo[k]fluoranthene	<2.1277
Benzyl alcohol	<2.1277
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.1277
bis(2-chloroethyl) ether	<2.1277
bis(2-Chloroisopropyl) ether	<2.1277
bis(2-ethylhexyl) phthalate (DEHP)	<2.1277
bis(n-octyl) phthalate	<2.1277
Bromophenyl-4 phenyl ether	<2.1277
Butyl benzyl phthalate	<2.1277
Chloronaphthalene-2	<2.1277
Chlorophenol-2	<2.1277
Chlorophenyl-4 phenyl ether	<2.1277
Chrysene	<2.1277
Cresol, o-	<2.1277
Cresol, p-	<2.1277
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.1277
Dibenzofuran	<2.1277
Dibutyl phthalate	<2.1277
Dichlorobenzene, 1,2-	<2.1277
Dichlorobenzene, 1,3-	<2.1277
Dichlorobenzene, 1,4-	<2.1277
Dichlorobenzidine, 3,3'-	<2.1277
Dichlorophenol, 2,4-	<2.1277
Dichlorophenol, 2,6-	<2.1277
Dieldrin	<.002
Diethyl phthalate	<2.1277
Dimethyl phthalate	<2.1277

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	13.08	707.0	04110002-06-02	41.39464	-81.62927

	2017/9/21
Dimethylaminoazobenzene, 4-	<2.1277
Dimethylbenz(a)anthracene, 7,12-	<2.1277
Dimethylphenol, 2,4-	<2.1277
Dinitrobenzene, m-	<2.1277
Dinitro-o-cresol	<10.6383
Dinitrophenol, 2,4-	<10.6383
Dinitrotoluene, 2,4-	<2.1277
Dinitrotoluene, 2,6-	<2.1277
Diphenylamine	<2.1277
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.1277
Endosulfan sulfate	<.0202
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.1277
Fluoranthene	<2.1277
Fluorene	<2.1277
Heptachlor	<.002
Heptachlor epoxide	<.002
Hexachlorobenzene	<.002
Hexachlorobutadiene	<2.1277
Hexachlorocyclopentadiene	<2.1277
Hexachloroethane	<2.1277
Hexachloropropene	<2.1277
Indeno[1,2,3-cd]pyrene	<2.1277
Isophorone	<2.1277
Methoxychlor	<.0101
Methyl methanesulfonate	<2.1277
Methylcholanthrene, 3-	<2.1277
Methylnaphthalene, 2-	<2.1277
Mirex	<.0101
Naphthalene	<2.1277
Naphthalenedione, 1,4-	<2.1277
Nitroaniline, 2-	<2.1277
Nitroaniline, 4-	<2.1277
Nitro-benzene	<2.1277
Nitrophenol, 2-	<2.1277
Nitrophenol, 4-	<10.6383
Nitrosodibutylamine, n-	<2.1277
Nitrosodipropylamine, n-	<2.1277
Nitrosomorpholine, n-	<2.1277
Nitrosopiperidine, n-	<2.1277
Nitrosopyrrolidine, n-	<2.1277
PCB-Aroclor 1016	<.101
PCB-Aroclor 1221	<.101

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	13.08	707.0	04110002-06-02	41.39464	-81.62927

	2017/9/21
PCB-Aroclor 1232	<.101
PCB-Aroclor 1242	<.101
PCB-Aroclor 1248	<.101
PCB-Aroclor 1254	<.101
PCB-Aroclor 1260	<.101
Pentachlorobenzene	<2.1277
Pentachlorophenol (PCP)	<10.6383
Phenacetin	<2.1277
Phenanthrene	<2.1277
Phenol	<2.1277
Picoline, 2-	<2.1277
Pronamide	<2.1277
Pyrene	<2.1277
Safrole	<2.1277
Tetrachlorobenzene, 1,2,4,5-	<2.1277
Tetrachlorophenol, 2,3,4,6-	<2.1277
Trichlorobenzene, 1,2,4-	<2.1277
Trichlorophenol, 2,4,5-	<2.1277
Trichlorophenol, 2,4,6- (TCPh)	<2.1277

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	75.83	151.0	04110002-02-03	41.34060	-81.16690

	2017/8/22
4-Chloro-3-methylphenol	<10.2041
Acenaphthene	<2.0408
Acenaphthylene	<2.0408
Acetophenone	<2.0408
Acetylaminofluorene, 2-	<2.0408
Aldrin	<.0021
Aniline	<2.0408
Anthracene	<2.0408
Benzo[a]anthracene	<2.0408
Benzo[a]pyrene	<2.0408
Benzo[b]fluoranthene	<2.0408
Benzo[g,h,i]perylene	<2.0408
Benzo[k]fluoranthene	<2.0408
Benzyl alcohol	<2.0408
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.0408
bis(2-chloroethyl) ether	<2.0408
bis(2-Chloroisopropyl) ether	<2.0408
bis(2-ethylhexyl) phthalate (DEHP)	<2.0408
bis(n-octyl) phthalate	<2.0408
Bromophenyl-4 phenyl ether	<2.0408
Butyl benzyl phthalate	<2.0408
Chloronaphthalene-2	<2.0408
Chlorophenol-2	<2.0408
Chlorophenyl-4 phenyl ether	<2.0408
Chrysene	<2.0408
Cresol, o-	<2.0408
Cresol, p-	<2.0408
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.0408
Dibenzofuran	<2.0408
Dibutyl phthalate	<2.0408
Dichlorobenzene, 1,2-	<2.0408
Dichlorobenzene, 1,3-	<2.0408
Dichlorobenzene, 1,4-	<2.0408
Dichlorobenzidine, 3,3'-	<2.0408
Dichlorophenol, 2,4-	<2.0408
Dichlorophenol, 2,6-	<2.0408
Dieldrin	<.0021
Diethyl phthalate	<2.0408
Dimethyl phthalate	<2.0408

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	75.83	151.0	04110002-02-03	41.34060	-81.16690

	2017/8/22
Dimethylaminoazobenzene, 4-	<2.0408
Dimethylbenz(a)anthracene, 7,12-	<2.0408
Dimethylphenol, 2,4-	<2.0408
Dinitrobenzene, m-	<2.0408
Dinitro-o-cresol	<10.2041
Dinitrophenol, 2,4-	<10.2041
Dinitrotoluene, 2,4-	<2.0408
Dinitrotoluene, 2,6-	<2.0408
Diphenylamine	<2.0408
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.0408
Endosulfan sulfate	<.0207
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.0408
Fluoranthene	<2.0408
Fluorene	<2.0408
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.0408
Hexachlorocyclopentadiene	<2.0408
Hexachloroethane	<2.0408
Hexachloropropene	<2.0408
Indeno[1,2,3-cd]pyrene	<2.0408
Isophorone	<2.0408
Methoxychlor	<.0104
Methyl methanesulfonate	<2.0408
Methylcholanthrene, 3-	<2.0408
Methylnaphthalene, 2-	<2.0408
Mirex	<.0104
Naphthalene	<2.0408
Naphthalenedione, 1,4-	<2.0408
Nitroaniline, 2-	<2.0408
Nitroaniline, 4-	<2.0408
Nitro-benzene	<2.0408
Nitrophenol, 2-	<2.0408
Nitrophenol, 4-	<10.2041
Nitrosodibutylamine, n-	<2.0408
Nitrosodipropylamine, n-	<2.0408
Nitrosomorpholine, n-	<2.0408
Nitrosopiperidine, n-	<2.0408
Nitrosopyrrolidine, n-	<2.0408
PCB-Aroclor 1016	<.1036
PCB-Aroclor 1221	<.1036

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	75.83	151.0	04110002-02-03	41.34060	-81.16690

	2017/8/22
PCB-Aroclor 1232	<.1036
PCB-Aroclor 1242	<.1036
PCB-Aroclor 1248	<.1036
PCB-Aroclor 1254	<.1036
PCB-Aroclor 1260	<.1036
Pentachlorobenzene	<2.0408
Pentachlorophenol (PCP)	<10.2041
Phenacetin	<2.0408
Phenanthrene	<2.0408
Phenol	<2.0408
Picoline, 2-	<2.0408
Pronamide	<2.0408
Pyrene	<2.0408
Safrole	<2.0408
Tetrachlorobenzene, 1,2,4,5-	<2.0408
Tetrachlorophenol, 2,3,4,6-	<2.0408
Trichlorobenzene, 1,2,4-	<2.0408
Trichlorophenol, 2,4,5-	<2.0408
Trichlorophenol, 2,4,6- (TCPh)	<2.0408

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	0.12	18.5	04110002-06-01	41.41780	-81.63830

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0065
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0022
BHC-beta	<.0022
BHC-delta	<.0022
BHC-gamma (Lindane)	<.0022
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0065
DDE	<.0022
DDT	<.0065
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0065
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	0.12	18.5	04110002-06-01	41.41780	-81.63830

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0217
Endosulfan, alpha-	<.0022
Endosulfan, beta-	<.0022
Endrin	<.0022
Endrin aldehyde	<.0065
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0065
Heptachlor epoxide	<.0022
Hexachlorobenzene	<.0065
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0109
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0109
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.109
PCB-Aroclor 1221	<.109

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	0.12	18.5	04110002-06-01	41.41780	-81.63830

	2018/8/13
PCB-Aroclor 1232	<.109
PCB-Aroclor 1242	<.109
PCB-Aroclor 1248	<.109
PCB-Aroclor 1254	<.109
PCB-Aroclor 1260	<.109
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502120 BIG CREEK @ JENNINGS AVE.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-005-000	0.23	37.1	04110002-06-03	41.44670	-81.68830

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502120 BIG CREEK @ JENNINGS AVE.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-005-000	0.23	37.1	04110002-06-03	41.44670	-81.68830

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502120		BIG CREEK @ JENNINGS AVE.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-005-000	0.23	37.1	04110002-06-03	41.44670	-81.68830

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	7.10	786.0	04110002-06-05	41.44736	-81.68473

	2017/9/18
4-Chloro-3-methylphenol	<10.5
Acenaphthene	<2.11
Acenaphthylene	<2.11
Acetophenone	<2.11
Acetylaminofluorene, 2-	<2.11
Aldrin	<.002
Aniline	<2.11
Anthracene	<2.11
Benzo[a]anthracene	<2.11
Benzo[a]pyrene	<2.11
Benzo[b]fluoranthene	<2.11
Benzo[g,h,i]perylene	<2.11
Benzo[k]fluoranthene	<2.11
Benzyl alcohol	<2.11
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.11
bis(2-chloroethyl) ether	<2.11
bis(2-Chloroisopropyl) ether	<2.11
bis(2-ethylhexyl) phthalate (DEHP)	<2.11
bis(n-octyl) phthalate	2.11
Bromophenyl-4 phenyl ether	<2.11
Butyl benzyl phthalate	<2.11
Chloronaphthalene-2	<2.11
Chlorophenol-2	<2.11
Chlorophenyl-4 phenyl ether	<2.11
Chrysene	<2.11
Cresol, o-	<2.11
Cresol, p-	<2.11
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.11
Dibenzofuran	<2.11
Dibutyl phthalate	<2.11
Dichlorobenzene, 1,2-	<2.11
Dichlorobenzene, 1,3-	<2.11
Dichlorobenzene, 1,4-	<2.11
Dichlorobenzidine, 3,3'-	<2.11
Dichlorophenol, 2,4-	<2.11
Dichlorophenol, 2,6-	<2.11
Dieldrin	<.002
Diethyl phthalate	<2.11
Dimethyl phthalate	<2.11

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502130		CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	7.10	786.0	04110002-06-05	41.44736	-81.68473

	2017/9/18
Dimethylaminoazobenzene, 4-	<2.11
Dimethylbenz(a)anthracene, 7,12-	<2.11
Dimethylphenol, 2,4-	<2.11
Dinitrobenzene, m-	<2.11
Dinitro-o-cresol	<10.5
Dinitrophenol, 2,4-	<10.5
Dinitrotoluene, 2,4-	<2.11
Dinitrotoluene, 2,6-	<2.11
Diphenylamine	<2.11
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.11
Endosulfan sulfate	<.0203
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.11
Fluoranthene	<2.11
Fluorene	<2.11
Heptachlor	<.002
Heptachlor epoxide	<.002
Hexachlorobenzene	<.002
Hexachlorobutadiene	<2.11
Hexachlorocyclopentadiene	<2.11
Hexachloroethane	<2.11
Hexachloropropene	<2.11
Indeno[1,2,3-cd]pyrene	<2.11
Isophorone	<2.11
Methoxychlor	<.0102
Methyl methanesulfonate	<2.11
Methylcholanthrene, 3-	<2.11
Methylnaphthalene, 2-	<2.11
Mirex	<.0102
Naphthalene	<2.11
Naphthalenedione, 1,4-	<2.11
Nitroaniline, 2-	<2.11
Nitroaniline, 4-	<2.11
Nitro-benzene	<2.11
Nitrophenol, 2-	<2.11
Nitrophenol, 4-	<10.5
Nitrosodibutylamine, n-	<2.11
Nitrosodipropylamine, n-	<2.11
Nitrosomorpholine, n-	<2.11
Nitrosopiperidine, n-	<2.11
Nitrosopyrrolidine, n-	<2.11
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	7.10	786.0	04110002-06-05	41.44736	-81.68473

	2017/9/18
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.11
Pentachlorophenol (PCP)	<10.5
Phenacetin	<2.11
Phenanthrene	<2.11
Phenol	<2.11
Picoline, 2-	<2.11
Pronamide	<2.11
Pyrene	<2.11
Safrole	<2.11
Tetrachlorobenzene, 1,2,4,5-	<2.11
Tetrachlorophenol, 2,3,4,6-	<2.11
Trichlorobenzene, 1,2,4-	<2.11
Trichlorophenol, 2,4,5-	<2.11
Trichlorophenol, 2,4,6- (TCPh)	<2.11

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502150 CUYAHOGA R. AT AKRON @ CUYAHOGA ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	42.60	340.0	04110002-03-05	41.11690	-81.52500

	2017/8/22
4-Chloro-3-methylphenol	<10.4712
Acenaphthene	<2.0942
Acenaphthylene	<2.0942
Acetophenone	<2.0942
Acetylaminofluorene, 2-	<2.0942
Aldrin	<.0021
Aniline	<2.0942
Anthracene	<2.0942
Benzo[a]anthracene	<2.0942
Benzo[a]pyrene	<2.0942
Benzo[b]fluoranthene	<2.0942
Benzo[g,h,i]perylene	<2.0942
Benzo[k]fluoranthene	<2.0942
Benzyl alcohol	<2.0942
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.0942
bis(2-chloroethyl) ether	<2.0942
bis(2-Chloroisopropyl) ether	<2.0942
bis(2-ethylhexyl) phthalate (DEHP)	<2.0942
bis(n-octyl) phthalate	<2.0942
Bromophenyl-4 phenyl ether	<2.0942
Butyl benzyl phthalate	<2.0942
Chloronaphthalene-2	<2.0942
Chlorophenol-2	<2.0942
Chlorophenyl-4 phenyl ether	<2.0942
Chrysene	<2.0942
Cresol, o-	<2.0942
Cresol, p-	<2.0942
DDD	<.0063
DDE	<.0021
DDT	<.0063
Dibenzo[a,h]anthracene	<2.0942
Dibenzofuran	<2.0942
Dibutyl phthalate	<2.0942
Dichlorobenzene, 1,2-	<2.0942
Dichlorobenzene, 1,3-	<2.0942
Dichlorobenzene, 1,4-	<2.0942
Dichlorobenzidine, 3,3'-	<2.0942
Dichlorophenol, 2,4-	<2.0942
Dichlorophenol, 2,6-	<2.0942
Dieldrin	<.0021
Diethyl phthalate	<2.0942
Dimethyl phthalate	<2.0942

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502150		CUYAHOGA R. AT AKRON @ CUYAHOGA ST.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	42.60	340.0	04110002-03-05	41.11690	-81.52500

	2017/8/22
Dimethylaminoazobenzene, 4-	<2.0942
Dimethylbenz(a)anthracene, 7,12-	<2.0942
Dimethylphenol, 2,4-	<2.0942
Dinitrobenzene, m-	<2.0942
Dinitro-o-cresol	<10.4712
Dinitrophenol, 2,4-	<10.4712
Dinitrotoluene, 2,4-	<2.0942
Dinitrotoluene, 2,6-	<2.0942
Diphenylamine	<2.0942
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.0942
Endosulfan sulfate	<.0208
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0063
Ethyl methanesulfonate	<2.0942
Fluoranthene	<2.0942
Fluorene	<2.0942
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.0942
Hexachlorocyclopentadiene	<2.0942
Hexachloroethane	<2.0942
Hexachloropropene	<2.0942
Indeno[1,2,3-cd]pyrene	<2.0942
Isophorone	<2.0942
Methoxychlor	<.0104
Methyl methanesulfonate	<2.0942
Methylcholanthrene, 3-	<2.0942
Methylnaphthalene, 2-	<2.0942
Mirex	<.0104
Naphthalene	<2.0942
Naphthalenedione, 1,4-	<2.0942
Nitroaniline, 2-	<2.0942
Nitroaniline, 4-	<2.0942
Nitro-benzene	<2.0942
Nitrophenol, 2-	<2.0942
Nitrophenol, 4-	<10.4712
Nitrosodibutylamine, n-	<2.0942
Nitrosodipropylamine, n-	<2.0942
Nitrosomorpholine, n-	<2.0942
Nitrosopiperidine, n-	<2.0942
Nitrosopyrrolidine, n-	<2.0942
PCB-Aroclor 1016	<.1042
PCB-Aroclor 1221	<.1042

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502150		CUYAHOGA R. AT AKRON @ CUYAHOGA ST.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	42.60	340.0	04110002-03-05	41.11690	-81.52500

	2017/8/22
PCB-Aroclor 1232	<.1042
PCB-Aroclor 1242	<.1042
PCB-Aroclor 1248	<.1042
PCB-Aroclor 1254	<.1042
PCB-Aroclor 1260	<.1042
Pentachlorobenzene	<2.0942
Pentachlorophenol (PCP)	<10.4712
Phenacetin	<2.0942
Phenanthrene	<2.0942
Phenol	<2.0942
Picoline, 2-	<2.0942
Pronamide	<2.0942
Pyrene	<2.0942
Safrole	<2.0942
Tetrachlorobenzene, 1,2,4,5-	<2.0942
Tetrachlorophenol, 2,3,4,6-	<2.0942
Trichlorobenzene, 1,2,4-	<2.0942
Trichlorophenol, 2,4,5-	<2.0942
Trichlorophenol, 2,4,6- (TCPh)	<2.0942

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	0.30	61.7	04110002-03-04	41.11469	-81.52795

	2018/10/23
4-Chloro-3-methylphenol	<10.8
Acenaphthene	<2.15
Acenaphthylene	<2.15
Acetophenone	<2.15
Acetylaminofluorene, 2-	<2.15
Aldrin	<.0065
Aniline	<2.15
Anthracene	<2.15
Benzo[a]anthracene	<2.15
Benzo[a]pyrene	<2.15
Benzo[b]fluoranthene	<2.15
Benzo[g,h,i]perylene	<2.15
Benzo[k]fluoranthene	<2.15
Benzyl alcohol	<2.15
BHC-alpha	<.0022
BHC-beta	<.0022
BHC-delta	<.0022
BHC-gamma (Lindane)	<.0022
bis(2-chloroethoxy) methane	<2.15
bis(2-chloroethyl) ether	<2.15
bis(2-Chloroisopropyl) ether	<2.15
bis(2-ethylhexyl) phthalate (DEHP)	<2.15
bis(n-octyl) phthalate	<2.15
Bromophenyl-4 phenyl ether	<2.15
Butyl benzyl phthalate	<2.15
Chloronaphthalene-2	<2.15
Chlorophenol-2	<2.15
Chlorophenyl-4 phenyl ether	<2.15
Chrysene	<2.15
Cresol, o-	<2.15
Cresol, p-	<2.15
DDD	<.0065
DDE	<.0022
DDT	<.0065
Dibenzo[a,h]anthracene	<2.15
Dibenzofuran	<2.15
Dibutyl phthalate	<2.15
Dichlorobenzene, 1,2-	<2.15
Dichlorobenzene, 1,3-	<2.15
Dichlorobenzene, 1,4-	<2.15
Dichlorobenzidine, 3,3'-	<2.15
Dichlorophenol, 2,4-	<2.15
Dichlorophenol, 2,6-	<2.15
Dieldrin	<.0065
Diethyl phthalate	<2.15
Dimethyl phthalate	<2.15

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	0.30	61.7	04110002-03-04	41.11469	-81.52795

	2018/10/23
Dimethylaminoazobenzene, 4-	<2.15
Dimethylbenz(a)anthracene, 7,12-	<2.15
Dimethylphenol, 2,4-	<10.8
Dinitrobenzene, m-	<2.15
Dinitro-o-cresol	<10.8
Dinitrophenol, 2,4-	<10.8
Dinitrotoluene, 2,4-	<2.15
Dinitrotoluene, 2,6-	<2.15
Diphenylamine	<2.15
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.15
Endosulfan sulfate	<.0215
Endosulfan, alpha-	<.0022
Endosulfan, beta-	<.0022
Endrin	<.0022
Endrin aldehyde	<.0065
Ethyl methanesulfonate	<2.15
Fluoranthene	<2.15
Fluorene	<2.15
Heptachlor	<.0065
Heptachlor epoxide	<.0022
Hexachlorobenzene	<.0065
Hexachlorobutadiene	<2.15
Hexachlorocyclopentadiene	<10.8
Hexachloroethane	<2.15
Hexachloropropene	<2.15
Indeno[1,2,3-cd]pyrene	<2.15
Isophorone	<2.15
Methoxychlor	<.0108
Methyl methanesulfonate	<2.15
Methylcholanthrene, 3-	<2.15
Methylnaphthalene, 2-	<2.15
Mirex	<.0108
Naphthalene	<2.15
Naphthalenedione, 1,4-	<2.15
Nitroaniline, 2-	<2.15
Nitroaniline, 4-	<2.15
Nitro-benzene	<2.15
Nitrophenol, 2-	<2.15
Nitrophenol, 4-	<10.8
Nitrosodibutylamine, n-	<2.15
Nitrosodipropylamine, n-	<2.15
Nitrosomorpholine, n-	<2.15
Nitrosopiperidine, n-	<2.15
Nitrosopyrrolidine, n-	<2.15
PCB-Aroclor 1016	<.108
PCB-Aroclor 1221	<.108

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	0.30	61.7	04110002-03-04	41.11469	-81.52795

	2018/10/23
PCB-Aroclor 1232	<.108
PCB-Aroclor 1242	<.108
PCB-Aroclor 1248	<.108
PCB-Aroclor 1254	<.108
PCB-Aroclor 1260	<.108
Pentachlorobenzene	<2.15
Pentachlorophenol (PCP)	<10.8
Phenacetin	<2.15
Phenanthrene	<2.15
Phenol	<2.15
Picoline, 2-	<2.15
Pronamide	<2.15
Pyrene	<2.15
Safrole	<2.15
Tetrachlorobenzene, 1,2,4,5-	<2.15
Tetrachlorophenol, 2,3,4,6-	<2.15
Trichlorobenzene, 1,2,4-	<2.15
Trichlorophenol, 2,4,5-	<2.15
Trichlorophenol, 2,4,6- (TCPh)	<2.15

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	14.60	42.3	04110002-02-02	41.08920	-81.29140

	2018/10/23
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.06
Acenaphthylene	<2.06
Acetophenone	<2.06
Acetylaminofluorene, 2-	<2.06
Aldrin	<.0061
Aniline	<2.06
Anthracene	<2.06
Benzo[a]anthracene	<2.06
Benzo[a]pyrene	<2.06
Benzo[b]fluoranthene	<2.06
Benzo[g,h,i]perylene	<2.06
Benzo[k]fluoranthene	<2.06
Benzyl alcohol	<2.06
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.06
bis(2-chloroethyl) ether	<2.06
bis(2-Chloroisopropyl) ether	<2.06
bis(2-ethylhexyl) phthalate (DEHP)	<2.06
bis(n-octyl) phthalate	<2.06
Bromophenyl-4 phenyl ether	<2.06
Butyl benzyl phthalate	<2.06
Chloronaphthalene-2	<2.06
Chlorophenol-2	<2.06
Chlorophenyl-4 phenyl ether	<2.06
Chrysene	<2.06
Cresol, o-	<2.06
Cresol, p-	<2.06
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.06
Dibenzofuran	<2.06
Dibutyl phthalate	<2.06
Dichlorobenzene, 1,2-	<2.06
Dichlorobenzene, 1,3-	<2.06
Dichlorobenzene, 1,4-	<2.06
Dichlorobenzidine, 3,3'-	<2.06
Dichlorophenol, 2,4-	<2.06
Dichlorophenol, 2,6-	<2.06
Dieldrin	<.0061
Diethyl phthalate	<2.06
Dimethyl phthalate	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	14.60	42.3	04110002-02-02	41.08920	-81.29140

	2018/10/23
Dimethylaminoazobenzene, 4-	<2.06
Dimethylbenz(a)anthracene, 7,12-	<2.06
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.06
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.06
Dinitrotoluene, 2,6-	<2.06
Diphenylamine	<2.06
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.06
Endosulfan sulfate	<.0204
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.06
Fluoranthene	<2.06
Fluorene	<2.06
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.06
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.06
Hexachloropropene	<2.06
Indeno[1,2,3-cd]pyrene	<2.06
Isophorone	<2.06
Methoxychlor	<.0102
Methyl methanesulfonate	<2.06
Methylcholanthrene, 3-	<2.06
Methylnaphthalene, 2-	<2.06
Mirex	<.0102
Naphthalene	<2.06
Naphthalenedione, 1,4-	<2.06
Nitroaniline, 2-	<2.06
Nitroaniline, 4-	<2.06
Nitro-benzene	<2.06
Nitrophenol, 2-	<2.06
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.06
Nitrosodipropylamine, n-	<2.06
Nitrosomorpholine, n-	<2.06
Nitrosopiperidine, n-	<2.06
Nitrosopyrrolidine, n-	<2.06
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	14.60	42.3	04110002-02-02	41.08920	-81.29140

	2018/10/23
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.06
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.06
Phenanthrene	<2.06
Phenol	<2.06
Picoline, 2-	<2.06
Pronamide	<2.06
Pyrene	<2.06
Safrole	<2.06
Tetrachlorobenzene, 1,2,4,5-	<2.06
Tetrachlorophenol, 2,3,4,6-	<2.06
Trichlorobenzene, 1,2,4-	<2.06
Trichlorophenol, 2,4,5-	<2.06
Trichlorophenol, 2,4,6- (TCPh)	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G04 TARE CREEK @ BURTON-WINDSOR RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-038-000	3.10	4.5	04110002-01-03	41.50130	-81.07010

	2018/10/9
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.06
Acenaphthylene	<2.06
Acetophenone	<2.06
Acetylaminofluorene, 2-	<2.06
Aldrin	<.0062
Aniline	<2.06
Anthracene	<2.06
Benzo[a]anthracene	<2.06
Benzo[a]pyrene	<2.06
Benzo[b]fluoranthene	<2.06
Benzo[g,h,i]perylene	<2.06
Benzo[k]fluoranthene	<2.06
Benzyl alcohol	<2.06
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.06
bis(2-chloroethyl) ether	<2.06
bis(2-Chloroisopropyl) ether	<2.06
bis(2-ethylhexyl) phthalate (DEHP)	<2.06
bis(n-octyl) phthalate	<2.06
Bromophenyl-4 phenyl ether	<2.06
Butyl benzyl phthalate	<2.06
Chloronaphthalene-2	<2.06
Chlorophenol-2	<2.06
Chlorophenyl-4 phenyl ether	<2.06
Chrysene	<2.06
Cresol, o-	<2.06
Cresol, p-	<2.06
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.06
Dibenzofuran	<2.06
Dibutyl phthalate	<2.06
Dichlorobenzene, 1,2-	<2.06
Dichlorobenzene, 1,3-	<2.06
Dichlorobenzene, 1,4-	<2.06
Dichlorobenzidine, 3,3'-	<2.06
Dichlorophenol, 2,4-	<2.06
Dichlorophenol, 2,6-	<2.06
Dieldrin	<.0062
Diethyl phthalate	<2.06
Dimethyl phthalate	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G04 TARE CREEK @ BURTON-WINDSOR RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-038-000	3.10	4.5	04110002-01-03	41.50130	-81.07010

	2018/10/9
Dimethylaminoazobenzene, 4-	<2.06
Dimethylbenz(a)anthracene, 7,12-	<2.06
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.06
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.06
Dinitrotoluene, 2,6-	<2.06
Diphenylamine	<2.06
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.06
Endosulfan sulfate	<.0205
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.06
Fluoranthene	<2.06
Fluorene	<2.06
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.06
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.06
Hexachloropropene	<2.06
Indeno[1,2,3-cd]pyrene	<2.06
Isophorone	<2.06
Methoxychlor	<.0103
Methyl methanesulfonate	<2.06
Methylcholanthrene, 3-	<2.06
Methylnaphthalene, 2-	<2.06
Mirex	<.0103
Naphthalene	<2.06
Naphthalenedione, 1,4-	<2.06
Nitroaniline, 2-	<2.06
Nitroaniline, 4-	<2.06
Nitro-benzene	<2.06
Nitrophenol, 2-	<2.06
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.06
Nitrosodipropylamine, n-	<2.06
Nitrosomorpholine, n-	<2.06
Nitrosopiperidine, n-	<2.06
Nitrosopyrrolidine, n-	<2.06
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G04 TARE CREEK @ BURTON-WINDSOR RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-038-000	3.10	4.5	04110002-01-03	41.50130	-81.07010

	2018/10/9
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.06
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.06
Phenanthrene	<2.06
Phenol	<2.06
Picoline, 2-	<2.06
Pronamide	<2.06
Pyrene	<2.06
Safrole	<2.06
Tetrachlorobenzene, 1,2,4,5-	<2.06
Tetrachlorophenol, 2,3,4,6-	<2.06
Trichlorobenzene, 1,2,4-	<2.06
Trichlorophenol, 2,4,5-	<2.06
Trichlorophenol, 2,4,6- (TCPh)	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-023-000	0.60	2.9	04110002-04-05	41.15940	-81.56490

	2018/10/9
4-Chloro-3-methylphenol	<10.4
Acenaphthene	<2.08
Acenaphthylene	<2.08
Acetophenone	<2.08
Acetylaminofluorene, 2-	<2.08
Aldrin	<.0062
Aniline	<2.08
Anthracene	<2.08
Benzo[a]anthracene	<2.08
Benzo[a]pyrene	<2.08
Benzo[b]fluoranthene	<2.08
Benzo[g,h,i]perylene	<2.08
Benzo[k]fluoranthene	<2.08
Benzyl alcohol	<2.08
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.08
bis(2-chloroethyl) ether	<2.08
bis(2-Chloroisopropyl) ether	<2.08
bis(2-ethylhexyl) phthalate (DEHP)	<2.08
bis(n-octyl) phthalate	<2.08
Bromophenyl-4 phenyl ether	<2.08
Butyl benzyl phthalate	<2.08
Chloronaphthalene-2	<2.08
Chlorophenol-2	<2.08
Chlorophenyl-4 phenyl ether	<2.08
Chrysene	<2.08
Cresol, o-	<2.08
Cresol, p-	<2.08
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.08
Dibenzofuran	<2.08
Dibutyl phthalate	<2.08
Dichlorobenzene, 1,2-	<2.08
Dichlorobenzene, 1,3-	<2.08
Dichlorobenzene, 1,4-	<2.08
Dichlorobenzidine, 3,3'-	<2.08
Dichlorophenol, 2,4-	<2.08
Dichlorophenol, 2,6-	<2.08
Dieldrin	<.0062
Diethyl phthalate	<2.08
Dimethyl phthalate	<2.08

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-023-000	0.60	2.9	04110002-04-05	41.15940	-81.56490

	2018/10/9
Dimethylaminoazobenzene, 4-	<2.08
Dimethylbenz(a)anthracene, 7,12-	<2.08
Dimethylphenol, 2,4-	<10.4
Dinitrobenzene, m-	<2.08
Dinitro-o-cresol	<10.4
Dinitrophenol, 2,4-	<10.4
Dinitrotoluene, 2,4-	<2.08
Dinitrotoluene, 2,6-	<2.08
Diphenylamine	<2.08
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.08
Endosulfan sulfate	<.0207
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.08
Fluoranthene	<2.08
Fluorene	<2.08
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.08
Hexachlorocyclopentadiene	<10.4
Hexachloroethane	<2.08
Hexachloropropene	<2.08
Indeno[1,2,3-cd]pyrene	<2.08
Isophorone	<2.08
Methoxychlor	<.0104
Methyl methanesulfonate	<2.08
Methylcholanthrene, 3-	<2.08
Methylnaphthalene, 2-	<2.08
Mirex	<.0104
Naphthalene	<2.08
Naphthalenedione, 1,4-	<2.08
Nitroaniline, 2-	<2.08
Nitroaniline, 4-	<2.08
Nitro-benzene	<2.08
Nitrophenol, 2-	<2.08
Nitrophenol, 4-	<10.4
Nitrosodibutylamine, n-	<2.08
Nitrosodipropylamine, n-	<2.08
Nitrosomorpholine, n-	<2.08
Nitrosopiperidine, n-	<2.08
Nitrosopyrrolidine, n-	<2.08
PCB-Aroclor 1016	<.104
PCB-Aroclor 1221	<.104

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-023-000	0.60	2.9	04110002-04-05	41.15940	-81.56490

	2018/10/9
PCB-Aroclor 1232	<.104
PCB-Aroclor 1242	<.104
PCB-Aroclor 1248	<.104
PCB-Aroclor 1254	<.104
PCB-Aroclor 1260	<.104
Pentachlorobenzene	<2.08
Pentachlorophenol (PCP)	<10.4
Phenacetin	<2.08
Phenanthrene	<2.08
Phenol	<2.08
Picoline, 2-	<2.08
Pronamide	<2.08
Pyrene	<2.08
Safrole	<2.08
Tetrachlorobenzene, 1,2,4,5-	<2.08
Tetrachlorophenol, 2,3,4,6-	<2.08
Trichlorobenzene, 1,2,4-	<2.08
Trichlorophenol, 2,4,5-	<2.08
Trichlorophenol, 2,4,6- (TCPh)	<2.08

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G38 SAGAMORE CREEK @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-011	0.20	6.2	04110002-05-05	41.35140	-81.59230

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G38 SAGAMORE CREEK @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-011	0.20	6.2	04110002-05-05	41.35140	-81.59230

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0205
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G38 SAGAMORE CREEK @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-011	0.20	6.2	04110002-05-05	41.35140	-81.59230

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G43 WEST CREEK AT PARMA @ BROADVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	3.70	4.8	04110002-06-04	41.41120	-81.69280

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G43 WEST CREEK AT PARMA @ BROADVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	3.70	4.8	04110002-06-04	41.41120	-81.69280

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0205
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01G43 WEST CREEK AT PARMA @ BROADVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	3.70	4.8	04110002-06-04	41.41120	-81.69280

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P09 MILL CREEK @ BROADWAY RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	4.20	12.5	04110002-06-01	41.43360	-81.60580

	2018/8/13
4-Chloro-3-methylphenol	<10.1
Acenaphthene	<2.02
Acenaphthylene	<2.02
Acetophenone	<2.02
Acetylaminofluorene, 2-	<2.02
Aldrin	<.0062
Aniline	<2.02
Anthracene	<2.02
Benzo[a]anthracene	<2.02
Benzo[a]pyrene	<2.02
Benzo[b]fluoranthene	<2.02
Benzo[g,h,i]perylene	<2.02
Benzo[k]fluoranthene	<2.02
Benzyl alcohol	<2.02
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.02
bis(2-chloroethyl) ether	<2.02
bis(2-Chloroisopropyl) ether	<2.02
bis(2-ethylhexyl) phthalate (DEHP)	<2.02
bis(n-octyl) phthalate	<2.02
Bromophenyl-4 phenyl ether	<2.02
Butyl benzyl phthalate	<2.02
Chloronaphthalene-2	<2.02
Chlorophenol-2	<2.02
Chlorophenyl-4 phenyl ether	<2.02
Chrysene	<2.02
Cresol, o-	<2.02
Cresol, p-	<2.02
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.02
Dibenzofuran	<2.02
Dibutyl phthalate	<2.02
Dichlorobenzene, 1,2-	<2.02
Dichlorobenzene, 1,3-	<2.02
Dichlorobenzene, 1,4-	<2.02
Dichlorobenzidine, 3,3'-	<2.02
Dichlorophenol, 2,4-	<2.02
Dichlorophenol, 2,6-	<2.02
Dieldrin	<.0062
Diethyl phthalate	<2.02
Dimethyl phthalate	<2.02

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P09 MILL CREEK @ BROADWAY RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	4.20	12.5	04110002-06-01	41.43360	-81.60580

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.02
Dimethylbenz(a)anthracene, 7,12-	<2.02
Dimethylphenol, 2,4-	<10.1
Dinitrobenzene, m-	<2.02
Dinitro-o-cresol	<10.1
Dinitrophenol, 2,4-	<10.1
Dinitrotoluene, 2,4-	<2.02
Dinitrotoluene, 2,6-	<2.02
Diphenylamine	<2.02
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.02
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.02
Fluoranthene	<2.02
Fluorene	<2.02
Heptachlor	<.0062
Heptachlor epoxide	.0024
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.02
Hexachlorocyclopentadiene	<10.1
Hexachloroethane	<2.02
Hexachloropropene	<2.02
Indeno[1,2,3-cd]pyrene	<2.02
Isophorone	<2.02
Methoxychlor	<.0103
Methyl methanesulfonate	<2.02
Methylcholanthrene, 3-	<2.02
Methylnaphthalene, 2-	<2.02
Mirex	<.0103
Naphthalene	<2.02
Naphthalenedione, 1,4-	<2.02
Nitroaniline, 2-	<2.02
Nitroaniline, 4-	<2.02
Nitro-benzene	<2.02
Nitrophenol, 2-	<2.02
Nitrophenol, 4-	<10.1
Nitrosodibutylamine, n-	<2.02
Nitrosodipropylamine, n-	<2.02
Nitrosomorpholine, n-	<2.02
Nitrosopiperidine, n-	<2.02
Nitrosopyrrolidine, n-	<2.02
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P09		MILL CREEK @ BROADWAY RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	4.20	12.5	04110002-06-01	41.43360	-81.60580

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.02
Pentachlorophenol (PCP)	<10.1
Phenacetin	<2.02
Phenanthrene	<2.02
Phenol	<2.02
Picoline, 2-	<2.02
Pronamide	<2.02
Pyrene	<2.02
Safrole	<2.02
Tetrachlorobenzene, 1,2,4,5-	<2.02
Tetrachlorophenol, 2,3,4,6-	<2.02
Trichlorobenzene, 1,2,4-	<2.02
Trichlorophenol, 2,4,5-	<2.02
Trichlorophenol, 2,4,6- (TCPh)	<2.02

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	0.19	13.2	04110002-06-04	41.41470	-81.64780

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0061
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0061
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	0.19	13.2	04110002-06-04	41.41470	-81.64780

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0203
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0102
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0102
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	0.19	13.2	04110002-06-04	41.41470	-81.64780

	2018/8/13
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-020-000	0.27	20.3	04110002-04-03	41.20152	-81.57335

	2018/10/18
4-Chloro-3-methylphenol	<10.2
Acenaphthene	<2.03
Acenaphthylene	<2.03
Acetophenone	<2.03
Acetylaminofluorene, 2-	<2.03
Aldrin	<.0061
Aniline	<2.03
Anthracene	<2.03
Benzo[a]anthracene	<2.03
Benzo[a]pyrene	<2.03
Benzo[b]fluoranthene	<2.03
Benzo[g,h,i]perylene	<2.03
Benzo[k]fluoranthene	<2.03
Benzyl alcohol	<2.03
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.03
bis(2-chloroethyl) ether	<2.03
bis(2-Chloroisopropyl) ether	<2.03
bis(2-ethylhexyl) phthalate (DEHP)	<2.03
bis(n-octyl) phthalate	<2.03
Bromophenyl-4 phenyl ether	<2.03
Butyl benzyl phthalate	<2.03
Chloronaphthalene-2	<2.03
Chlorophenol-2	<2.03
Chlorophenyl-4 phenyl ether	<2.03
Chrysene	<2.03
Cresol, o-	<2.03
Cresol, p-	<2.03
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.03
Dibenzofuran	<2.03
Dibutyl phthalate	<2.03
Dichlorobenzene, 1,2-	<2.03
Dichlorobenzene, 1,3-	<2.03
Dichlorobenzene, 1,4-	<2.03
Dichlorobenzidine, 3,3'-	<2.03
Dichlorophenol, 2,4-	<2.03
Dichlorophenol, 2,6-	<2.03
Dieldrin	<.0061
Diethyl phthalate	<2.03
Dimethyl phthalate	<2.03

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-020-000	0.27	20.3	04110002-04-03	41.20152	-81.57335

	2018/10/18
Dimethylaminoazobenzene, 4-	<2.03
Dimethylbenz(a)anthracene, 7,12-	<2.03
Dimethylphenol, 2,4-	<10.2
Dinitrobenzene, m-	<2.03
Dinitro-o-cresol	<10.2
Dinitrophenol, 2,4-	<10.2
Dinitrotoluene, 2,4-	<2.03
Dinitrotoluene, 2,6-	<2.03
Diphenylamine	<2.03
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.03
Endosulfan sulfate	<.0203
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.03
Fluoranthene	<2.03
Fluorene	<2.03
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.03
Hexachlorocyclopentadiene	<10.2
Hexachloroethane	<2.03
Hexachloropropene	<2.03
Indeno[1,2,3-cd]pyrene	<2.03
Isophorone	<2.03
Methoxychlor	<.0102
Methyl methanesulfonate	<2.03
Methylcholanthrene, 3-	<2.03
Methylnaphthalene, 2-	<2.03
Mirex	<.0102
Naphthalene	<2.03
Naphthalenedione, 1,4-	<2.03
Nitroaniline, 2-	<2.03
Nitroaniline, 4-	<2.03
Nitro-benzene	<2.03
Nitrophenol, 2-	<2.03
Nitrophenol, 4-	<10.2
Nitrosodibutylamine, n-	<2.03
Nitrosodipropylamine, n-	<2.03
Nitrosomorpholine, n-	<2.03
Nitrosopiperidine, n-	<2.03
Nitrosopyrrolidine, n-	<2.03
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-020-000	0.27	20.3	04110002-04-03	41.20152	-81.57335

	2018/10/18
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.03
Pentachlorophenol (PCP)	<10.2
Phenacetin	<2.03
Phenanthrene	<2.03
Phenol	<2.03
Picoline, 2-	<2.03
Pronamide	<2.03
Pyrene	<2.03
Safrole	<2.03
Tetrachlorobenzene, 1,2,4,5-	<2.03
Tetrachlorophenol, 2,3,4,6-	<2.03
Trichlorobenzene, 1,2,4-	<2.03
Trichlorophenol, 2,4,5-	<2.03
Trichlorophenol, 2,4,6- (TCPh)	<2.03

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-021-000	0.14	31.0	04110002-04-02	41.16353	-81.57627

	2018/10/18
4-Chloro-3-methylphenol	<10.2
Acenaphthene	<2.03
Acenaphthylene	<2.03
Acetophenone	<2.03
Acetylaminofluorene, 2-	<2.03
Aldrin	<.0061
Aniline	<2.03
Anthracene	<2.03
Benzo[a]anthracene	<2.03
Benzo[a]pyrene	<2.03
Benzo[b]fluoranthene	<2.03
Benzo[g,h,i]perylene	<2.03
Benzo[k]fluoranthene	<2.03
Benzyl alcohol	<2.03
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.03
bis(2-chloroethyl) ether	<2.03
bis(2-Chloroisopropyl) ether	<2.03
bis(2-ethylhexyl) phthalate (DEHP)	<2.03
bis(n-octyl) phthalate	<2.03
Bromophenyl-4 phenyl ether	<2.03
Butyl benzyl phthalate	<2.03
Chloronaphthalene-2	<2.03
Chlorophenol-2	<2.03
Chlorophenyl-4 phenyl ether	<2.03
Chrysene	<2.03
Cresol, o-	<2.03
Cresol, p-	<2.03
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.03
Dibenzofuran	<2.03
Dibutyl phthalate	<2.03
Dichlorobenzene, 1,2-	<2.03
Dichlorobenzene, 1,3-	<2.03
Dichlorobenzene, 1,4-	<2.03
Dichlorobenzidine, 3,3'-	<2.03
Dichlorophenol, 2,4-	<2.03
Dichlorophenol, 2,6-	<2.03
Dieldrin	<.0061
Diethyl phthalate	<2.03
Dimethyl phthalate	<2.03

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-021-000	0.14	31.0	04110002-04-02	41.16353	-81.57627

	2018/10/18
Dimethylaminoazobenzene, 4-	<2.03
Dimethylbenz(a)anthracene, 7,12-	<2.03
Dimethylphenol, 2,4-	<10.2
Dinitrobenzene, m-	<2.03
Dinitro-o-cresol	<10.2
Dinitrophenol, 2,4-	<10.2
Dinitrotoluene, 2,4-	<2.03
Dinitrotoluene, 2,6-	<2.03
Diphenylamine	<2.03
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.03
Endosulfan sulfate	<.0204
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.03
Fluoranthene	<2.03
Fluorene	<2.03
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.03
Hexachlorocyclopentadiene	<10.2
Hexachloroethane	<2.03
Hexachloropropene	<2.03
Indeno[1,2,3-cd]pyrene	<2.03
Isophorone	<2.03
Methoxychlor	<.0102
Methyl methanesulfonate	<2.03
Methylcholanthrene, 3-	<2.03
Methylnaphthalene, 2-	<2.03
Mirex	<.0102
Naphthalene	<2.03
Naphthalenedione, 1,4-	<2.03
Nitroaniline, 2-	<2.03
Nitroaniline, 4-	<2.03
Nitro-benzene	<2.03
Nitrophenol, 2-	<2.03
Nitrophenol, 4-	<10.2
Nitrosodibutylamine, n-	<2.03
Nitrosodipropylamine, n-	<2.03
Nitrosomorpholine, n-	<2.03
Nitrosopiperidine, n-	<2.03
Nitrosopyrrolidine, n-	<2.03
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-021-000	0.14	31.0	04110002-04-02	41.16353	-81.57627

	2018/10/18
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.03
Pentachlorophenol (PCP)	<10.2
Phenacetin	<2.03
Phenanthrene	<2.03
Phenol	<2.03
Picoline, 2-	<2.03
Pronamide	<2.03
Pyrene	<2.03
Safrole	<2.03
Tetrachlorobenzene, 1,2,4,5-	<2.03
Tetrachlorophenol, 2,3,4,6-	<2.03
Trichlorobenzene, 1,2,4-	<2.03
Trichlorophenol, 2,4,5-	<2.03
Trichlorophenol, 2,4,6- (TCPh)	<2.03

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-024-000	0.18	29.3	04110002-04-01	41.13889	-81.54826

	2018/10/18
4-Chloro-3-methylphenol	<10.2
Acenaphthene	<2.04
Acenaphthylene	<2.04
Acetophenone	<2.04
Acetylaminofluorene, 2-	<2.04
Aldrin	<.0061
Aniline	<2.04
Anthracene	<2.04
Benzo[a]anthracene	<2.04
Benzo[a]pyrene	<2.04
Benzo[b]fluoranthene	<2.04
Benzo[g,h,i]perylene	<2.04
Benzo[k]fluoranthene	<2.04
Benzyl alcohol	<2.04
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.04
bis(2-chloroethyl) ether	<2.04
bis(2-Chloroisopropyl) ether	<2.04
bis(2-ethylhexyl) phthalate (DEHP)	<2.04
bis(n-octyl) phthalate	<2.04
Bromophenyl-4 phenyl ether	<2.04
Butyl benzyl phthalate	<2.04
Chloronaphthalene-2	<2.04
Chlorophenol-2	<2.04
Chlorophenyl-4 phenyl ether	<2.04
Chrysene	<2.04
Cresol, o-	<2.04
Cresol, p-	<2.04
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.04
Dibenzofuran	<2.04
Dibutyl phthalate	<2.04
Dichlorobenzene, 1,2-	<2.04
Dichlorobenzene, 1,3-	<2.04
Dichlorobenzene, 1,4-	<2.04
Dichlorobenzidine, 3,3'-	<2.04
Dichlorophenol, 2,4-	<2.04
Dichlorophenol, 2,6-	<2.04
Dieldrin	<.0061
Diethyl phthalate	<2.04
Dimethyl phthalate	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-024-000	0.18	29.3	04110002-04-01	41.13889	-81.54826

	2018/10/18
Dimethylaminoazobenzene, 4-	<2.04
Dimethylbenz(a)anthracene, 7,12-	<2.04
Dimethylphenol, 2,4-	<10.2
Dinitrobenzene, m-	<2.04
Dinitro-o-cresol	<10.2
Dinitrophenol, 2,4-	<10.2
Dinitrotoluene, 2,4-	<2.04
Dinitrotoluene, 2,6-	<2.04
Diphenylamine	<2.04
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.04
Endosulfan sulfate	<.0203
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.04
Fluoranthene	<2.04
Fluorene	<2.04
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.04
Hexachlorocyclopentadiene	<10.2
Hexachloroethane	<2.04
Hexachloropropene	<2.04
Indeno[1,2,3-cd]pyrene	<2.04
Isophorone	<2.04
Methoxychlor	<.0102
Methyl methanesulfonate	<2.04
Methylcholanthrene, 3-	<2.04
Methylnaphthalene, 2-	<2.04
Mirex	<.0102
Naphthalene	<2.04
Naphthalenedione, 1,4-	<2.04
Nitroaniline, 2-	<2.04
Nitroaniline, 4-	<2.04
Nitro-benzene	<2.04
Nitrophenol, 2-	<2.04
Nitrophenol, 4-	<10.2
Nitrosodibutylamine, n-	<2.04
Nitrosodipropylamine, n-	<2.04
Nitrosomorpholine, n-	<2.04
Nitrosopiperidine, n-	<2.04
Nitrosopyrrolidine, n-	<2.04
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-024-000	0.18	29.3	04110002-04-01	41.13889	-81.54826

	2018/10/18
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.04
Pentachlorophenol (PCP)	<10.2
Phenacetin	<2.04
Phenanthrene	<2.04
Phenol	<2.04
Picoline, 2-	<2.04
Pronamide	<2.04
Pyrene	<2.04
Safrole	<2.04
Tetrachlorobenzene, 1,2,4,5-	<2.04
Tetrachlorophenol, 2,3,4,6-	<2.04
Trichlorobenzene, 1,2,4-	<2.04
Trichlorophenol, 2,4,5-	<2.04
Trichlorophenol, 2,4,6- (TCPh)	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-002	0.39	5.5	04110002-02-02	41.15166	-81.27950

	2018/10/22
4-Chloro-3-methylphenol	<10.6
Acenaphthene	<2.13
Acenaphthylene	<2.13
Acetophenone	<2.13
Acetylaminofluorene, 2-	<2.13
Aldrin	<.0062
Aniline	<2.13
Anthracene	<2.13
Benzo[a]anthracene	<2.13
Benzo[a]pyrene	<2.13
Benzo[b]fluoranthene	<2.13
Benzo[g,h,i]perylene	<2.13
Benzo[k]fluoranthene	<2.13
Benzyl alcohol	<2.13
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.13
bis(2-chloroethyl) ether	<2.13
bis(2-Chloroisopropyl) ether	<2.13
bis(2-ethylhexyl) phthalate (DEHP)	<2.13
bis(n-octyl) phthalate	<2.13
Bromophenyl-4 phenyl ether	<2.13
Butyl benzyl phthalate	<2.13
Chloronaphthalene-2	<2.13
Chlorophenol-2	<2.13
Chlorophenyl-4 phenyl ether	<2.13
Chrysene	<2.13
Cresol, o-	<2.13
Cresol, p-	<2.13
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.13
Dibenzofuran	<2.13
Dibutyl phthalate	<2.13
Dichlorobenzene, 1,2-	<2.13
Dichlorobenzene, 1,3-	<2.13
Dichlorobenzene, 1,4-	<2.13
Dichlorobenzidine, 3,3'-	<2.13
Dichlorophenol, 2,4-	<2.13
Dichlorophenol, 2,6-	<2.13
Dieldrin	<.0062
Diethyl phthalate	<2.13
Dimethyl phthalate	<2.13

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-002	0.39	5.5	04110002-02-02	41.15166	-81.27950

	2018/10/22
Dimethylaminoazobenzene, 4-	<2.13
Dimethylbenz(a)anthracene, 7,12-	<2.13
Dimethylphenol, 2,4-	<10.6
Dinitrobenzene, m-	<2.13
Dinitro-o-cresol	<10.6
Dinitrophenol, 2,4-	<10.6
Dinitrotoluene, 2,4-	<2.13
Dinitrotoluene, 2,6-	<2.13
Diphenylamine	<2.13
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.13
Endosulfan sulfate	<.0205
Endosulfan, alpha-	<.0021
Endosulfan, beta-	.0022
Endrin	.0076
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.13
Fluoranthene	<2.13
Fluorene	<2.13
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.13
Hexachlorocyclopentadiene	<10.6
Hexachloroethane	<2.13
Hexachloropropene	<2.13
Indeno[1,2,3-cd]pyrene	<2.13
Isophorone	<2.13
Methoxychlor	<.0103
Methyl methanesulfonate	<2.13
Methylcholanthrene, 3-	<2.13
Methylnaphthalene, 2-	<2.13
Mirex	<.0103
Naphthalene	<2.13
Naphthalenedione, 1,4-	<2.13
Nitroaniline, 2-	<2.13
Nitroaniline, 4-	<2.13
Nitro-benzene	<2.13
Nitrophenol, 2-	<2.13
Nitrophenol, 4-	<10.6
Nitrosodibutylamine, n-	<2.13
Nitrosodipropylamine, n-	<2.13
Nitrosomorpholine, n-	<2.13
Nitrosopiperidine, n-	<2.13
Nitrosopyrrolidine, n-	<2.13
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-002	0.39	5.5	04110002-02-02	41.15166	-81.27950

	2018/10/22
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.13
Pentachlorophenol (PCP)	<10.6
Phenacetin	<2.13
Phenanthrene	<2.13
Phenol	<2.13
Picoline, 2-	<2.13
Pronamide	<2.13
Pyrene	<2.13
Safrole	<2.13
Tetrachlorobenzene, 1,2,4,5-	<2.13
Tetrachlorophenol, 2,3,4,6-	<2.13
Trichlorobenzene, 1,2,4-	<2.13
Trichlorophenol, 2,4,5-	<2.13
Trichlorophenol, 2,4,6- (TCPh)	<2.13

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-027-000	0.15	13.1	04110002-03-04	41.14060	-81.37280

	2018/10/23
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.06
Acenaphthylene	<2.06
Acetophenone	<2.06
Acetylaminofluorene, 2-	<2.06
Aldrin	<.0062
Aniline	<2.06
Anthracene	<2.06
Benzo[a]anthracene	<2.06
Benzo[a]pyrene	<2.06
Benzo[b]fluoranthene	<2.06
Benzo[g,h,i]perylene	<2.06
Benzo[k]fluoranthene	<2.06
Benzyl alcohol	<2.06
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.06
bis(2-chloroethyl) ether	<2.06
bis(2-Chloroisopropyl) ether	<2.06
bis(2-ethylhexyl) phthalate (DEHP)	<2.06
bis(n-octyl) phthalate	<2.06
Bromophenyl-4 phenyl ether	<2.06
Butyl benzyl phthalate	<2.06
Chloronaphthalene-2	<2.06
Chlorophenol-2	<2.06
Chlorophenyl-4 phenyl ether	<2.06
Chrysene	<2.06
Cresol, o-	<2.06
Cresol, p-	<2.06
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.06
Dibenzofuran	<2.06
Dibutyl phthalate	<2.06
Dichlorobenzene, 1,2-	<2.06
Dichlorobenzene, 1,3-	<2.06
Dichlorobenzene, 1,4-	<2.06
Dichlorobenzidine, 3,3'-	<2.06
Dichlorophenol, 2,4-	<2.06
Dichlorophenol, 2,6-	<2.06
Dieldrin	<.0062
Diethyl phthalate	<2.06
Dimethyl phthalate	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-027-000	0.15	13.1	04110002-03-04	41.14060	-81.37280

	2018/10/23
Dimethylaminoazobenzene, 4-	<2.06
Dimethylbenz(a)anthracene, 7,12-	<2.06
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.06
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.06
Dinitrotoluene, 2,6-	<2.06
Diphenylamine	<2.06
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.06
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.06
Fluoranthene	<2.06
Fluorene	<2.06
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.06
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.06
Hexachloropropene	<2.06
Indeno[1,2,3-cd]pyrene	<2.06
Isophorone	<2.06
Methoxychlor	<.0103
Methyl methanesulfonate	<2.06
Methylcholanthrene, 3-	<2.06
Methylnaphthalene, 2-	<2.06
Mirex	<.0103
Naphthalene	<2.06
Naphthalenedione, 1,4-	<2.06
Nitroaniline, 2-	<2.06
Nitroaniline, 4-	<2.06
Nitro-benzene	<2.06
Nitrophenol, 2-	<2.06
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.06
Nitrosodipropylamine, n-	<2.06
Nitrosomorpholine, n-	<2.06
Nitrosopiperidine, n-	<2.06
Nitrosopyrrolidine, n-	<2.06
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-027-000	0.15	13.1	04110002-03-04	41.14060	-81.37280

	2018/10/23
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.06
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.06
Phenanthrene	<2.06
Phenol	<2.06
Picoline, 2-	<2.06
Pronamide	<2.06
Pyrene	<2.06
Safrole	<2.06
Tetrachlorobenzene, 1,2,4,5-	<2.06
Tetrachlorophenol, 2,3,4,6-	<2.06
Trichlorobenzene, 1,2,4-	<2.06
Trichlorophenol, 2,4,5-	<2.06
Trichlorophenol, 2,4,6- (TCPh)	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	7.00	56.2	04110002-02-02	41.13940	-81.27080

	2018/10/22
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	7.00	56.2	04110002-02-02	41.13940	-81.27080

	2018/10/22
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	7.00	56.2	04110002-02-02	41.13940	-81.27080

	2018/10/22
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	11.33	730.0	04110002-06-04	41.41780	-81.64170

	2017/9/21
4-Chloro-3-methylphenol	<11.236
Acenaphthene	<2.2472
Acenaphthylene	<2.2472
Acetophenone	<2.2472
Acetylaminofluorene, 2-	<2.2472
Aldrin	<.0021
Aniline	<2.2472
Anthracene	<2.2472
Benzo[a]anthracene	<2.2472
Benzo[a]pyrene	<2.2472
Benzo[b]fluoranthene	<2.2472
Benzo[g,h,i]perylene	<2.2472
Benzo[k]fluoranthene	<2.2472
Benzyl alcohol	<2.2472
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.2472
bis(2-chloroethyl) ether	<2.2472
bis(2-Chloroisopropyl) ether	<2.2472
bis(2-ethylhexyl) phthalate (DEHP)	<2.2472
bis(n-octyl) phthalate	<2.2472
Bromophenyl-4 phenyl ether	<2.2472
Butyl benzyl phthalate	<2.2472
Chloronaphthalene-2	<2.2472
Chlorophenol-2	<2.2472
Chlorophenyl-4 phenyl ether	<2.2472
Chrysene	<2.2472
Cresol, o-	<2.2472
Cresol, p-	<2.2472
DDD	<.0063
DDE	<.0021
DDT	<.0063
Dibenzo[a,h]anthracene	<2.2472
Dibenzofuran	<2.2472
Dibutyl phthalate	<2.2472
Dichlorobenzene, 1,2-	<2.2472
Dichlorobenzene, 1,3-	<2.2472
Dichlorobenzene, 1,4-	<2.2472
Dichlorobenzidine, 3,3'-	<2.2472
Dichlorophenol, 2,4-	<2.2472
Dichlorophenol, 2,6-	<2.2472
Dieldrin	<.0021
Diethyl phthalate	<2.2472
Dimethyl phthalate	<2.2472

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S10		CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	11.33	730.0	04110002-06-04	41.41780	-81.64170

	2017/9/21
Dimethylaminoazobenzene, 4-	<2.2472
Dimethylbenz(a)anthracene, 7,12-	<2.2472
Dimethylphenol, 2,4-	<2.2472
Dinitrobenzene, m-	<2.2472
Dinitro-o-cresol	<11.236
Dinitrophenol, 2,4-	<11.236
Dinitrotoluene, 2,4-	<2.2472
Dinitrotoluene, 2,6-	<2.2472
Diphenylamine	<2.2472
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.2472
Endosulfan sulfate	<.0212
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0063
Ethyl methanesulfonate	<2.2472
Fluoranthene	<2.2472
Fluorene	<2.2472
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.2472
Hexachlorocyclopentadiene	<2.2472
Hexachloroethane	<2.2472
Hexachloropropene	<2.2472
Indeno[1,2,3-cd]pyrene	<2.2472
Isophorone	<2.2472
Methoxychlor	<.0106
Methyl methanesulfonate	<2.2472
Methylcholanthrene, 3-	<2.2472
Methylnaphthalene, 2-	<2.2472
Mirex	<.0106
Naphthalene	<2.2472
Naphthalenedione, 1,4-	<2.2472
Nitroaniline, 2-	<2.2472
Nitroaniline, 4-	<2.2472
Nitro-benzene	<2.2472
Nitrophenol, 2-	<2.2472
Nitrophenol, 4-	<11.236
Nitrosodibutylamine, n-	<2.2472
Nitrosodipropylamine, n-	<2.2472
Nitrosomorpholine, n-	<2.2472
Nitrosopiperidine, n-	<2.2472
Nitrosopyrrolidine, n-	<2.2472
PCB-Aroclor 1016	<.1058
PCB-Aroclor 1221	<.1058

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	11.33	730.0	04110002-06-04	41.41780	-81.64170

	2017/9/21
PCB-Aroclor 1232	<.1058
PCB-Aroclor 1242	<.1058
PCB-Aroclor 1248	<.1058
PCB-Aroclor 1254	<.1058
PCB-Aroclor 1260	<.1058
Pentachlorobenzene	<2.2472
Pentachlorophenol (PCP)	<11.236
Phenacetin	<2.2472
Phenanthrene	<2.2472
Phenol	<2.2472
Picoline, 2-	<2.2472
Pronamide	<2.2472
Pyrene	<2.2472
Safrole	<2.2472
Tetrachlorobenzene, 1,2,4,5-	<2.2472
Tetrachlorophenol, 2,3,4,6-	<2.2472
Trichlorobenzene, 1,2,4-	<2.2472
Trichlorophenol, 2,4,5-	<2.2472
Trichlorophenol, 2,4,6- (TCPh)	<2.2472

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S11 CUYAHOGA R. @ HILLSIDE RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	15.61	698.0	04110002-06-02	41.37326	-81.61479

	2017/9/21
4-Chloro-3-methylphenol	<10.7527
Acenaphthene	<2.1505
Acenaphthylene	<2.1505
Acetophenone	<2.1505
Acetylaminofluorene, 2-	<2.1505
Aldrin	<.0021
Aniline	<2.1505
Anthracene	<2.1505
Benzo[a]anthracene	<2.1505
Benzo[a]pyrene	<2.1505
Benzo[b]fluoranthene	<2.1505
Benzo[g,h,i]perylene	<2.1505
Benzo[k]fluoranthene	<2.1505
Benzyl alcohol	<2.1505
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.1505
bis(2-chloroethyl) ether	<2.1505
bis(2-Chloroisopropyl) ether	<2.1505
bis(2-ethylhexyl) phthalate (DEHP)	<2.1505
bis(n-octyl) phthalate	<2.1505
Bromophenyl-4 phenyl ether	<2.1505
Butyl benzyl phthalate	<2.1505
Chloronaphthalene-2	<2.1505
Chlorophenol-2	<2.1505
Chlorophenyl-4 phenyl ether	<2.1505
Chrysene	<2.1505
Cresol, o-	<2.1505
Cresol, p-	<2.1505
DDD	<.0063
DDE	<.0021
DDT	<.0063
Dibenzo[a,h]anthracene	<2.1505
Dibenzofuran	<2.1505
Dibutyl phthalate	<2.1505
Dichlorobenzene, 1,2-	<2.1505
Dichlorobenzene, 1,3-	<2.1505
Dichlorobenzene, 1,4-	<2.1505
Dichlorobenzidine, 3,3'-	<2.1505
Dichlorophenol, 2,4-	<2.1505
Dichlorophenol, 2,6-	<2.1505
Dieldrin	<.0021
Diethyl phthalate	<2.1505
Dimethyl phthalate	<2.1505

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S11		CUYAHOGA R. @ HILLSIDE RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	15.61	698.0	04110002-06-02	41.37326	-81.61479

	2017/9/21
Dimethylaminoazobenzene, 4-	<2.1505
Dimethylbenz(a)anthracene, 7,12-	<2.1505
Dimethylphenol, 2,4-	<2.1505
Dinitrobenzene, m-	<2.1505
Dinitro-o-cresol	<10.7527
Dinitrophenol, 2,4-	<10.7527
Dinitrotoluene, 2,4-	<2.1505
Dinitrotoluene, 2,6-	<2.1505
Diphenylamine	<2.1505
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.1505
Endosulfan sulfate	<.0212
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0063
Ethyl methanesulfonate	<2.1505
Fluoranthene	<2.1505
Fluorene	<2.1505
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.1505
Hexachlorocyclopentadiene	<2.1505
Hexachloroethane	<2.1505
Hexachloropropene	<2.1505
Indeno[1,2,3-cd]pyrene	<2.1505
Isophorone	<2.1505
Methoxychlor	<.0106
Methyl methanesulfonate	<2.1505
Methylcholanthrene, 3-	<2.1505
Methylnaphthalene, 2-	<2.1505
Mirex	<.0106
Naphthalene	<2.1505
Naphthalenedione, 1,4-	<2.1505
Nitroaniline, 2-	<2.1505
Nitroaniline, 4-	<2.1505
Nitro-benzene	<2.1505
Nitrophenol, 2-	<2.1505
Nitrophenol, 4-	<10.7527
Nitrosodibutylamine, n-	<2.1505
Nitrosodipropylamine, n-	<2.1505
Nitrosomorpholine, n-	<2.1505
Nitrosopiperidine, n-	<2.1505
Nitrosopyrrolidine, n-	<2.1505
PCB-Aroclor 1016	<.1058
PCB-Aroclor 1221	<.1058

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S11		CUYAHOGA R. @ HILLSIDE RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	15.61	698.0	04110002-06-02	41.37326	-81.61479

	2017/9/21
PCB-Aroclor 1232	<.1058
PCB-Aroclor 1242	<.1058
PCB-Aroclor 1248	<.1058
PCB-Aroclor 1254	<.1058
PCB-Aroclor 1260	<.1058
Pentachlorobenzene	<2.1505
Pentachlorophenol (PCP)	<10.7527
Phenacetin	<2.1505
Phenanthrene	<2.1505
Phenol	<2.1505
Picoline, 2-	<2.1505
Pronamide	<2.1505
Pyrene	<2.1505
Safrole	<2.1505
Tetrachlorobenzene, 1,2,4,5-	<2.1505
Tetrachlorophenol, 2,3,4,6-	<2.1505
Trichlorobenzene, 1,2,4-	<2.1505
Trichlorophenol, 2,4,5-	<2.1505
Trichlorophenol, 2,4,6- (TCPh)	<2.1505

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	64.30	178.0	04110002-02-03	41.24500	-81.28600

	2017/8/22
4-Chloro-3-methylphenol	<10.3093
Acenaphthene	<2.0619
Acenaphthylene	<2.0619
Acetophenone	<2.0619
Acetylaminofluorene, 2-	<2.0619
Aldrin	<.0021
Aniline	<2.0619
Anthracene	<2.0619
Benzo[a]anthracene	<2.0619
Benzo[a]pyrene	<2.0619
Benzo[b]fluoranthene	<2.0619
Benzo[g,h,i]perylene	<2.0619
Benzo[k]fluoranthene	<2.0619
Benzyl alcohol	<2.0619
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.0619
bis(2-chloroethyl) ether	<2.0619
bis(2-Chloroisopropyl) ether	<2.0619
bis(2-ethylhexyl) phthalate (DEHP)	<2.0619
bis(n-octyl) phthalate	<2.0619
Bromophenyl-4 phenyl ether	<2.0619
Butyl benzyl phthalate	<2.0619
Chloronaphthalene-2	<2.0619
Chlorophenol-2	<2.0619
Chlorophenyl-4 phenyl ether	<2.0619
Chrysene	<2.0619
Cresol, o-	<2.0619
Cresol, p-	<2.0619
DDD	<.0064
DDE	<.0021
DDT	<.0064
Dibenzo[a,h]anthracene	<2.0619
Dibenzofuran	<2.0619
Dibutyl phthalate	<2.0619
Dichlorobenzene, 1,2-	<2.0619
Dichlorobenzene, 1,3-	<2.0619
Dichlorobenzene, 1,4-	<2.0619
Dichlorobenzidine, 3,3'-	<2.0619
Dichlorophenol, 2,4-	<2.0619
Dichlorophenol, 2,6-	<2.0619
Dieldrin	<.0021
Diethyl phthalate	<2.0619
Dimethyl phthalate	<2.0619

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	64.30	178.0	04110002-02-03	41.24500	-81.28600

	2017/8/22
Dimethylaminoazobenzene, 4-	<2.0619
Dimethylbenz(a)anthracene, 7,12-	<2.0619
Dimethylphenol, 2,4-	<2.0619
Dinitrobenzene, m-	<2.0619
Dinitro-o-cresol	<10.3093
Dinitrophenol, 2,4-	<10.3093
Dinitrotoluene, 2,4-	<2.0619
Dinitrotoluene, 2,6-	<2.0619
Diphenylamine	<2.0619
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.0619
Endosulfan sulfate	<.0213
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0064
Ethyl methanesulfonate	<2.0619
Fluoranthene	<2.0619
Fluorene	<2.0619
Heptachlor	<.0021
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0021
Hexachlorobutadiene	<2.0619
Hexachlorocyclopentadiene	<2.0619
Hexachloroethane	<2.0619
Hexachloropropene	<2.0619
Indeno[1,2,3-cd]pyrene	<2.0619
Isophorone	<2.0619
Methoxychlor	<.0106
Methyl methanesulfonate	<2.0619
Methylcholanthrene, 3-	<2.0619
Methylnaphthalene, 2-	<2.0619
Mirex	<.0106
Naphthalene	<2.0619
Naphthalenedione, 1,4-	<2.0619
Nitroaniline, 2-	<2.0619
Nitroaniline, 4-	<2.0619
Nitro-benzene	<2.0619
Nitrophenol, 2-	<2.0619
Nitrophenol, 4-	<10.3093
Nitrosodibutylamine, n-	<2.0619
Nitrosodipropylamine, n-	<2.0619
Nitrosomorpholine, n-	<2.0619
Nitrosopiperidine, n-	<2.0619
Nitrosopyrrolidine, n-	<2.0619
PCB-Aroclor 1016	<.1064
PCB-Aroclor 1221	<.1064

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	64.30	178.0	04110002-02-03	41.24500	-81.28600

	2017/8/22
PCB-Aroclor 1232	<.1064
PCB-Aroclor 1242	<.1064
PCB-Aroclor 1248	<.1064
PCB-Aroclor 1254	<.1064
PCB-Aroclor 1260	<.1064
Pentachlorobenzene	<2.0619
Pentachlorophenol (PCP)	<10.3093
Phenacetin	<2.0619
Phenanthrene	<2.0619
Phenol	<2.0619
Picoline, 2-	<2.0619
Pronamide	<2.0619
Pyrene	<2.0619
Safrole	<2.0619
Tetrachlorobenzene, 1,2,4,5-	<2.0619
Tetrachlorophenol, 2,3,4,6-	<2.0619
Trichlorobenzene, 1,2,4-	<2.0619
Trichlorophenol, 2,4,5-	<2.0619
Trichlorophenol, 2,4,6- (TCPh)	<2.0619

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	0.10	96.0	04110002-05-04	41.36489	-81.60862

	2018/10/9
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	0.10	96.0	04110002-05-04	41.36489	-81.60862

	2018/10/9
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	0.10	96.0	04110002-05-04	41.36489	-81.60862

	2018/10/9
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	13.80	53.5	04110002-05-04	41.33702	-81.45662

	2018/10/9
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.06
Acenaphthylene	<2.06
Acetophenone	<2.06
Acetylaminofluorene, 2-	<2.06
Aldrin	<.0062
Aniline	<2.06
Anthracene	<2.06
Benzo[a]anthracene	<2.06
Benzo[a]pyrene	<2.06
Benzo[b]fluoranthene	<2.06
Benzo[g,h,i]perylene	<2.06
Benzo[k]fluoranthene	<2.06
Benzyl alcohol	<2.06
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.06
bis(2-chloroethyl) ether	<2.06
bis(2-Chloroisopropyl) ether	<2.06
bis(2-ethylhexyl) phthalate (DEHP)	<2.06
bis(n-octyl) phthalate	<2.06
Bromophenyl-4 phenyl ether	<2.06
Butyl benzyl phthalate	<2.06
Chloronaphthalene-2	<2.06
Chlorophenol-2	<2.06
Chlorophenyl-4 phenyl ether	<2.06
Chrysene	<2.06
Cresol, o-	<2.06
Cresol, p-	<2.06
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.06
Dibenzofuran	<2.06
Dibutyl phthalate	<2.06
Dichlorobenzene, 1,2-	<2.06
Dichlorobenzene, 1,3-	<2.06
Dichlorobenzene, 1,4-	<2.06
Dichlorobenzidine, 3,3'-	<2.06
Dichlorophenol, 2,4-	<2.06
Dichlorophenol, 2,6-	<2.06
Dieldrin	<.0062
Diethyl phthalate	<2.06
Dimethyl phthalate	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	13.80	53.5	04110002-05-04	41.33702	-81.45662

	2018/10/9
Dimethylaminoazobenzene, 4-	<2.06
Dimethylbenz(a)anthracene, 7,12-	<2.06
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.06
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.06
Dinitrotoluene, 2,6-	<2.06
Diphenylamine	<2.06
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.06
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.06
Fluoranthene	<2.06
Fluorene	<2.06
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.06
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.06
Hexachloropropene	<2.06
Indeno[1,2,3-cd]pyrene	<2.06
Isophorone	<2.06
Methoxychlor	<.0103
Methyl methanesulfonate	<2.06
Methylcholanthrene, 3-	<2.06
Methylnaphthalene, 2-	<2.06
Mirex	<.0103
Naphthalene	<2.06
Naphthalenedione, 1,4-	<2.06
Nitroaniline, 2-	<2.06
Nitroaniline, 4-	<2.06
Nitro-benzene	<2.06
Nitrophenol, 2-	<2.06
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.06
Nitrosodipropylamine, n-	<2.06
Nitrosomorpholine, n-	<2.06
Nitrosopiperidine, n-	<2.06
Nitrosopyrrolidine, n-	<2.06
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	13.80	53.5	04110002-05-04	41.33702	-81.45662

	2018/10/9
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.06
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.06
Phenanthrene	<2.06
Phenol	<2.06
Picoline, 2-	<2.06
Pronamide	<2.06
Pyrene	<2.06
Safrole	<2.06
Tetrachlorobenzene, 1,2,4,5-	<2.06
Tetrachlorophenol, 2,3,4,6-	<2.06
Trichlorobenzene, 1,2,4-	<2.06
Trichlorophenol, 2,4,5-	<2.06
Trichlorophenol, 2,4,6- (TCPh)	<2.06

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	0.26	27.2	04110002-04-04	41.28590	-81.56150

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	0.26	27.2	04110002-04-04	41.28590	-81.56150

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	0.26	27.2	04110002-04-04	41.28590	-81.56150

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	5.11	47.0	04110002-03-04	41.07329	-81.48453

	2018/10/23
4-Chloro-3-methylphenol	<10.2
Acenaphthene	<2.04
Acenaphthylene	<2.04
Acetophenone	<2.04
Acetylaminofluorene, 2-	<2.04
Aldrin	<.0061
Aniline	<2.04
Anthracene	<2.04
Benzo[a]anthracene	<2.04
Benzo[a]pyrene	<2.04
Benzo[b]fluoranthene	<2.04
Benzo[g,h,i]perylene	<2.04
Benzo[k]fluoranthene	<2.04
Benzyl alcohol	<2.04
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.04
bis(2-chloroethyl) ether	<2.04
bis(2-Chloroisopropyl) ether	<2.04
bis(2-ethylhexyl) phthalate (DEHP)	<2.04
bis(n-octyl) phthalate	<2.04
Bromophenyl-4 phenyl ether	<2.04
Butyl benzyl phthalate	<2.04
Chloronaphthalene-2	<2.04
Chlorophenol-2	<2.04
Chlorophenyl-4 phenyl ether	<2.04
Chrysene	<2.04
Cresol, o-	<2.04
Cresol, p-	<2.04
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.04
Dibenzofuran	<2.04
Dibutyl phthalate	<2.04
Dichlorobenzene, 1,2-	<2.04
Dichlorobenzene, 1,3-	<2.04
Dichlorobenzene, 1,4-	<2.04
Dichlorobenzidine, 3,3'-	<2.04
Dichlorophenol, 2,4-	<2.04
Dichlorophenol, 2,6-	<2.04
Dieldrin	<.0061
Diethyl phthalate	<2.04
Dimethyl phthalate	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	5.11	47.0	04110002-03-04	41.07329	-81.48453

	2018/10/23
Dimethylaminoazobenzene, 4-	<2.04
Dimethylbenz(a)anthracene, 7,12-	<2.04
Dimethylphenol, 2,4-	<10.2
Dinitrobenzene, m-	<2.04
Dinitro-o-cresol	<10.2
Dinitrophenol, 2,4-	<10.2
Dinitrotoluene, 2,4-	<2.04
Dinitrotoluene, 2,6-	<2.04
Diphenylamine	<2.04
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.04
Endosulfan sulfate	<.0203
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.04
Fluoranthene	<2.04
Fluorene	<2.04
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.04
Hexachlorocyclopentadiene	<10.2
Hexachloroethane	<2.04
Hexachloropropene	<2.04
Indeno[1,2,3-cd]pyrene	<2.04
Isophorone	<2.04
Methoxychlor	<.0102
Methyl methanesulfonate	<2.04
Methylcholanthrene, 3-	<2.04
Methylnaphthalene, 2-	<2.04
Mirex	<.0102
Naphthalene	<2.04
Naphthalenedione, 1,4-	<2.04
Nitroaniline, 2-	<2.04
Nitroaniline, 4-	<2.04
Nitro-benzene	<2.04
Nitrophenol, 2-	<2.04
Nitrophenol, 4-	<10.2
Nitrosodibutylamine, n-	<2.04
Nitrosodipropylamine, n-	<2.04
Nitrosomorpholine, n-	<2.04
Nitrosopiperidine, n-	<2.04
Nitrosopyrrolidine, n-	<2.04
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	5.11	47.0	04110002-03-04	41.07329	-81.48453

	2018/10/23
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.04
Pentachlorophenol (PCP)	<10.2
Phenacetin	<2.04
Phenanthrene	<2.04
Phenol	<2.04
Picoline, 2-	<2.04
Pronamide	<2.04
Pyrene	<2.04
Safrole	<2.04
Tetrachlorobenzene, 1,2,4,5-	<2.04
Tetrachlorophenol, 2,3,4,6-	<2.04
Trichlorobenzene, 1,2,4-	<2.04
Trichlorophenol, 2,4,5-	<2.04
Trichlorophenol, 2,4,6- (TCPh)	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	7.02	8.7	04110002-04-04	41.26020	-81.48910

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	7.02	8.7	04110002-04-04	41.26020	-81.48910

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	7.02	8.7	04110002-04-04	41.26020	-81.48910

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W37 FISH CREEK AT KENT @ N. RIVER RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-026-000	0.38	11.4	04110002-03-05	41.14580	-81.39720

	2018/8/13
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W37 FISH CREEK AT KENT @ N. RIVER RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-026-000	0.38	11.4	04110002-03-05	41.14580	-81.39720

	2018/8/13
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W37		FISH CREEK AT KENT @ N. RIVER RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-026-000	0.38	11.4	04110002-03-05	41.14580	-81.39720

	2018/8/13
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W43		CUYAHOGA R. @ LTV FOOTBRIDGE			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	5.90	788.0	04110002-06-05	41.46330	-81.68060

	2017/9/18
4-Chloro-3-methylphenol	<10.2
Acenaphthene	<2.04
Acenaphthylene	<2.04
Acetophenone	<2.04
Acetylaminofluorene, 2-	<2.04
Aldrin	<.0022
Aniline	<2.04
Anthracene	<2.04
Benzo[a]anthracene	<2.04
Benzo[a]pyrene	<2.04
Benzo[b]fluoranthene	<2.04
Benzo[g,h,i]perylene	<2.04
Benzo[k]fluoranthene	<2.04
Benzyl alcohol	<2.04
BHC-alpha	<.0022
BHC-beta	<.0022
BHC-delta	<.0022
BHC-gamma (Lindane)	<.0022
bis(2-chloroethoxy) methane	<2.04
bis(2-chloroethyl) ether	<2.04
bis(2-Chloroisopropyl) ether	<2.04
bis(2-ethylhexyl) phthalate (DEHP)	<2.04
bis(n-octyl) phthalate	<2.04
Bromophenyl-4 phenyl ether	<2.04
Butyl benzyl phthalate	<2.04
Chloronaphthalene-2	<2.04
Chlorophenol-2	<2.04
Chlorophenyl-4 phenyl ether	<2.04
Chrysene	<2.04
Cresol, o-	<2.04
Cresol, p-	<2.04
DDD	<.0065
DDE	<.0022
DDT	<.0065
Dibenzo[a,h]anthracene	<2.04
Dibenzofuran	<2.04
Dibutyl phthalate	<2.04
Dichlorobenzene, 1,2-	<2.04
Dichlorobenzene, 1,3-	<2.04
Dichlorobenzene, 1,4-	<2.04
Dichlorobenzidine, 3,3'-	<2.04
Dichlorophenol, 2,4-	<2.04
Dichlorophenol, 2,6-	<2.04
Dieldrin	<.0022
Diethyl phthalate	<2.04
Dimethyl phthalate	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W43		CUYAHOGA R. @ LTV FOOTBRIDGE			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	5.90	788.0	04110002-06-05	41.46330	-81.68060

	2017/9/18
Dimethylaminoazobenzene, 4-	<2.04
Dimethylbenz(a)anthracene, 7,12-	<2.04
Dimethylphenol, 2,4-	<2.04
Dinitrobenzene, m-	<2.04
Dinitro-o-cresol	<10.2
Dinitrophenol, 2,4-	<10.2
Dinitrotoluene, 2,4-	<2.04
Dinitrotoluene, 2,6-	<2.04
Diphenylamine	<2.04
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.04
Endosulfan sulfate	<.0216
Endosulfan, alpha-	<.0022
Endosulfan, beta-	<.0022
Endrin	<.0022
Endrin aldehyde	<.0065
Ethyl methanesulfonate	<2.04
Fluoranthene	<2.04
Fluorene	<2.04
Heptachlor	<.0022
Heptachlor epoxide	<.0022
Hexachlorobenzene	.0045
Hexachlorobutadiene	<2.04
Hexachlorocyclopentadiene	<2.04
Hexachloroethane	<2.04
Hexachloropropene	<2.04
Indeno[1,2,3-cd]pyrene	<2.04
Isophorone	<2.04
Methoxychlor	<.0108
Methyl methanesulfonate	<2.04
Methylcholanthrene, 3-	<2.04
Methylnaphthalene, 2-	<2.04
Mirex	<.0108
Naphthalene	<2.04
Naphthalenedione, 1,4-	<2.04
Nitroaniline, 2-	<2.04
Nitroaniline, 4-	<2.04
Nitro-benzene	<2.04
Nitrophenol, 2-	<2.04
Nitrophenol, 4-	<10.2
Nitrosodibutylamine, n-	<2.04
Nitrosodipropylamine, n-	<2.04
Nitrosomorpholine, n-	<2.04
Nitrosopiperidine, n-	<2.04
Nitrosopyrrolidine, n-	<2.04
PCB-Aroclor 1016	<.108
PCB-Aroclor 1221	<.108

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W43		CUYAHOGA R. @ LTV FOOTBRIDGE			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	5.90	788.0	04110002-06-05	41.46330	-81.68060

	2017/9/18
PCB-Aroclor 1232	<.108
PCB-Aroclor 1242	<.108
PCB-Aroclor 1248	<.108
PCB-Aroclor 1254	<.108
PCB-Aroclor 1260	<.108
Pentachlorobenzene	<2.04
Pentachlorophenol (PCP)	<10.2
Phenacetin	<2.04
Phenanthrene	<2.04
Phenol	<2.04
Picoline, 2-	<2.04
Pronamide	<2.04
Pyrene	<2.04
Safrole	<2.04
Tetrachlorobenzene, 1,2,4,5-	<2.04
Tetrachlorophenol, 2,3,4,6-	<2.04
Trichlorobenzene, 1,2,4-	<2.04
Trichlorophenol, 2,4,5-	<2.04
Trichlorophenol, 2,4,6- (TCPh)	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W71		POTTER CREEK @ TRARES RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-005	1.47	3.2	04110002-02-01	41.04280	-81.29580

	2018/10/22
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0062
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	.0024
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0062
DDE	<.0021
DDT	<.0062
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0062
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W71 POTTER CREEK @ TRARES RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-005	1.47	3.2	04110002-02-01	41.04280	-81.29580

	2018/10/22
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0206
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0062
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0062
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0062
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0103
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0103
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.103
PCB-Aroclor 1221	<.103

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W71		POTTER CREEK @ TRARES RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-005	1.47	3.2	04110002-02-01	41.04280	-81.29580

	2018/10/22
PCB-Aroclor 1232	<.103
PCB-Aroclor 1242	<.103
PCB-Aroclor 1248	<.103
PCB-Aroclor 1254	<.103
PCB-Aroclor 1260	<.103
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-036-000	0.87	35.4	04110002-01-02	41.45060	-81.15890

	2018/10/9
4-Chloro-3-methylphenol	<10.2
Acenaphthene	<2.04
Acenaphthylene	<2.04
Acetophenone	<2.04
Acetylaminofluorene, 2-	<2.04
Aldrin	<.0061
Aniline	<2.04
Anthracene	<2.04
Benzo[a]anthracene	<2.04
Benzo[a]pyrene	<2.04
Benzo[b]fluoranthene	<2.04
Benzo[g,h,i]perylene	<2.04
Benzo[k]fluoranthene	<2.04
Benzyl alcohol	<2.04
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.04
bis(2-chloroethyl) ether	<2.04
bis(2-Chloroisopropyl) ether	<2.04
bis(2-ethylhexyl) phthalate (DEHP)	<2.04
bis(n-octyl) phthalate	<2.04
Bromophenyl-4 phenyl ether	<2.04
Butyl benzyl phthalate	<2.04
Chloronaphthalene-2	<2.04
Chlorophenol-2	<2.04
Chlorophenyl-4 phenyl ether	<2.04
Chrysene	<2.04
Cresol, o-	<2.04
Cresol, p-	<2.04
DDD	<.0061
DDE	<.002
DDT	<.0061
Dibenzo[a,h]anthracene	<2.04
Dibenzofuran	<2.04
Dibutyl phthalate	<2.04
Dichlorobenzene, 1,2-	<2.04
Dichlorobenzene, 1,3-	<2.04
Dichlorobenzene, 1,4-	<2.04
Dichlorobenzidine, 3,3'-	<2.04
Dichlorophenol, 2,4-	<2.04
Dichlorophenol, 2,6-	<2.04
Dieldrin	<.0061
Diethyl phthalate	<2.04
Dimethyl phthalate	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-036-000	0.87	35.4	04110002-01-02	41.45060	-81.15890

	2018/10/9
Dimethylaminoazobenzene, 4-	<2.04
Dimethylbenz(a)anthracene, 7,12-	<2.04
Dimethylphenol, 2,4-	<10.2
Dinitrobenzene, m-	<2.04
Dinitro-o-cresol	<10.2
Dinitrophenol, 2,4-	<10.2
Dinitrotoluene, 2,4-	<2.04
Dinitrotoluene, 2,6-	<2.04
Diphenylamine	<2.04
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.04
Endosulfan sulfate	<.0203
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.0061
Ethyl methanesulfonate	<2.04
Fluoranthene	<2.04
Fluorene	<2.04
Heptachlor	<.0061
Heptachlor epoxide	<.002
Hexachlorobenzene	<.0061
Hexachlorobutadiene	<2.04
Hexachlorocyclopentadiene	<10.2
Hexachloroethane	<2.04
Hexachloropropene	<2.04
Indeno[1,2,3-cd]pyrene	<2.04
Isophorone	<2.04
Methoxychlor	<.0102
Methyl methanesulfonate	<2.04
Methylcholanthrene, 3-	<2.04
Methylnaphthalene, 2-	<2.04
Mirex	<.0102
Naphthalene	<2.04
Naphthalenedione, 1,4-	<2.04
Nitroaniline, 2-	<2.04
Nitroaniline, 4-	<2.04
Nitro-benzene	<2.04
Nitrophenol, 2-	<2.04
Nitrophenol, 4-	<10.2
Nitrosodibutylamine, n-	<2.04
Nitrosodipropylamine, n-	<2.04
Nitrosomorpholine, n-	<2.04
Nitrosopiperidine, n-	<2.04
Nitrosopyrrolidine, n-	<2.04
PCB-Aroclor 1016	<.102
PCB-Aroclor 1221	<.102

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W76		W. BR. CUYAHOGA R.@ RAPIDS RD.			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-036-000	0.87	35.4	04110002-01-02	41.45060	-81.15890

	2018/10/9
PCB-Aroclor 1232	<.102
PCB-Aroclor 1242	<.102
PCB-Aroclor 1248	<.102
PCB-Aroclor 1254	<.102
PCB-Aroclor 1260	<.102
Pentachlorobenzene	<2.04
Pentachlorophenol (PCP)	<10.2
Phenacetin	<2.04
Phenanthrene	<2.04
Phenol	<2.04
Picoline, 2-	<2.04
Pronamide	<2.04
Pyrene	<2.04
Safrole	<2.04
Tetrachlorobenzene, 1,2,4,5-	<2.04
Tetrachlorophenol, 2,3,4,6-	<2.04
Trichlorobenzene, 1,2,4-	<2.04
Trichlorophenol, 2,4,5-	<2.04
Trichlorophenol, 2,4,6- (TCPh)	<2.04

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W83		BREAKNECK CREEK NEAR MOUTH			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	0.05	78.7	04110002-02-02	41.16949	-81.33769

	2018/10/22
4-Chloro-3-methylphenol	<10.3
Acenaphthene	<2.05
Acenaphthylene	<2.05
Acetophenone	<2.05
Acetylaminofluorene, 2-	<2.05
Aldrin	<.0063
Aniline	<2.05
Anthracene	<2.05
Benzo[a]anthracene	<2.05
Benzo[a]pyrene	<2.05
Benzo[b]fluoranthene	<2.05
Benzo[g,h,i]perylene	<2.05
Benzo[k]fluoranthene	<2.05
Benzyl alcohol	<2.05
BHC-alpha	<.0021
BHC-beta	<.0021
BHC-delta	<.0021
BHC-gamma (Lindane)	<.0021
bis(2-chloroethoxy) methane	<2.05
bis(2-chloroethyl) ether	<2.05
bis(2-Chloroisopropyl) ether	<2.05
bis(2-ethylhexyl) phthalate (DEHP)	<2.05
bis(n-octyl) phthalate	<2.05
Bromophenyl-4 phenyl ether	<2.05
Butyl benzyl phthalate	<2.05
Chloronaphthalene-2	<2.05
Chlorophenol-2	<2.05
Chlorophenyl-4 phenyl ether	<2.05
Chrysene	<2.05
Cresol, o-	<2.05
Cresol, p-	<2.05
DDD	<.0063
DDE	<.0021
DDT	<.0063
Dibenzo[a,h]anthracene	<2.05
Dibenzofuran	<2.05
Dibutyl phthalate	<2.05
Dichlorobenzene, 1,2-	<2.05
Dichlorobenzene, 1,3-	<2.05
Dichlorobenzene, 1,4-	<2.05
Dichlorobenzidine, 3,3'-	<2.05
Dichlorophenol, 2,4-	<2.05
Dichlorophenol, 2,6-	<2.05
Dieldrin	<.0063
Diethyl phthalate	<2.05
Dimethyl phthalate	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W83		BREAKNECK CREEK NEAR MOUTH			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	0.05	78.7	04110002-02-02	41.16949	-81.33769

	2018/10/22
Dimethylaminoazobenzene, 4-	<2.05
Dimethylbenz(a)anthracene, 7,12-	<2.05
Dimethylphenol, 2,4-	<10.3
Dinitrobenzene, m-	<2.05
Dinitro-o-cresol	<10.3
Dinitrophenol, 2,4-	<10.3
Dinitrotoluene, 2,4-	<2.05
Dinitrotoluene, 2,6-	<2.05
Diphenylamine	<2.05
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.05
Endosulfan sulfate	<.0208
Endosulfan, alpha-	<.0021
Endosulfan, beta-	<.0021
Endrin	<.0021
Endrin aldehyde	<.0063
Ethyl methanesulfonate	<2.05
Fluoranthene	<2.05
Fluorene	<2.05
Heptachlor	<.0063
Heptachlor epoxide	<.0021
Hexachlorobenzene	<.0063
Hexachlorobutadiene	<2.05
Hexachlorocyclopentadiene	<10.3
Hexachloroethane	<2.05
Hexachloropropene	<2.05
Indeno[1,2,3-cd]pyrene	<2.05
Isophorone	<2.05
Methoxychlor	<.0104
Methyl methanesulfonate	<2.05
Methylcholanthrene, 3-	<2.05
Methylnaphthalene, 2-	<2.05
Mirex	<.0104
Naphthalene	<2.05
Naphthalenedione, 1,4-	<2.05
Nitroaniline, 2-	<2.05
Nitroaniline, 4-	<2.05
Nitro-benzene	<2.05
Nitrophenol, 2-	<2.05
Nitrophenol, 4-	<10.3
Nitrosodibutylamine, n-	<2.05
Nitrosodipropylamine, n-	<2.05
Nitrosomorpholine, n-	<2.05
Nitrosopiperidine, n-	<2.05
Nitrosopyrrolidine, n-	<2.05
PCB-Aroclor 1016	<.104
PCB-Aroclor 1221	<.104

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F01W83 BREAKNECK CREEK NEAR MOUTH

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	0.05	78.7	04110002-02-02	41.16949	-81.33769

	2018/10/22
PCB-Aroclor 1232	<.104
PCB-Aroclor 1242	<.104
PCB-Aroclor 1248	<.104
PCB-Aroclor 1254	<.104
PCB-Aroclor 1260	<.104
Pentachlorobenzene	<2.05
Pentachlorophenol (PCP)	<10.3
Phenacetin	<2.05
Phenanthrene	<2.05
Phenol	<2.05
Picoline, 2-	<2.05
Pronamide	<2.05
Pyrene	<2.05
Safrole	<2.05
Tetrachlorobenzene, 1,2,4,5-	<2.05
Tetrachlorophenol, 2,3,4,6-	<2.05
Trichlorobenzene, 1,2,4-	<2.05
Trichlorophenol, 2,4,5-	<2.05
Trichlorophenol, 2,4,6- (TCPh)	<2.05

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F99Q02 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	10.30	744.0	04110002-06-04	41.42122	-81.65907

	2017/9/21
4-Chloro-3-methylphenol	<10.3627
Acenaphthene	<2.0725
Acenaphthylene	<2.0725
Acetophenone	<2.0725
Acetylaminofluorene, 2-	<2.0725
Aldrin	<.002
Aniline	<2.0725
Anthracene	<2.0725
Benzo[a]anthracene	<2.0725
Benzo[a]pyrene	<2.0725
Benzo[b]fluoranthene	<2.0725
Benzo[g,h,i]perylene	<2.0725
Benzo[k]fluoranthene	<2.0725
Benzyl alcohol	<2.0725
BHC-alpha	<.002
BHC-beta	<.002
BHC-delta	<.002
BHC-gamma (Lindane)	<.002
bis(2-chloroethoxy) methane	<2.0725
bis(2-chloroethyl) ether	<2.0725
bis(2-Chloroisopropyl) ether	<2.0725
bis(2-ethylhexyl) phthalate (DEHP)	<2.0725
bis(n-octyl) phthalate	<2.0725
Bromophenyl-4 phenyl ether	<2.0725
Butyl benzyl phthalate	<2.0725
Chloronaphthalene-2	<2.0725
Chlorophenol-2	<2.0725
Chlorophenyl-4 phenyl ether	<2.0725
Chrysene	<2.0725
Cresol, o-	<2.0725
Cresol, p-	<2.0725
DDD	<.006
DDE	<.002
DDT	<.006
Dibenzo[a,h]anthracene	<2.0725
Dibenzofuran	<2.0725
Dibutyl phthalate	<2.0725
Dichlorobenzene, 1,2-	<2.0725
Dichlorobenzene, 1,3-	<2.0725
Dichlorobenzene, 1,4-	<2.0725
Dichlorobenzidine, 3,3'-	<2.0725
Dichlorophenol, 2,4-	<2.0725
Dichlorophenol, 2,6-	<2.0725
Dieldrin	<.002
Diethyl phthalate	<2.0725
Dimethyl phthalate	<2.0725

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F99Q02		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	10.30	744.0	04110002-06-04	41.42122	-81.65907

	2017/9/21
Dimethylaminoazobenzene, 4-	<2.0725
Dimethylbenz(a)anthracene, 7,12-	<2.0725
Dimethylphenol, 2,4-	<2.0725
Dinitrobenzene, m-	<2.0725
Dinitro-o-cresol	<10.3627
Dinitrophenol, 2,4-	<10.3627
Dinitrotoluene, 2,4-	<2.0725
Dinitrotoluene, 2,6-	<2.0725
Diphenylamine	<2.0725
DNBP, 4,6-Dinitro-2-sec-butylphenol	<2.0725
Endosulfan sulfate	<.0201
Endosulfan, alpha-	<.002
Endosulfan, beta-	<.002
Endrin	<.002
Endrin aldehyde	<.006
Ethyl methanesulfonate	<2.0725
Fluoranthene	<2.0725
Fluorene	<2.0725
Heptachlor	<.002
Heptachlor epoxide	<.002
Hexachlorobenzene	<.002
Hexachlorobutadiene	<2.0725
Hexachlorocyclopentadiene	<2.0725
Hexachloroethane	<2.0725
Hexachloropropene	<2.0725
Indeno[1,2,3-cd]pyrene	<2.0725
Isophorone	<2.0725
Methoxychlor	<.0101
Methyl methanesulfonate	<2.0725
Methylcholanthrene, 3-	<2.0725
Methylnaphthalene, 2-	<2.0725
Mirex	<.0101
Naphthalene	<2.0725
Naphthalenedione, 1,4-	<2.0725
Nitroaniline, 2-	<2.0725
Nitroaniline, 4-	<2.0725
Nitro-benzene	<2.0725
Nitrophenol, 2-	<2.0725
Nitrophenol, 4-	<10.3627
Nitrosodibutylamine, n-	<2.0725
Nitrosodipropylamine, n-	<2.0725
Nitrosomorpholine, n-	<2.0725
Nitrosopiperidine, n-	<2.0725
Nitrosopyrrolidine, n-	<2.0725
PCB-Aroclor 1016	<.1005
PCB-Aroclor 1221	<.1005

Appendix Table 2. Results from organic scans of water column samples from the Cuyahoga basin survey, 2017 - 2018.
All units are ug/L.

F99Q02		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	10.30	744.0	04110002-06-04	41.42122	-81.65907

	2017/9/21
PCB-Aroclor 1232	<.1005
PCB-Aroclor 1242	<.1005
PCB-Aroclor 1248	<.1005
PCB-Aroclor 1254	<.1005
PCB-Aroclor 1260	<.1005
Pentachlorobenzene	<2.0725
Pentachlorophenol (PCP)	<10.3627
Phenacetin	<2.0725
Phenanthrene	<2.0725
Phenol	<2.0725
Picoline, 2-	<2.0725
Pronamide	<2.0725
Pyrene	<2.0725
Safrole	<2.0725
Tetrachlorobenzene, 1,2,4,5-	<2.0725
Tetrachlorophenol, 2,3,4,6-	<2.0725
Trichlorobenzene, 1,2,4-	<2.0725
Trichlorophenol, 2,4,5-	<2.0725
Trichlorophenol, 2,4,6- (TCPh)	<2.0725

¡ Deteced in Blank; º Exceeds Calibration; ¿ QC Criteria Not Met; ¹ Invalid Colony Count; ¥ CoAnalyeCorrelation; £ Matrix Interference; ªEstimatedValue; ¯Holding/Shipping Time Exceeded: ¤ PesticideGCDiff

Appendix L – Water Quality Sonde Result Graphs

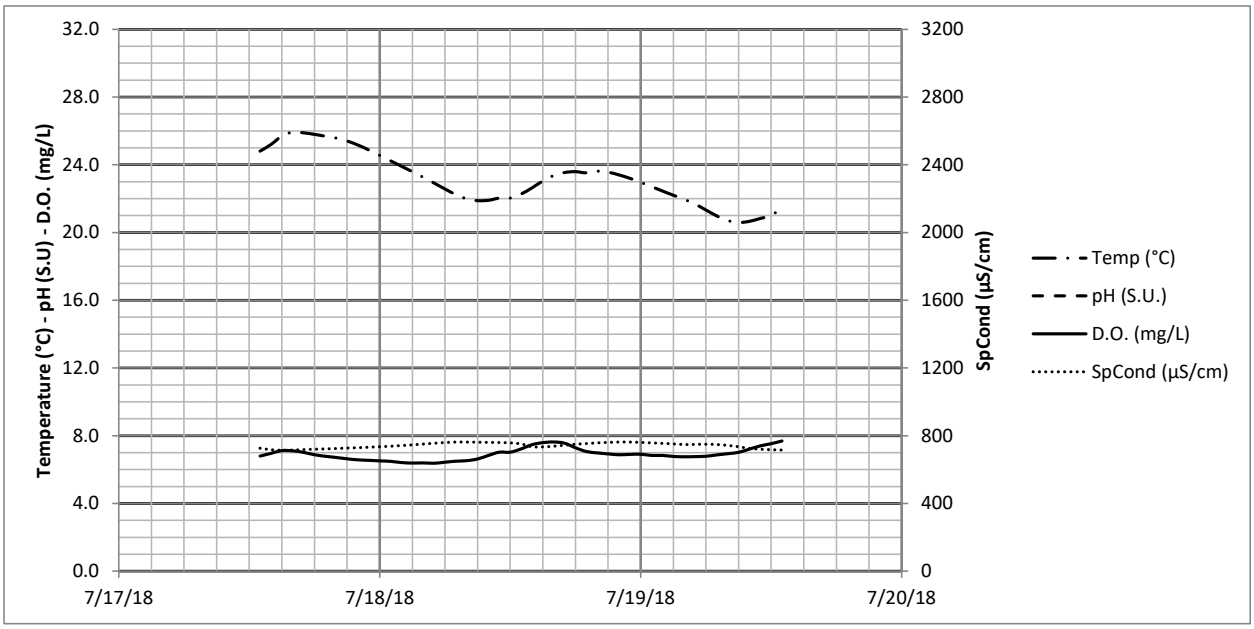


Figure 1: Plot of hourly data collected with a water quality sonde on Breakneck Creek (RM 3.08; STORET: F01S51). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

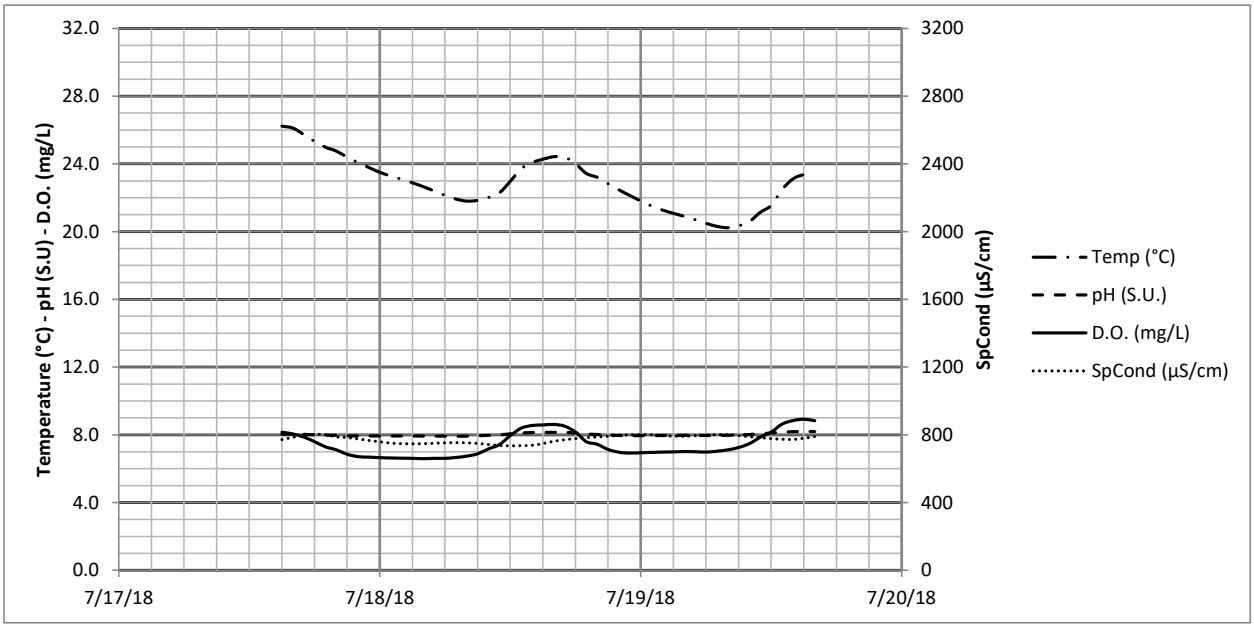


Figure 2: Plot of hourly data collected with a water quality sonde on Breakneck Creek (RM 0.05; STORET: F01W83). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

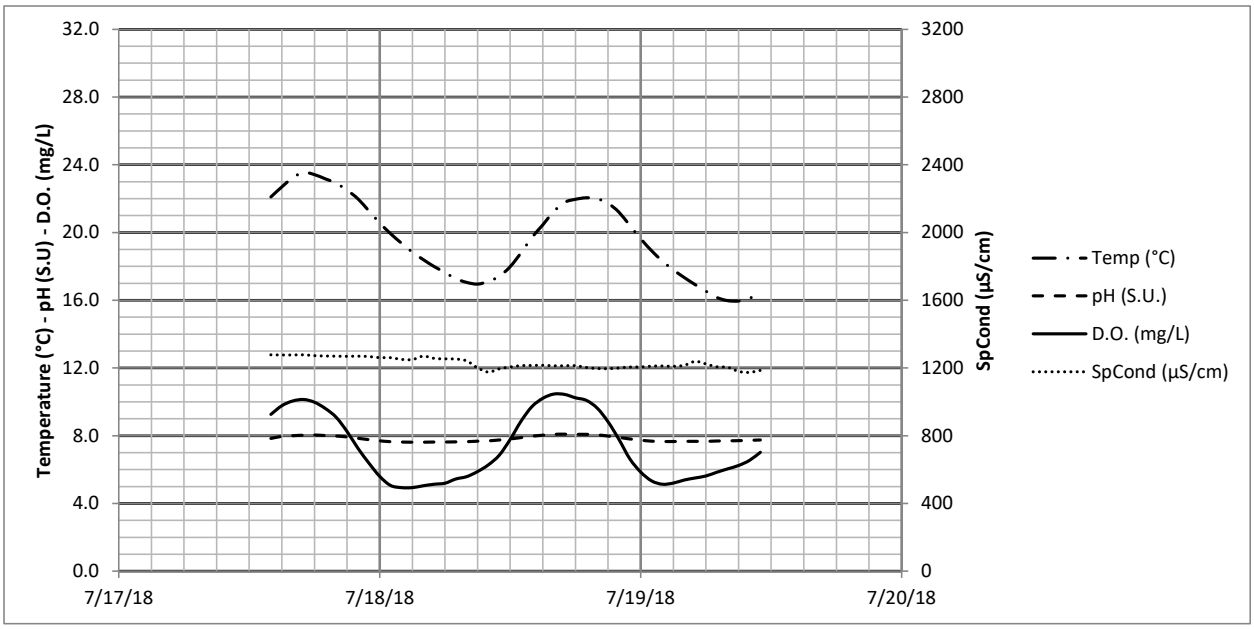


Figure 3: Plot of hourly data collected with a water quality sonde on Wahoo Ditch (RM 1.22; STORET: F01S53). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

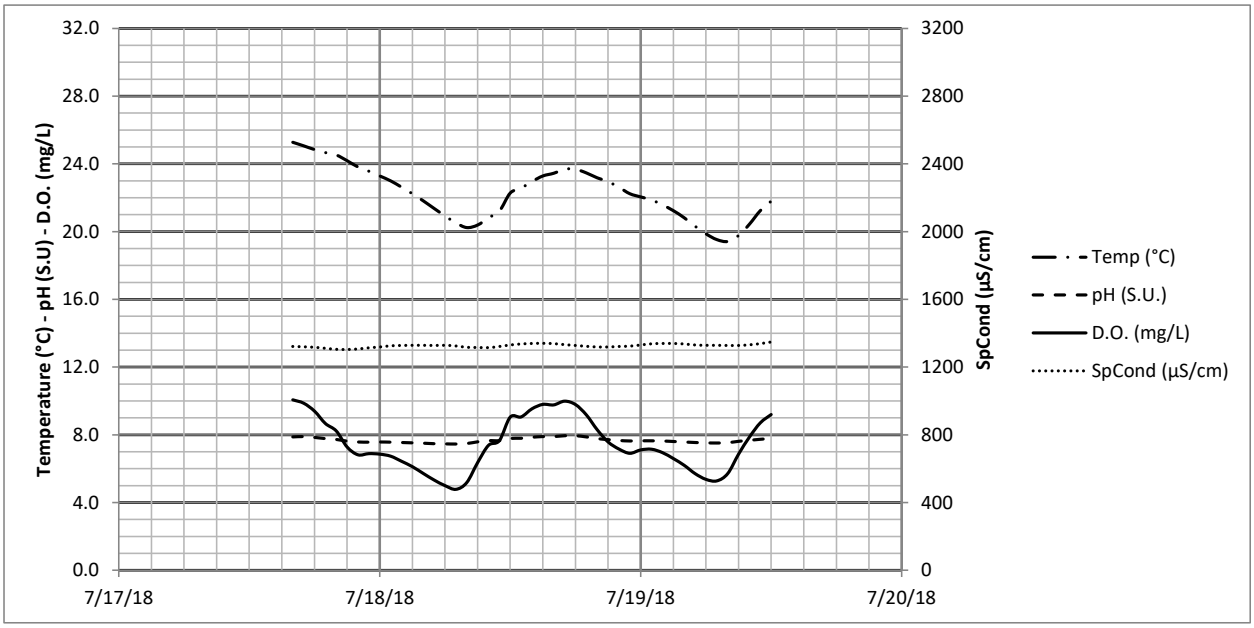


Figure 4: Plot of hourly data collected with a water quality sonde on Wahoo Ditch (RM 0.39; STORET: F01P32). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

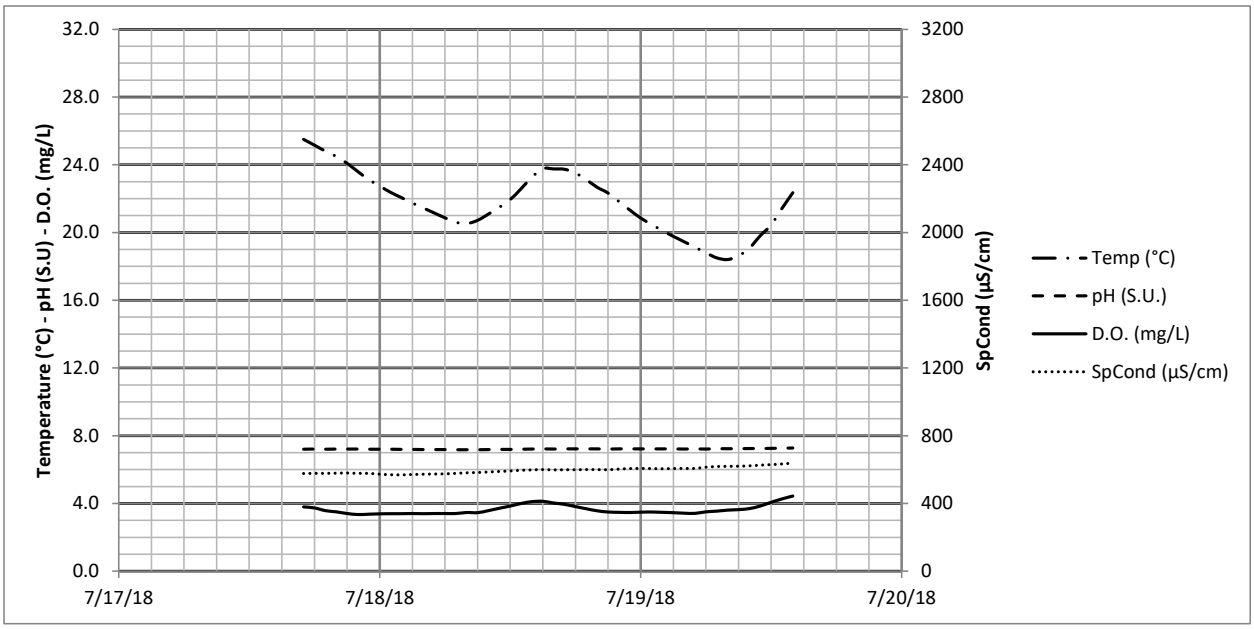


Figure 5: Plot of hourly data collected with a water quality sonde on Brimfield Ditch (RM 0.1; STORET: 200113). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

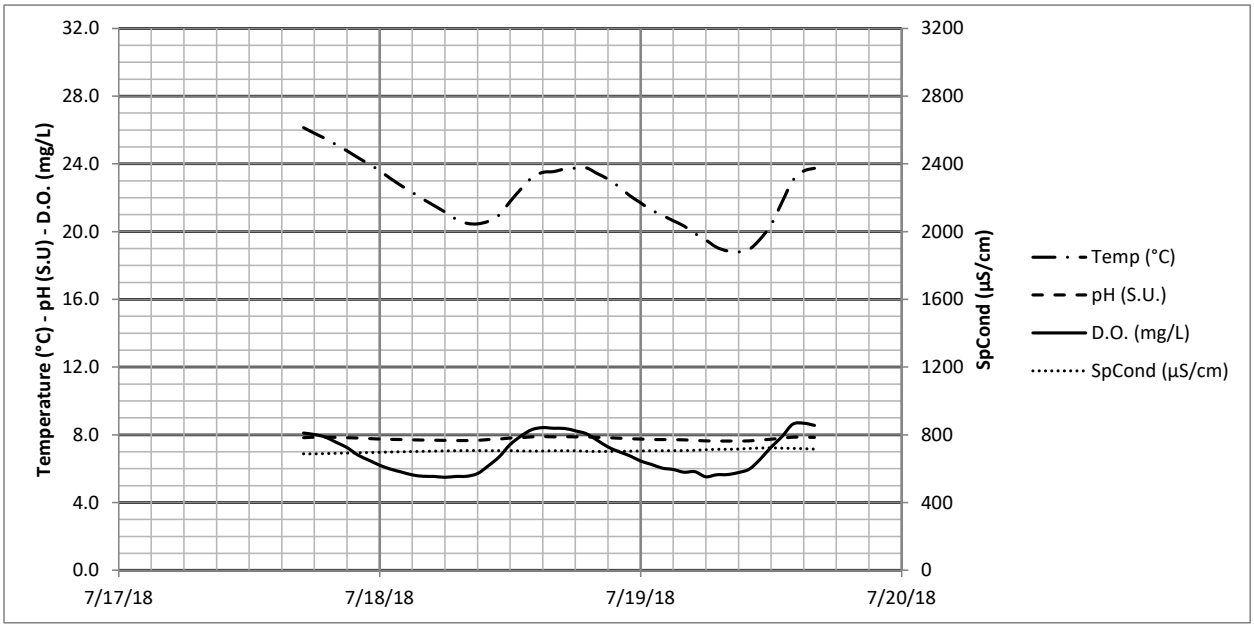


Figure 6: Plot of hourly data collected with a water quality sonde on Plum Creek (RM 0.32; STORET: F01P34). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

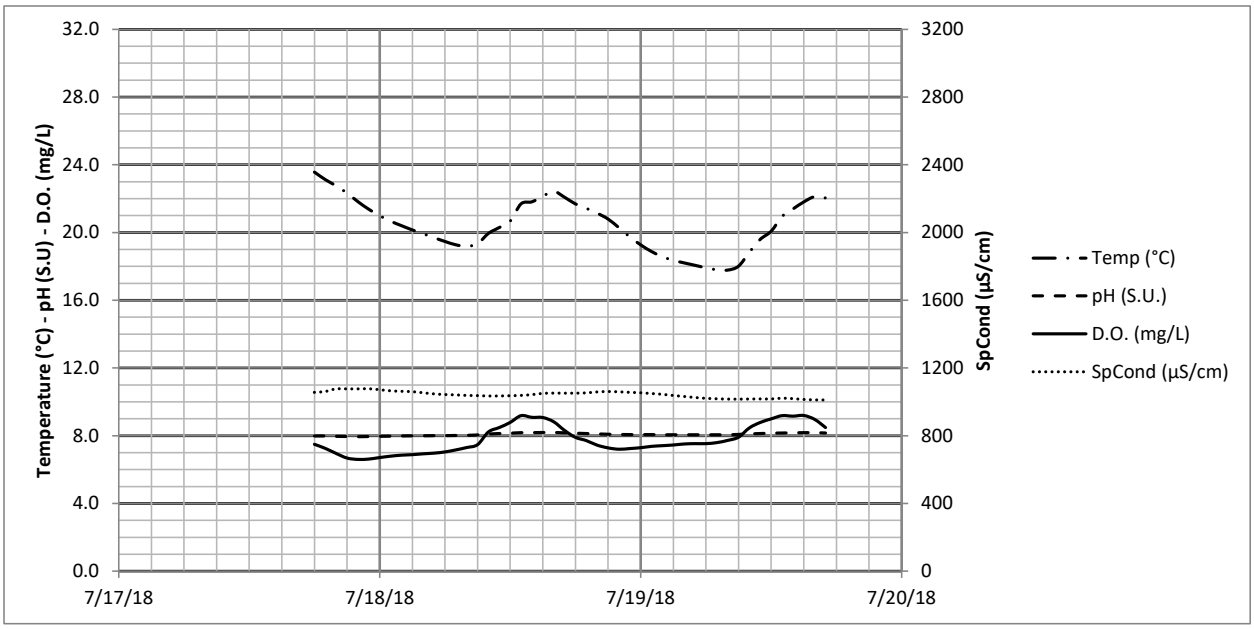


Figure 10: Plot of hourly data collected with a water quality sonde on Fish Creek (RM 0.38; STORET: F01W37). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

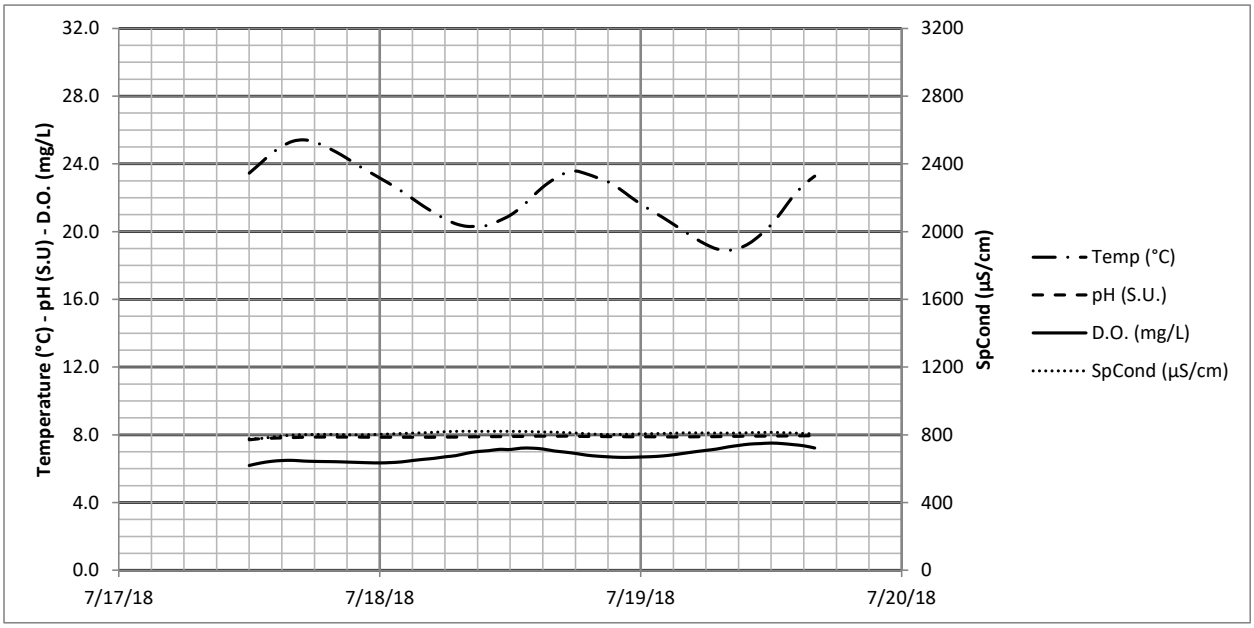


Figure 11: Plot of hourly data collected with a water quality sonde on Little Cuyahoga River (RM 11.2; STORET: F01S88). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

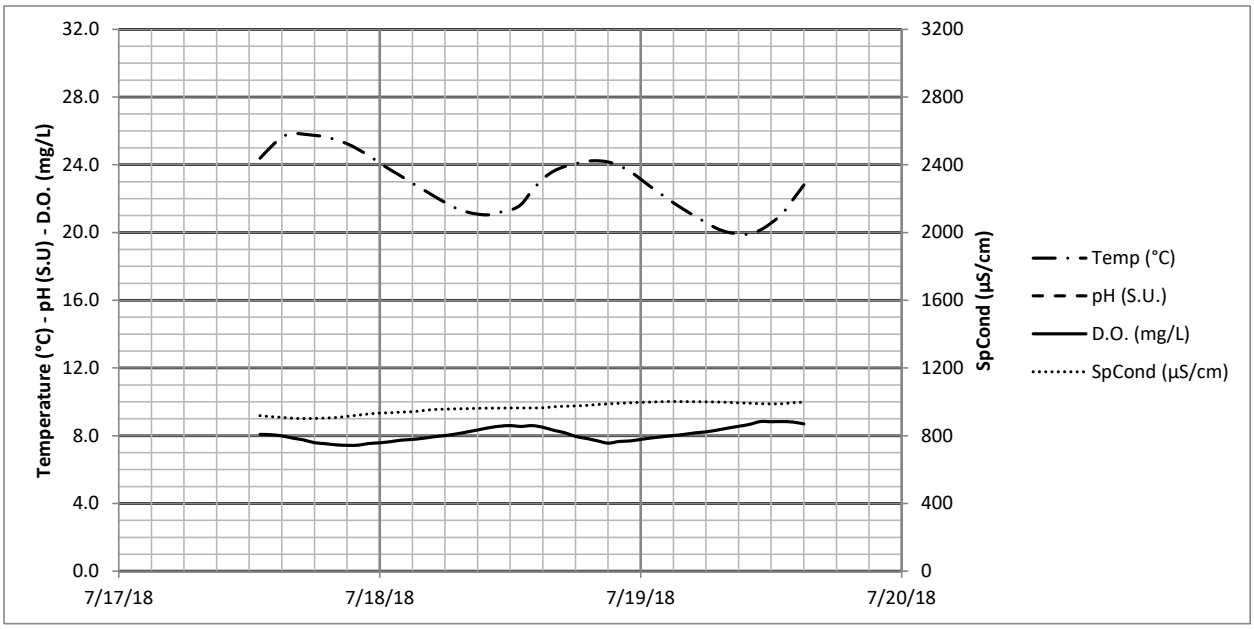


Figure 12: Plot of hourly data collected with a water quality sonde on Little Cuyahoga River (RM 5.11; STORET: F01S82). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

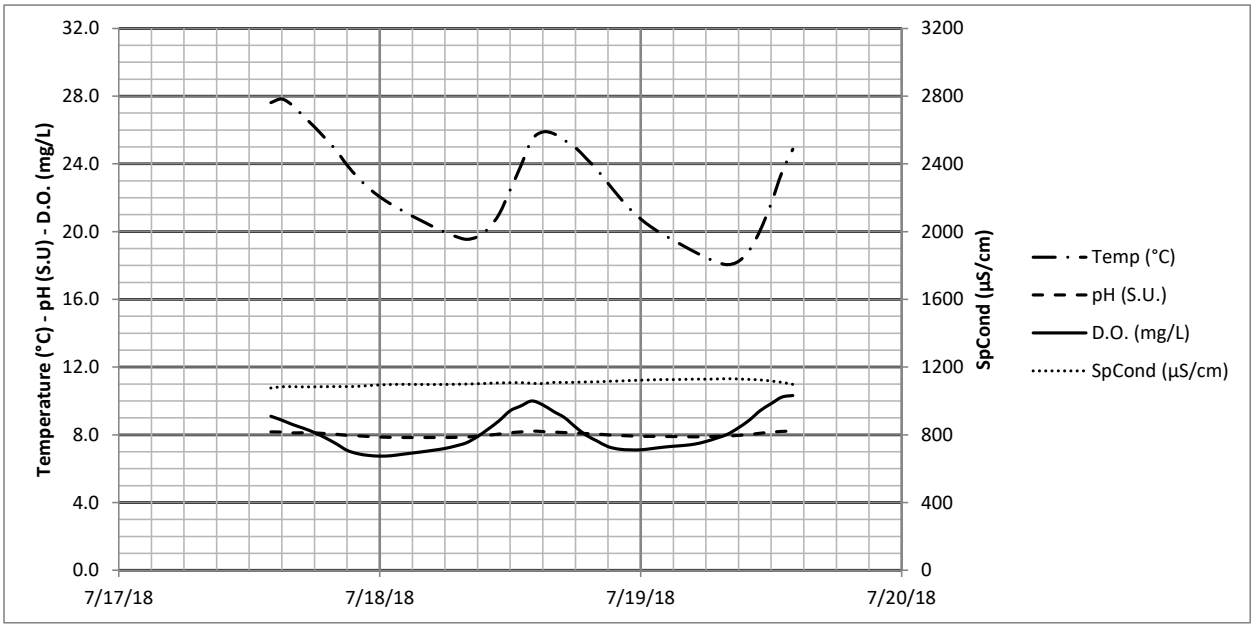


Figure 13: Plot of hourly data collected with a water quality sonde on Little Cuyahoga River (RM 0.3; STORET: 502180). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

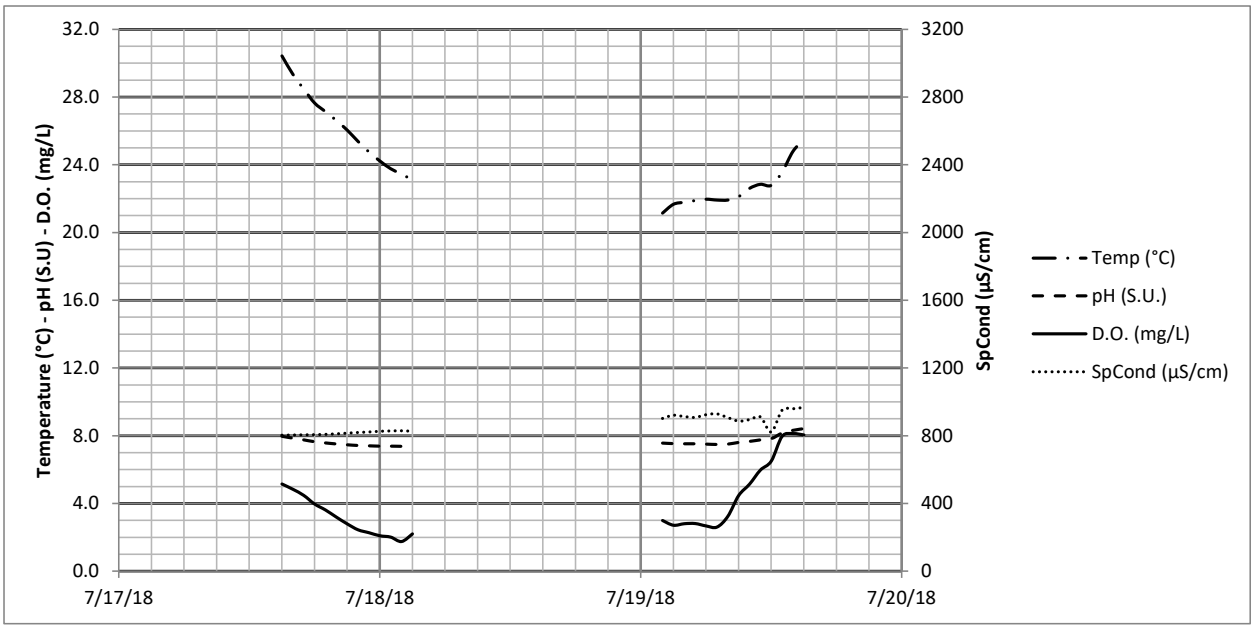


Figure 14: Plot of hourly data collected with a water quality sonde on Ohio Canal (RM 0.18; STORET: F01A01). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

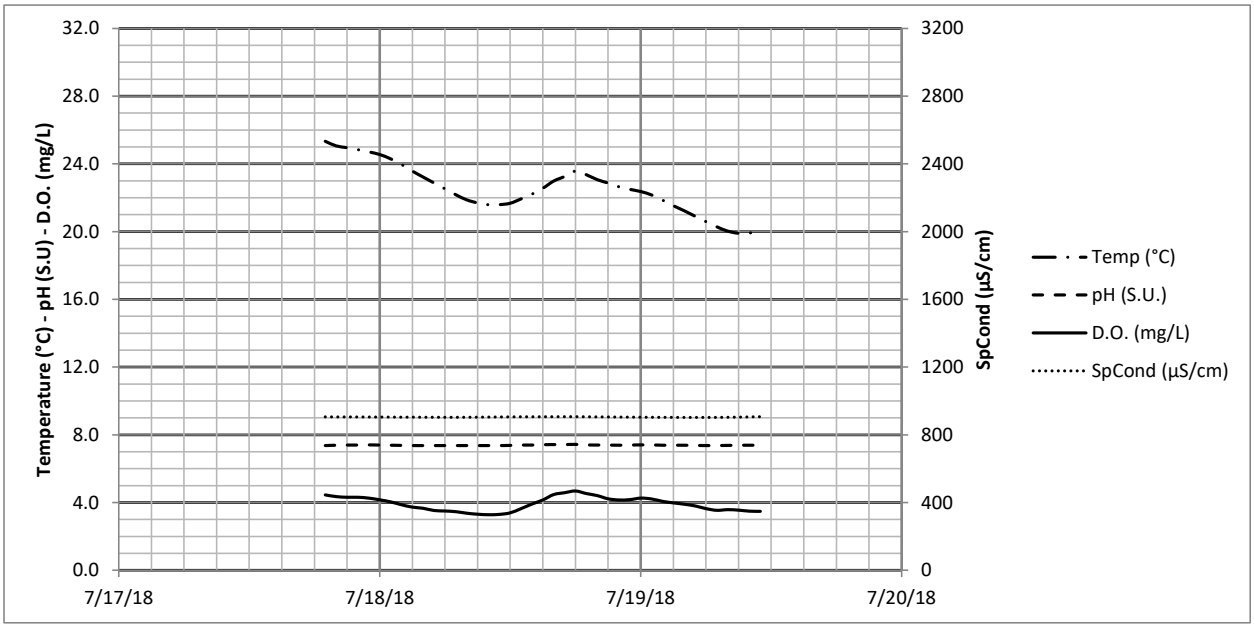


Figure 15: Plot of hourly data collected with a water quality sonde on Mud Brook (RM 8.34; STORET: F01P25). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

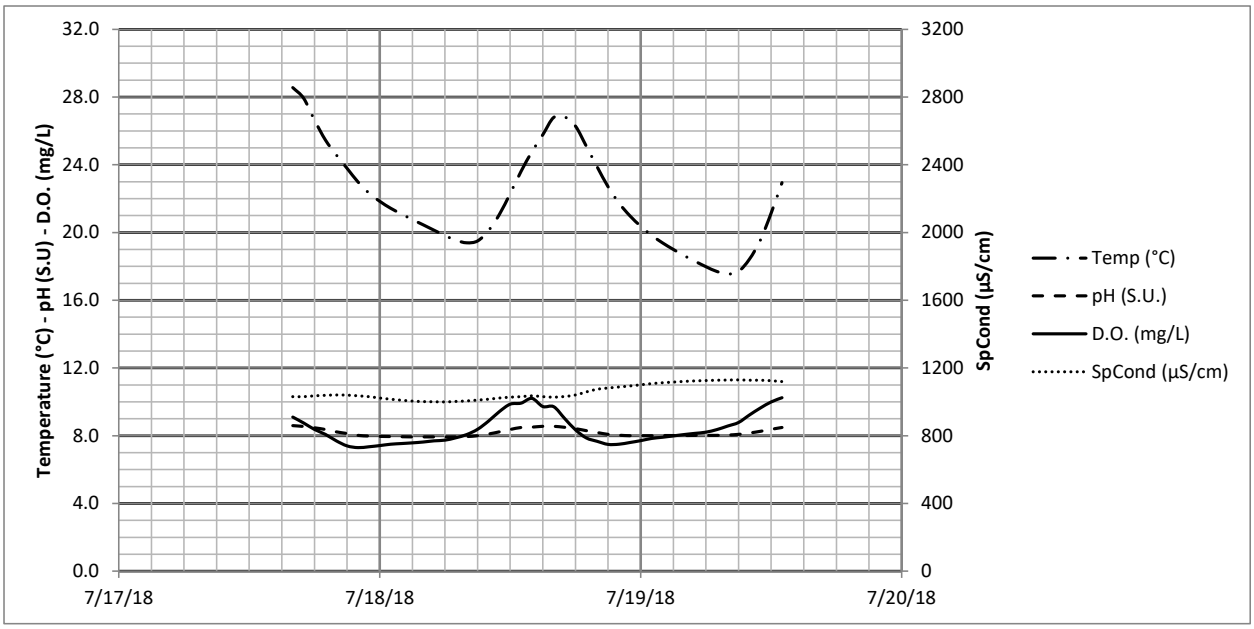


Figure 16: Plot of hourly data collected with a water quality sonde on Mud Brook (RM 0.18; STORET: F01P24). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

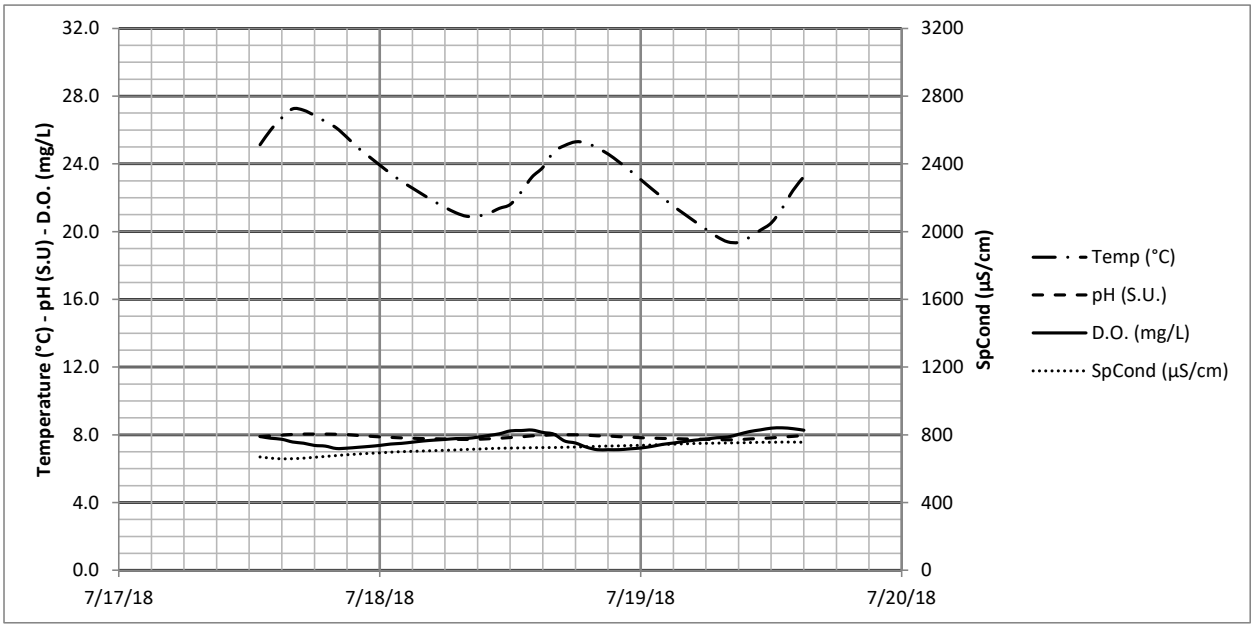


Figure 17: Plot of hourly data collected with a water quality sonde on Yellow Creek (RM 5.3; STORET: F01G46). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

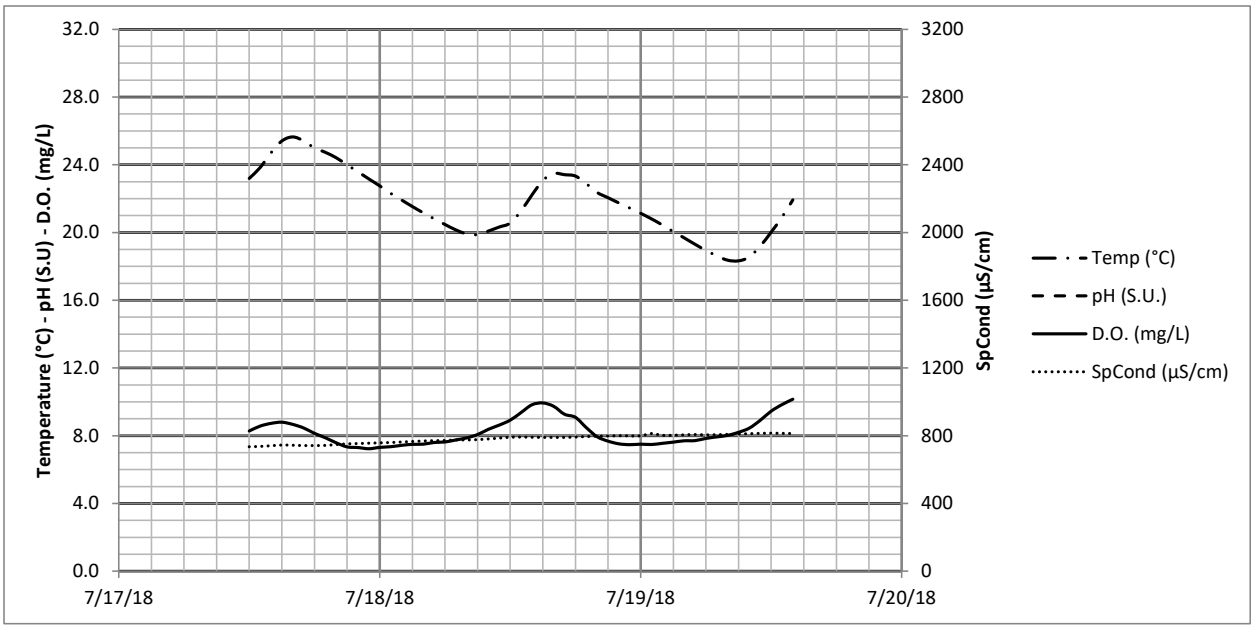


Figure 18: Plot of hourly data collected with a water quality sonde on Yellow Creek (RM 4.08; STORET: F01P16). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

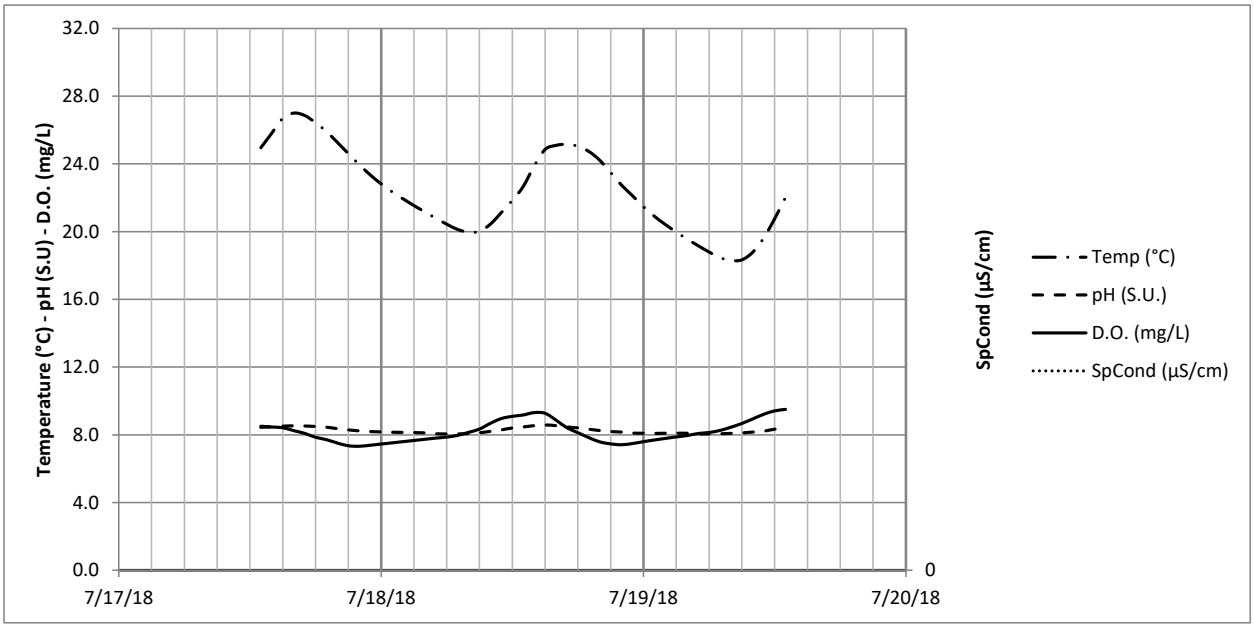


Figure 19: Plot of hourly data collected with a water quality sonde on Yellow Creek (RM 0.14; STORET: F01P15). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

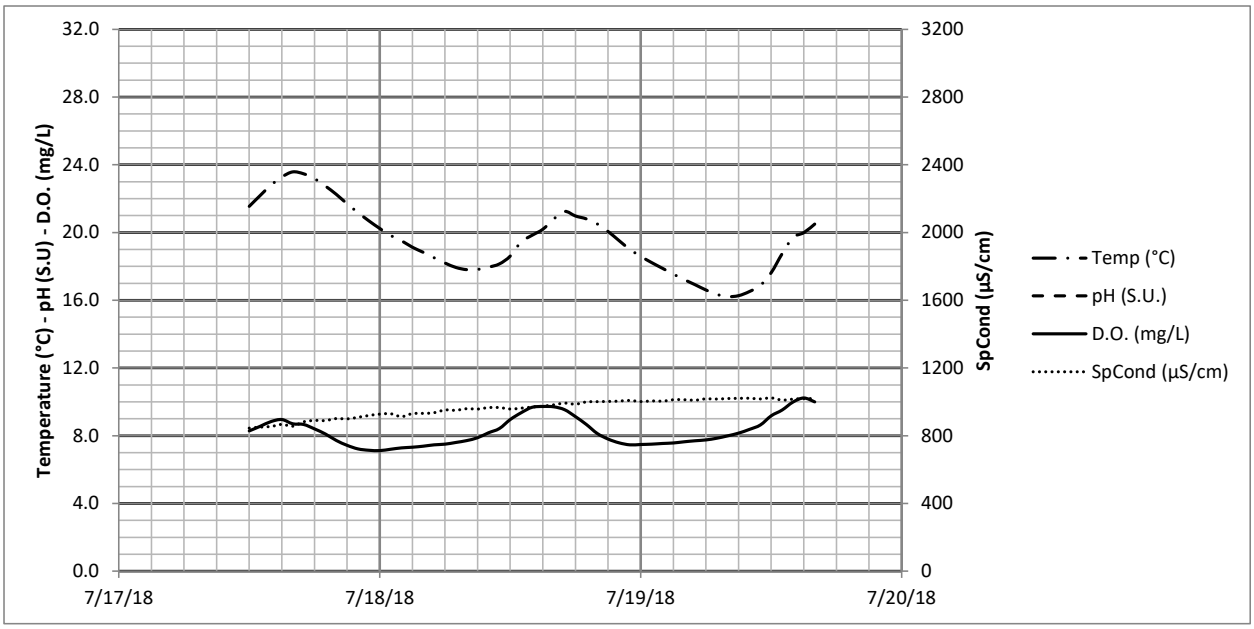


Figure 20: Plot of hourly data collected with a water quality sonde on North Fork Yellow Creek (RM 0.1; STORET: F01P21). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

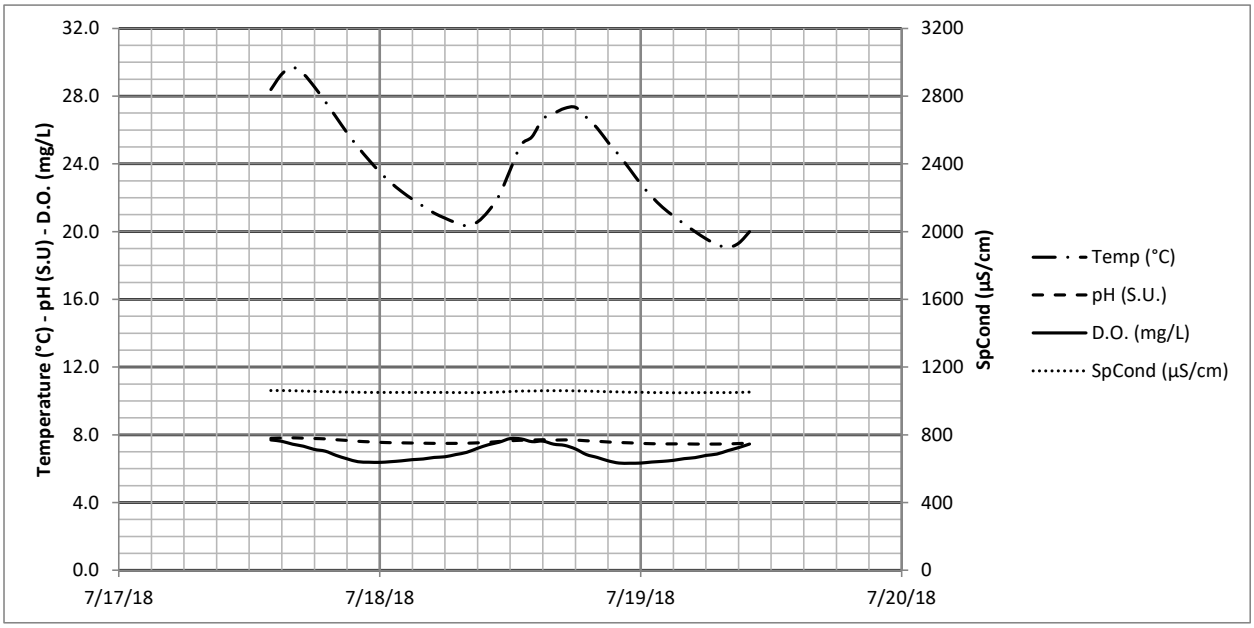


Figure 21: Plot of hourly data collected with a water quality sonde on Furnace Run (RM 0.27; STORET: F01P14). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

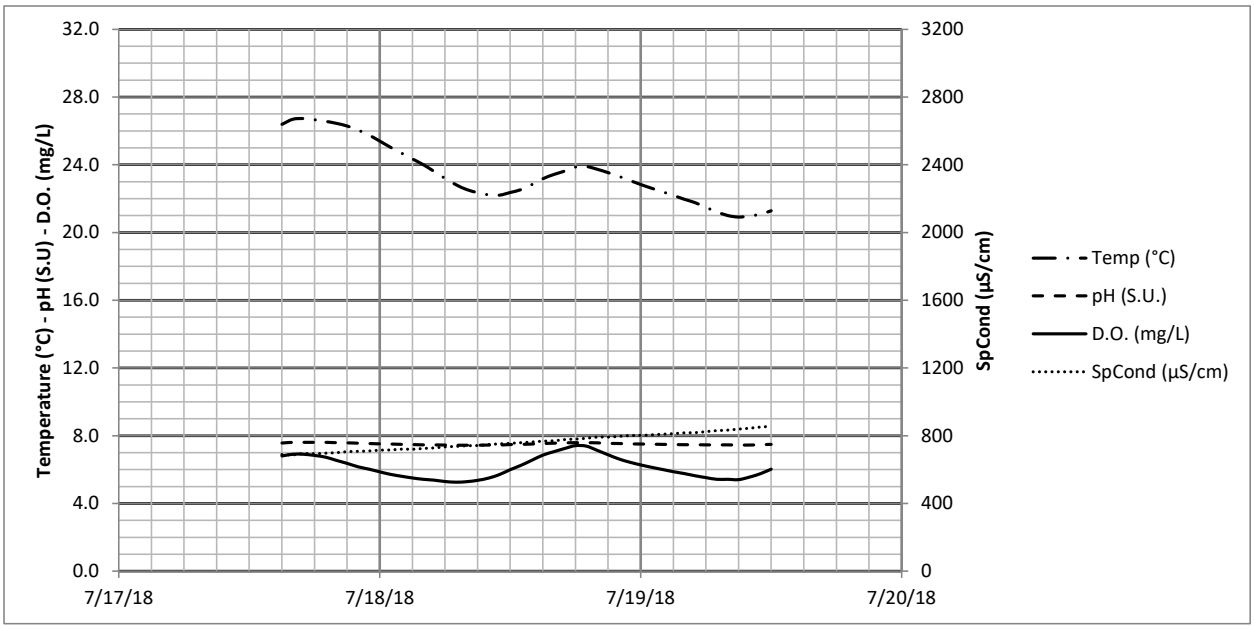


Figure 22: Plot of hourly data collected with a water quality sonde on Brandywine Creek (RM 4.27; STORET: F01P35). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

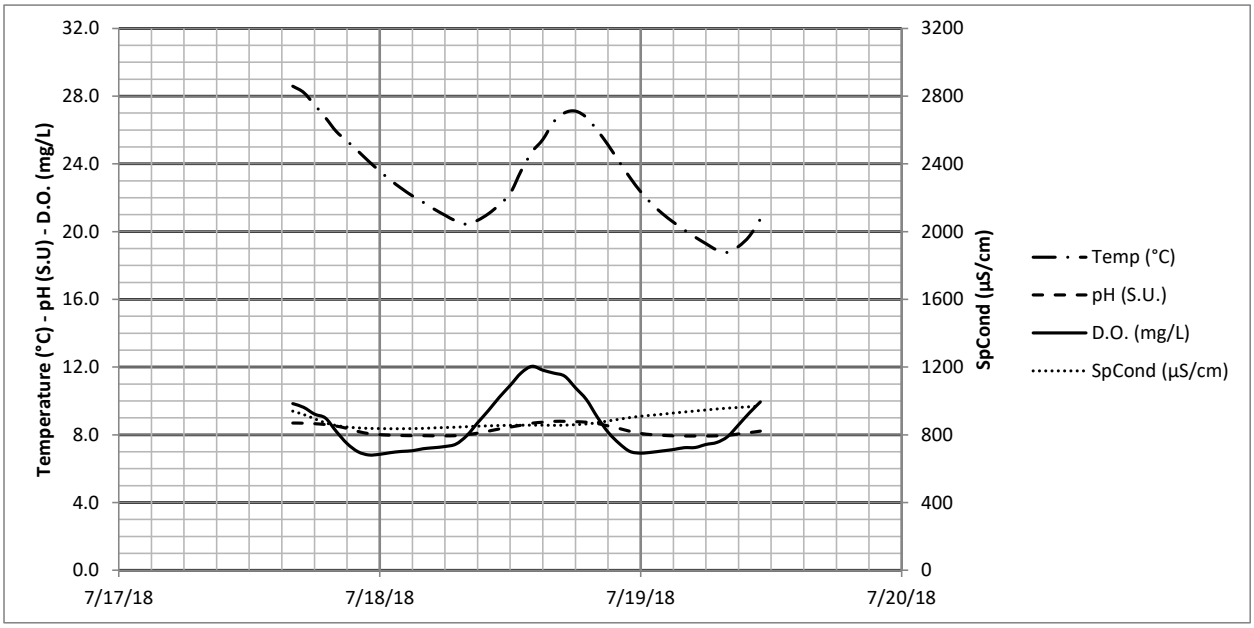


Figure 23: Plot of hourly data collected with a water quality sonde on Brandywine Creek (RM 0.26; STORET: F01S49). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

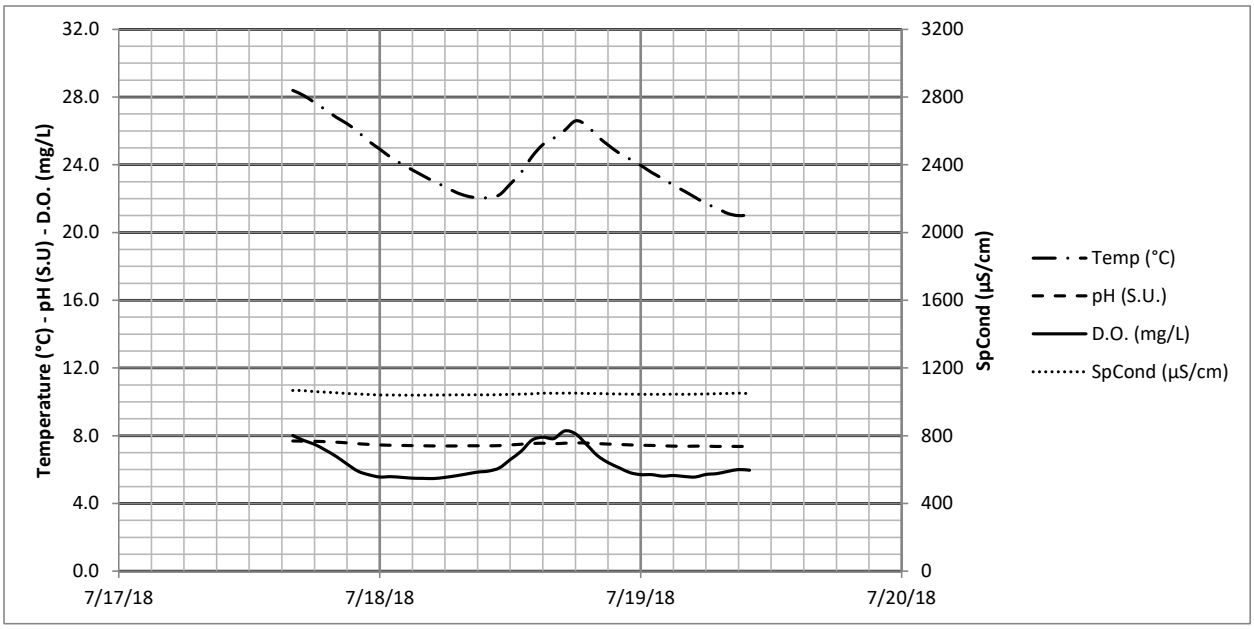


Figure 24: Plot of hourly data collected with a water quality sonde on Chippewa Creek (RM 0.36; STORET: F01P13). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 7/17-19/2018.

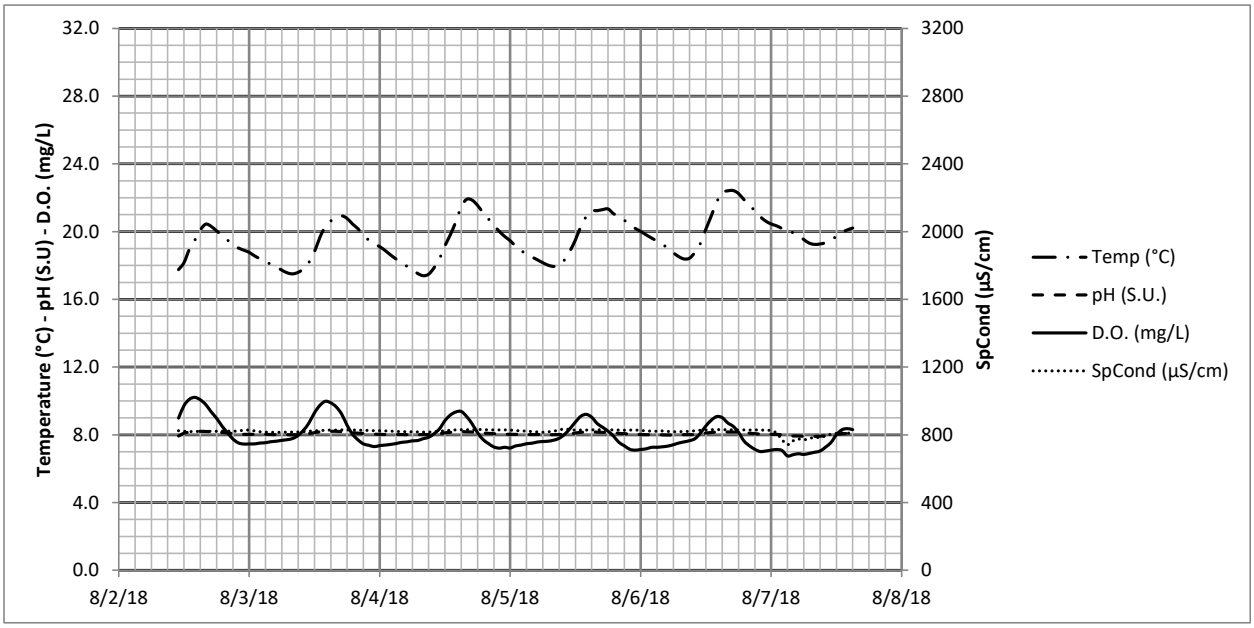


Figure 25: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 28.3; STORET: F99Q10). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

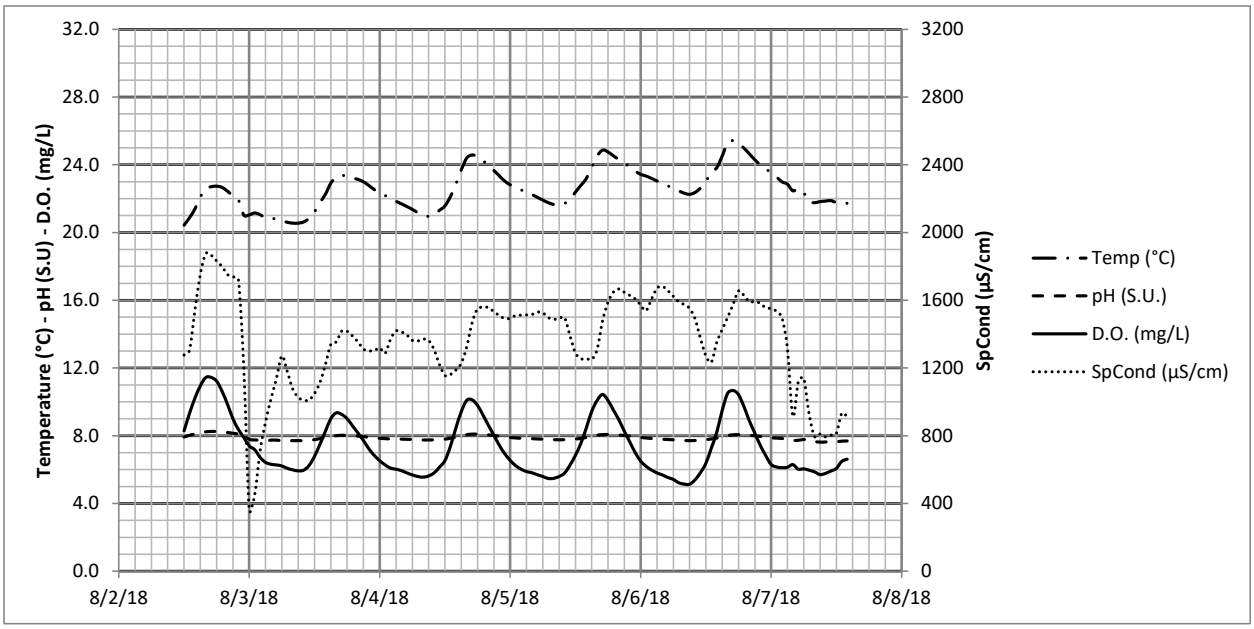


Figure 26: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 25.05; STORET: F01S32). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

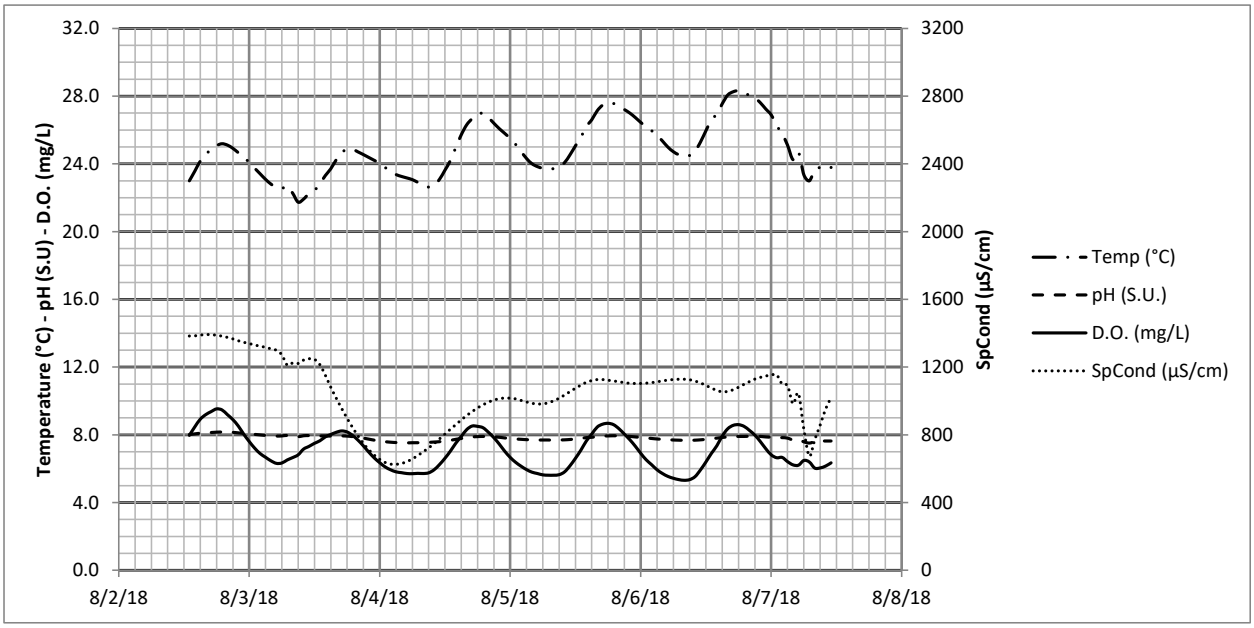


Figure 27: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 18; STORET: 200081). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

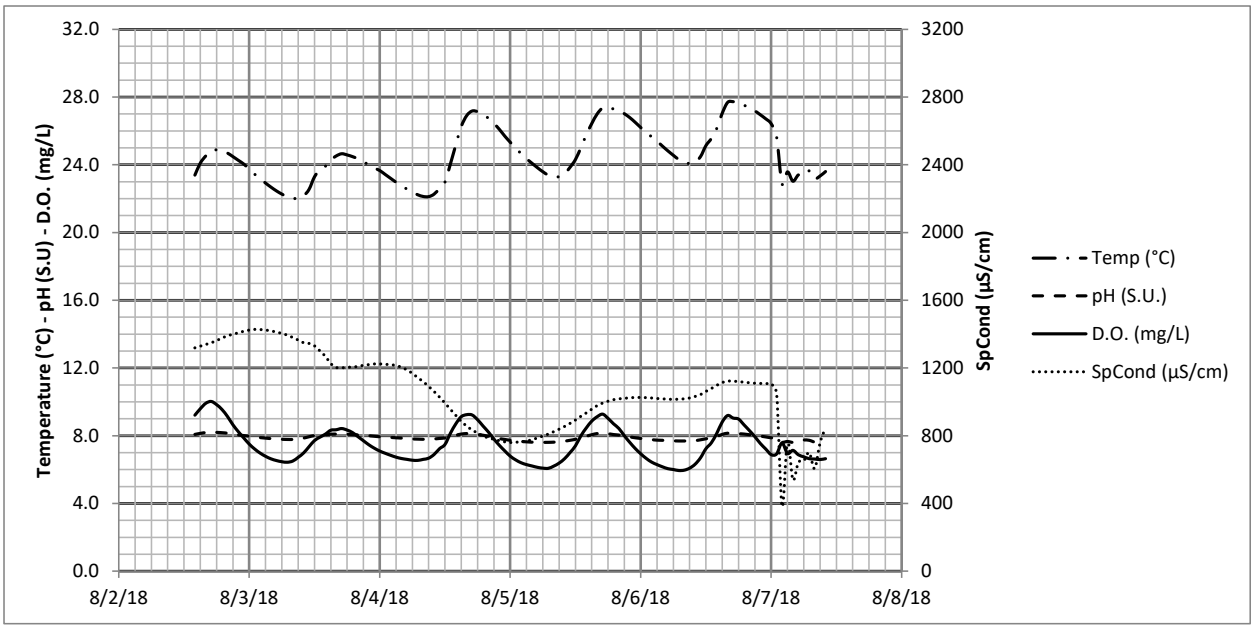


Figure 28: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 13.8; STORET: F01S29). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

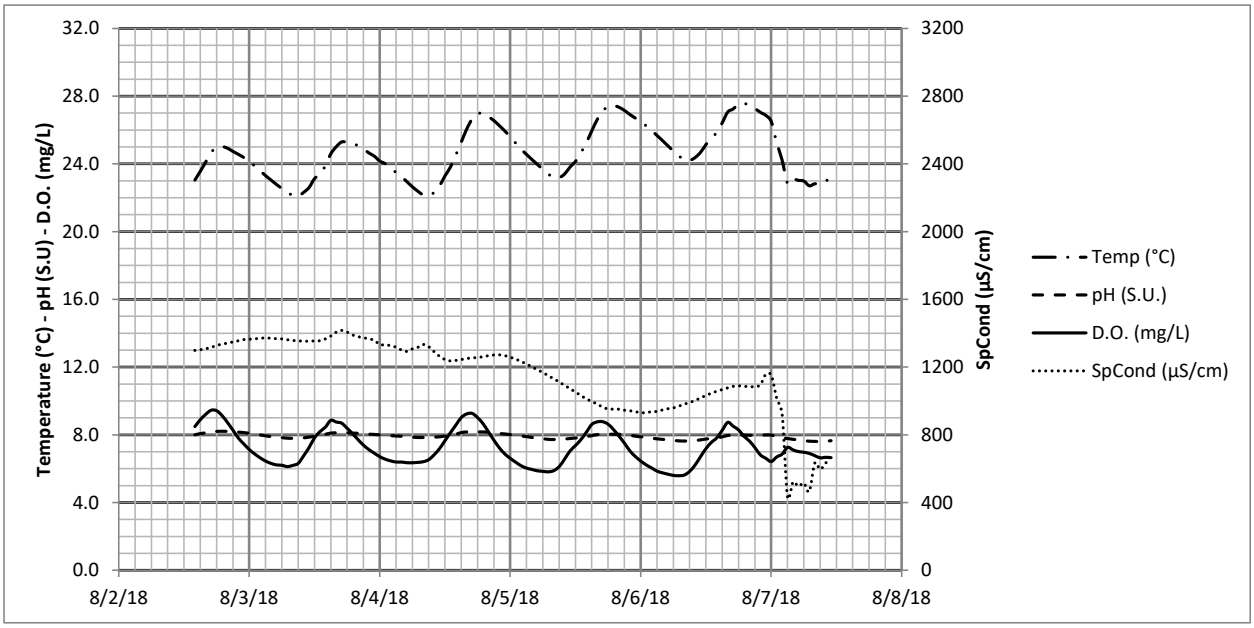


Figure 29: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 8.65; STORET: 502090). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

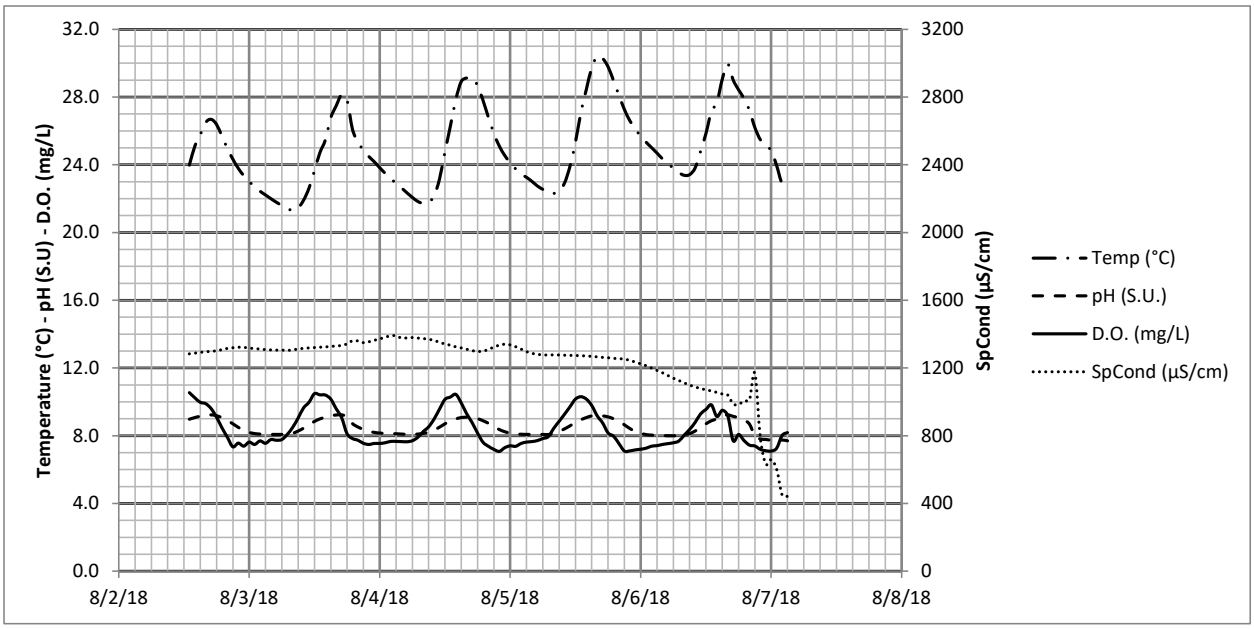


Figure 30: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 2.5; STORET: F01S25). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

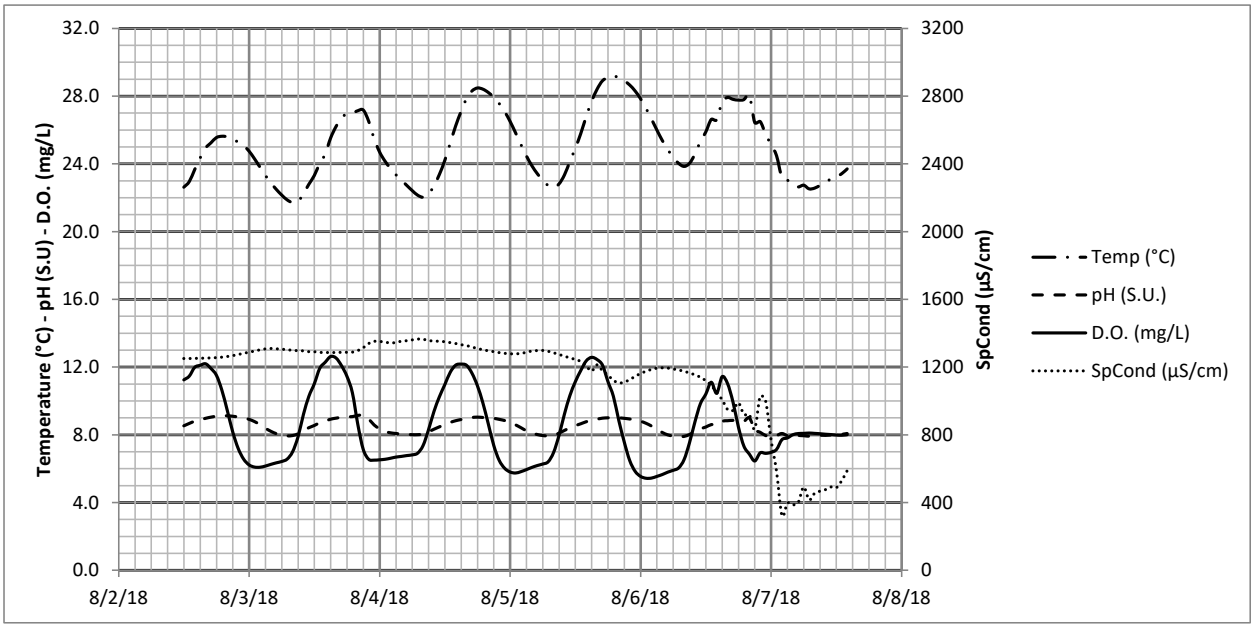


Figure 31: Plot of hourly data collected with a water quality sonde on Tinkers Creek (RM 0.1; STORET: F01S24). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

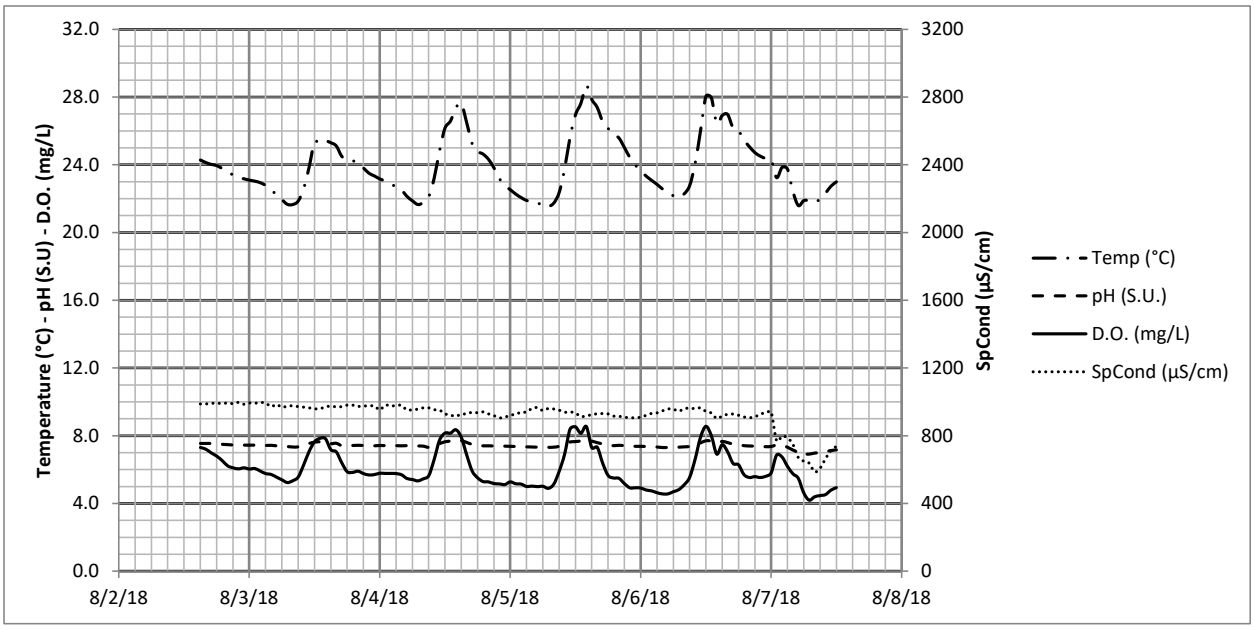


Figure 32: Plot of hourly data collected with a water quality sonde on Pond Brook (RM 2.39; STORET: F01W28). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

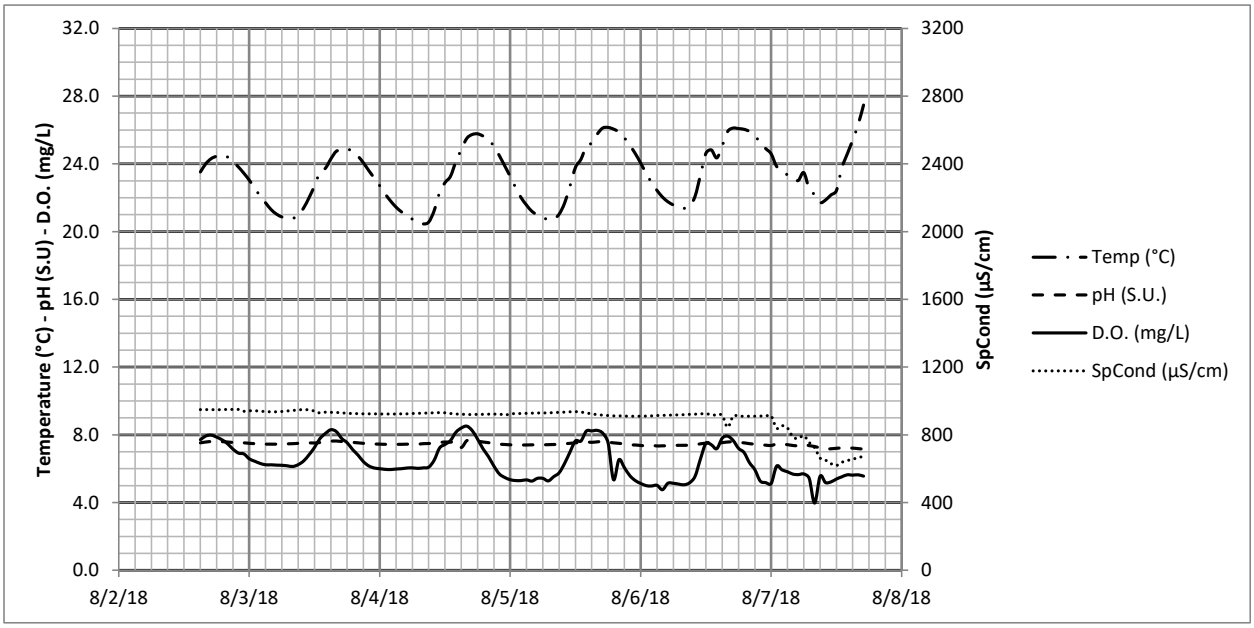


Figure 33: Plot of hourly data collected with a water quality sonde on Pond Brook (RM 1.41; STORET: F01S40). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

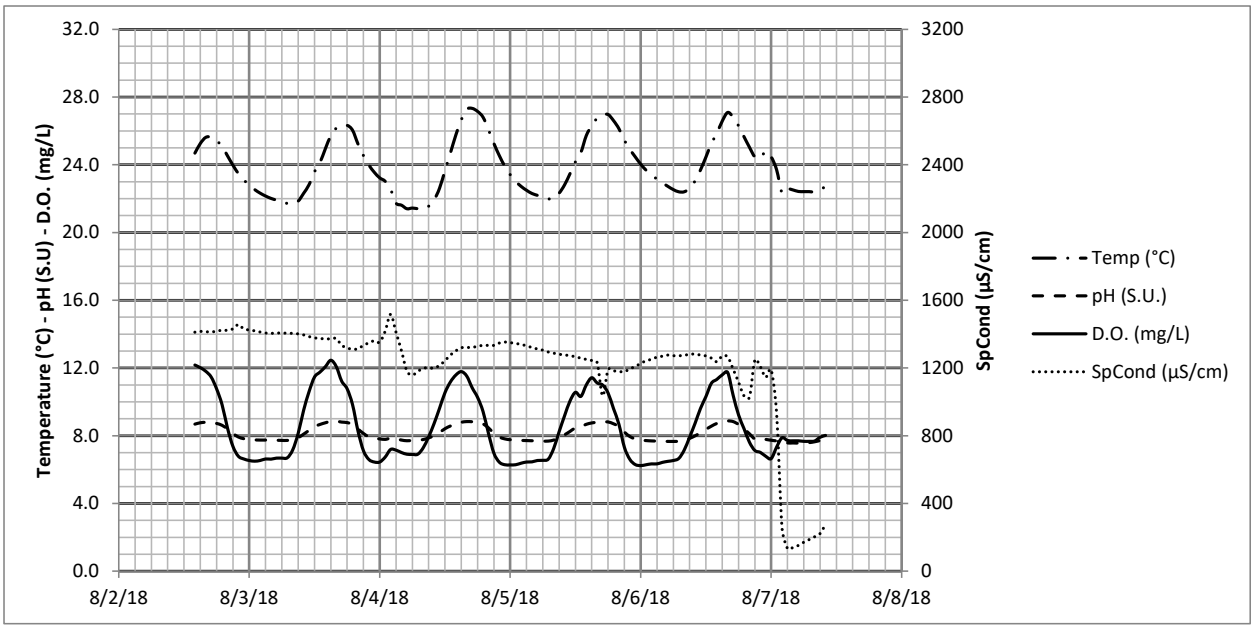


Figure 34: Plot of hourly data collected with a water quality sonde on Beaver Meadow Run (RM 0.11; STORET: F01P44). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

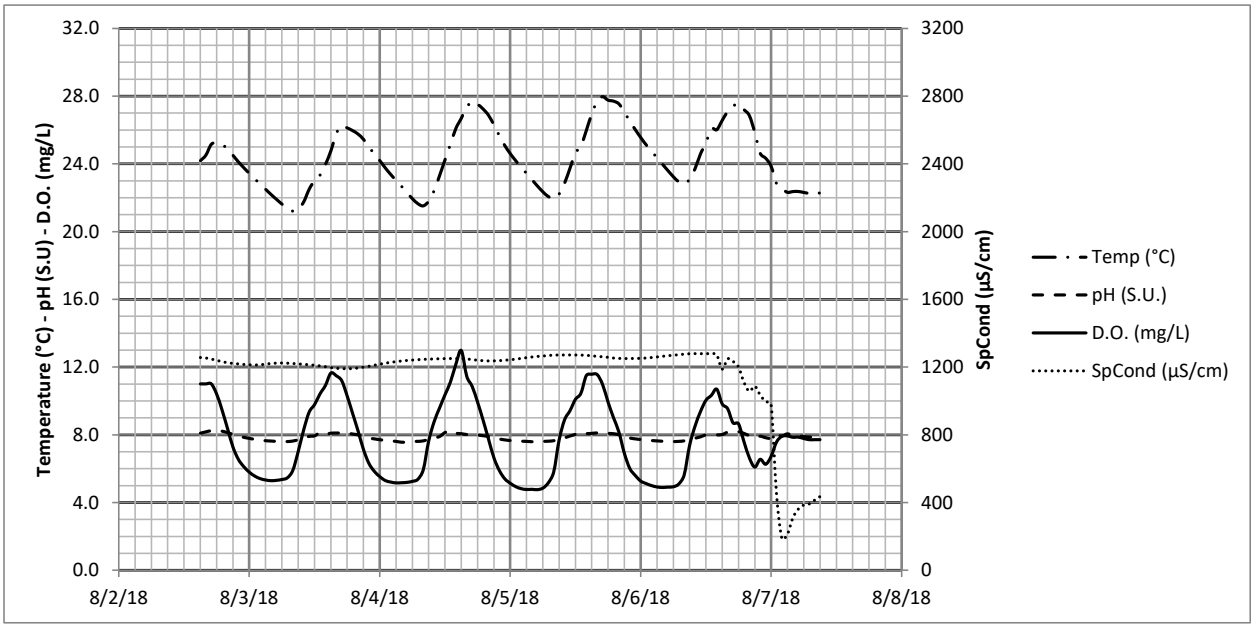


Figure 35: Plot of hourly data collected with a water quality sonde on Mill Creek (RM 0.12; STORET: 502110). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

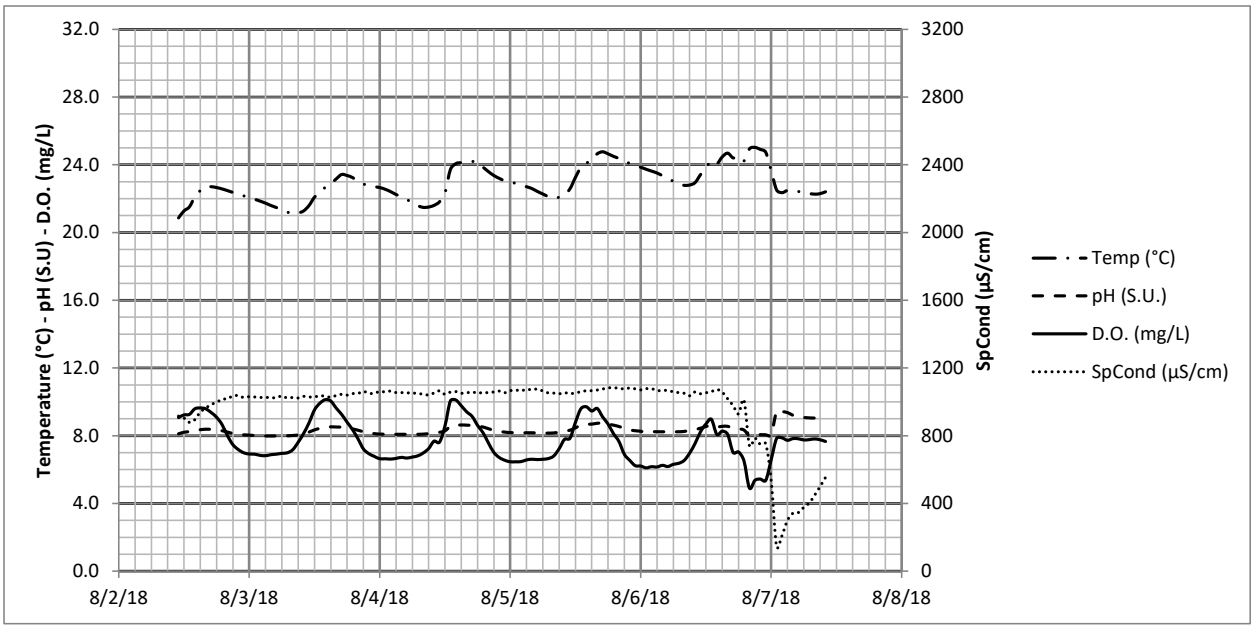


Figure 36: Plot of hourly data collected with a water quality sonde on Mill Creek (RM 4.2; STORET: F01P09). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

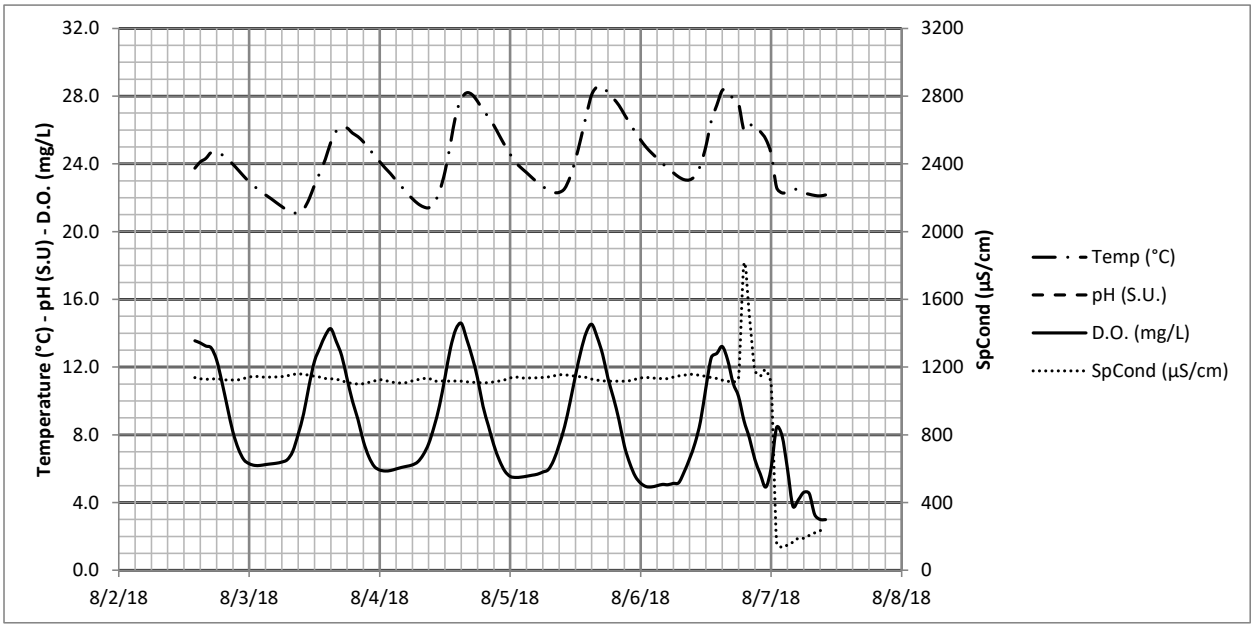


Figure 37: Plot of hourly data collected with a water quality sonde on West Creek (RM 0.19; STORET: F01P10). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

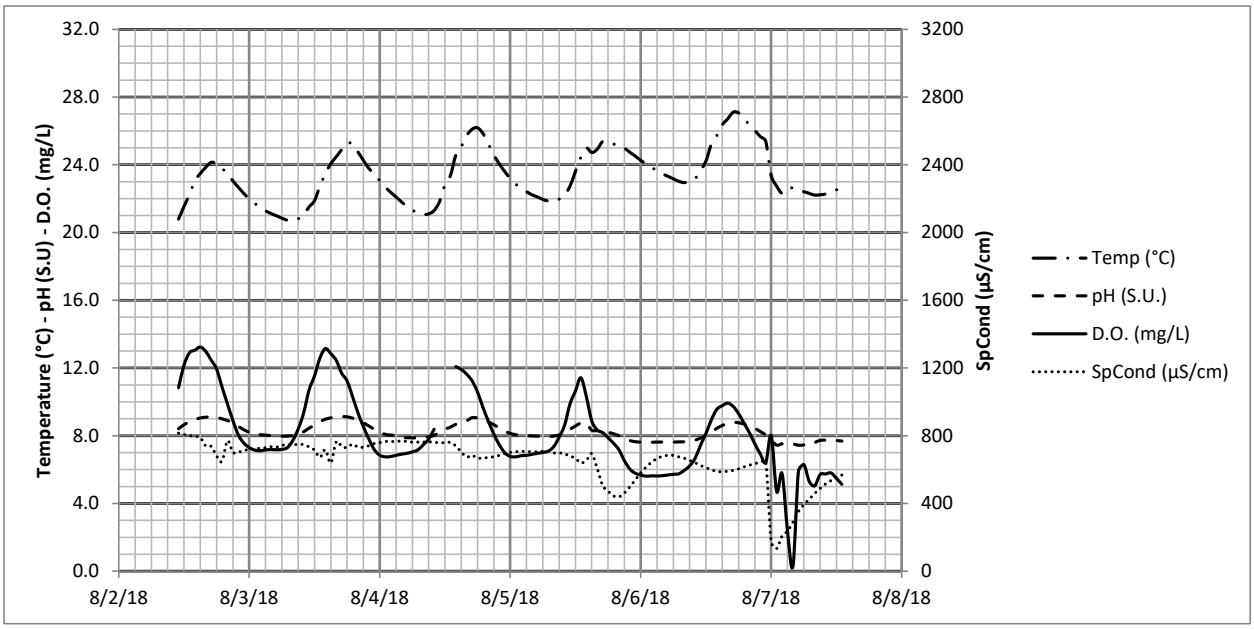


Figure 38: Plot of hourly data collected with a water quality sonde on Big Creek (RM 7.8; STORET: F01S21). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

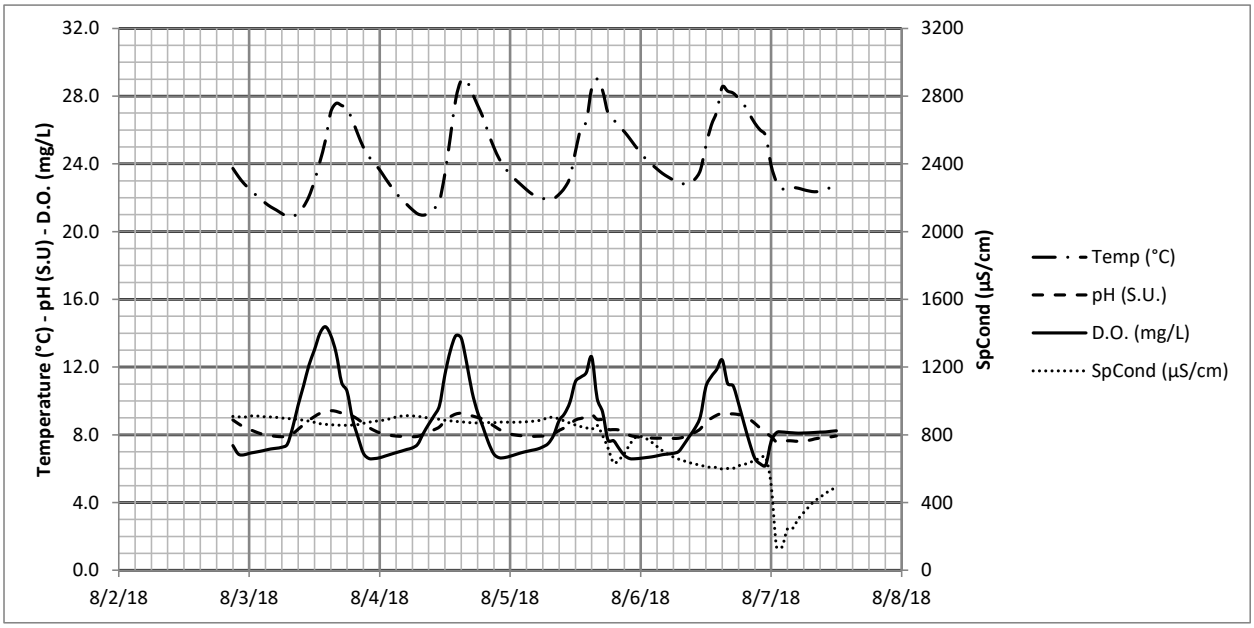


Figure 39: Plot of hourly data collected with a water quality sonde on Big Creek (RM 4.4; STORET: 301193). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

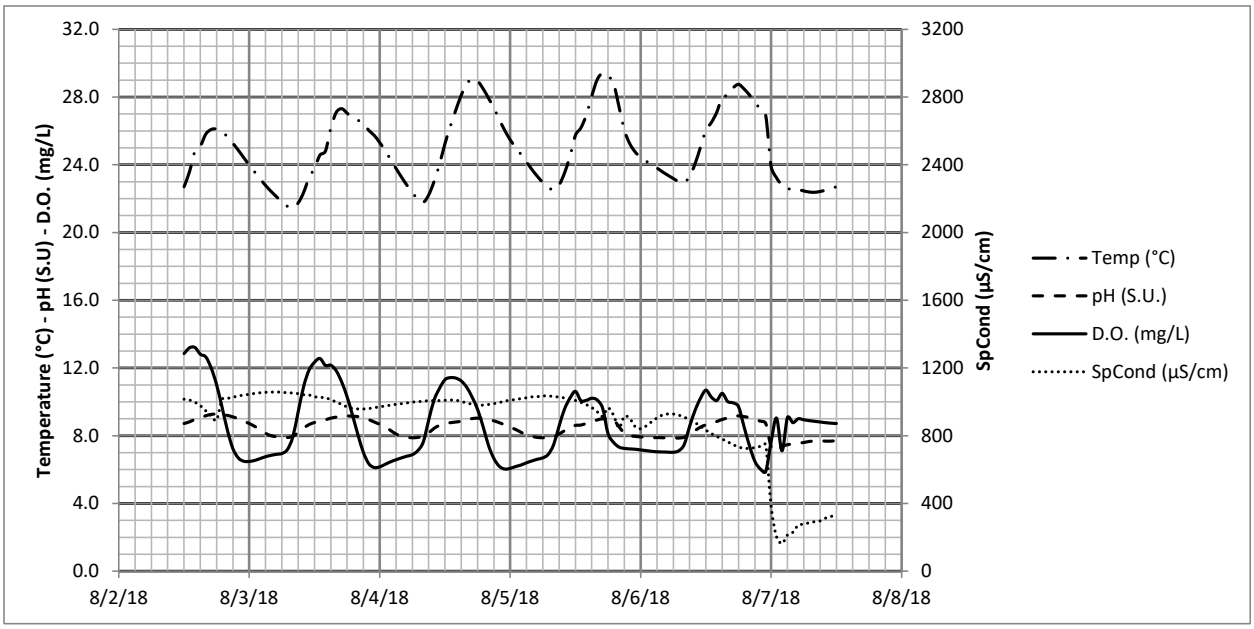


Figure 40: Plot of hourly data collected with a water quality sonde on Big Creek (RM 2.4; STORET: F01S20). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-7/2018.

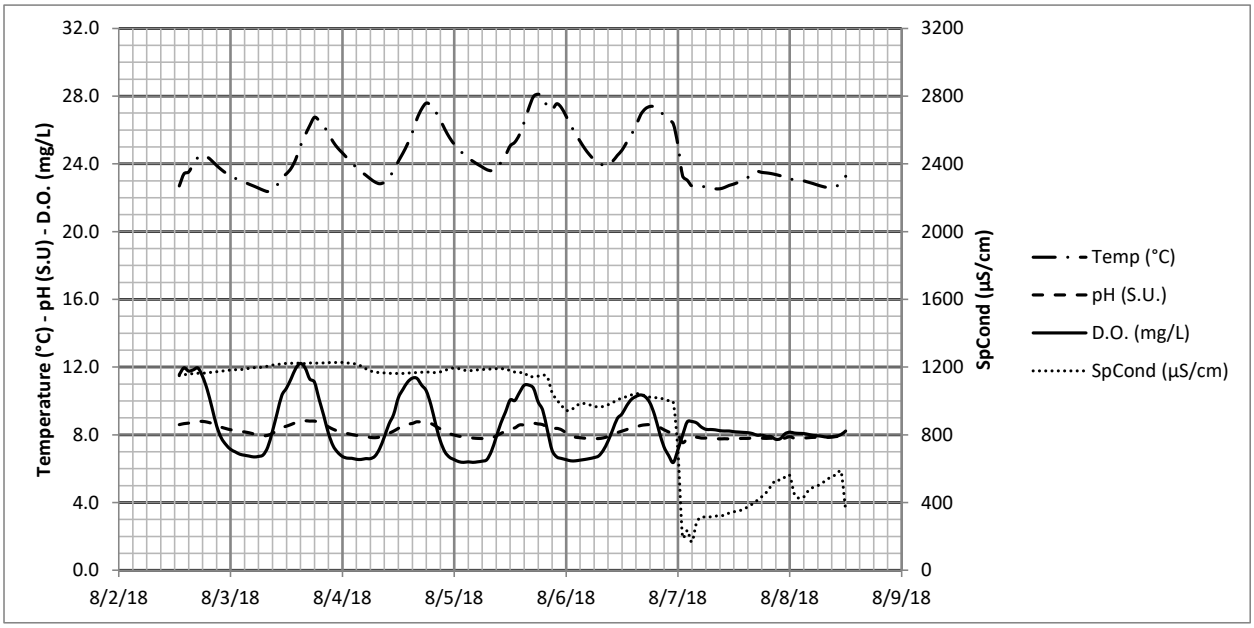


Figure 41: Plot of hourly data collected with a water quality sonde on Big Creek (RM 0.23; STORET: 502120). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/2-8/2018.

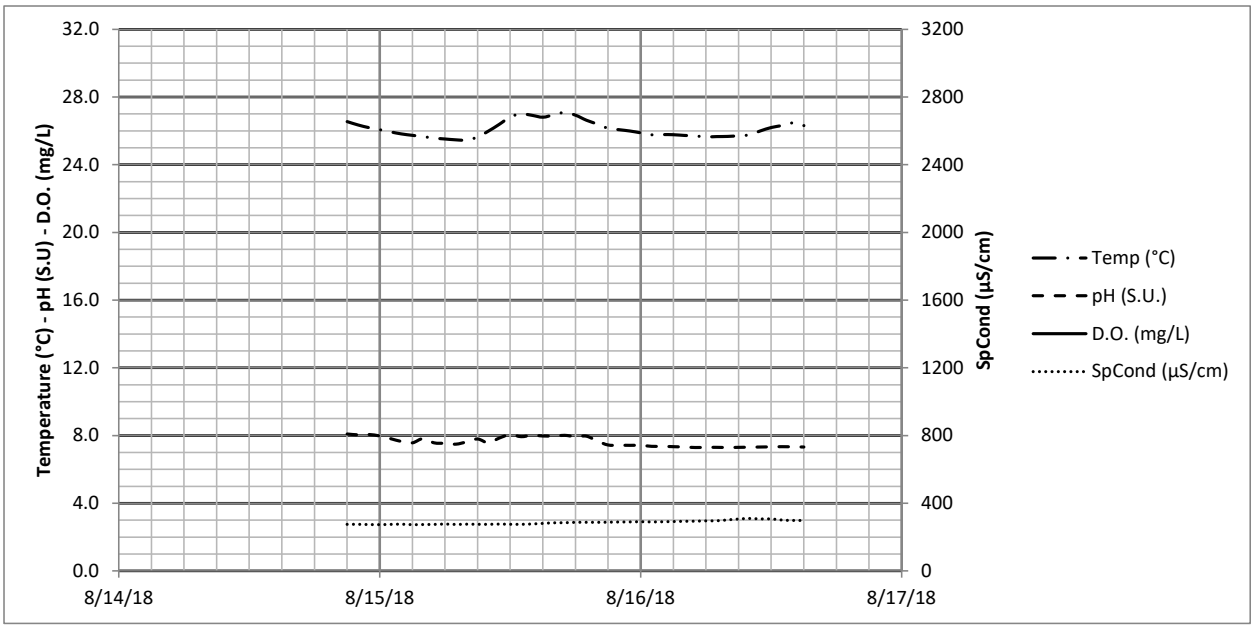


Figure 42: Plot of hourly data collected with a water quality sonde on East Branch Cuyahoga River (RM 90.86; STORET: F01P51). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

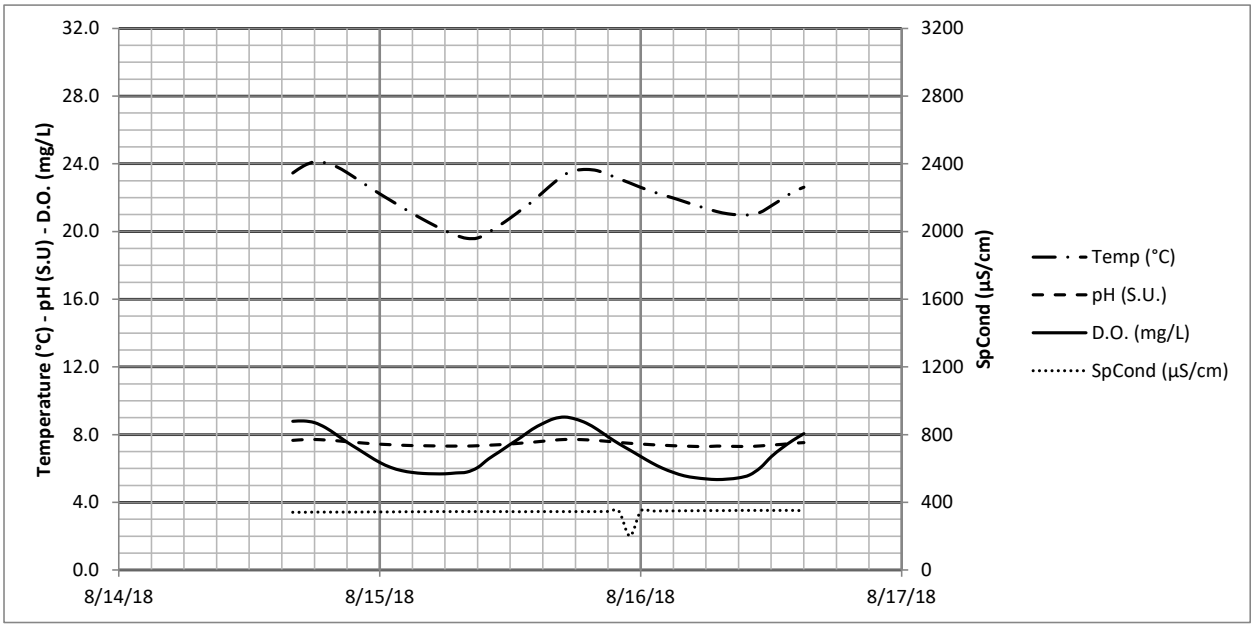


Figure 43: Plot of hourly data collected with a water quality sonde on West Branch Cuyahoga River (RM 12.3; STORET: F01G05). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

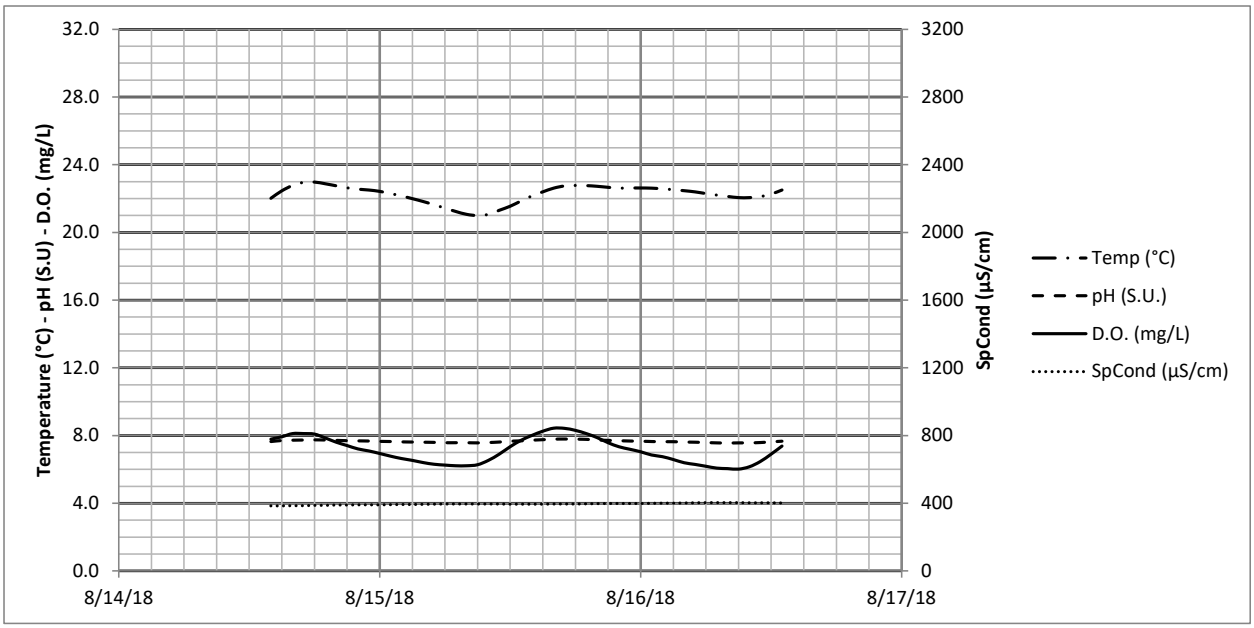


Figure 44: Plot of hourly data collected with a water quality sonde on West Branch Cuyahoga River (RM 0.87; STORET: F01W76). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

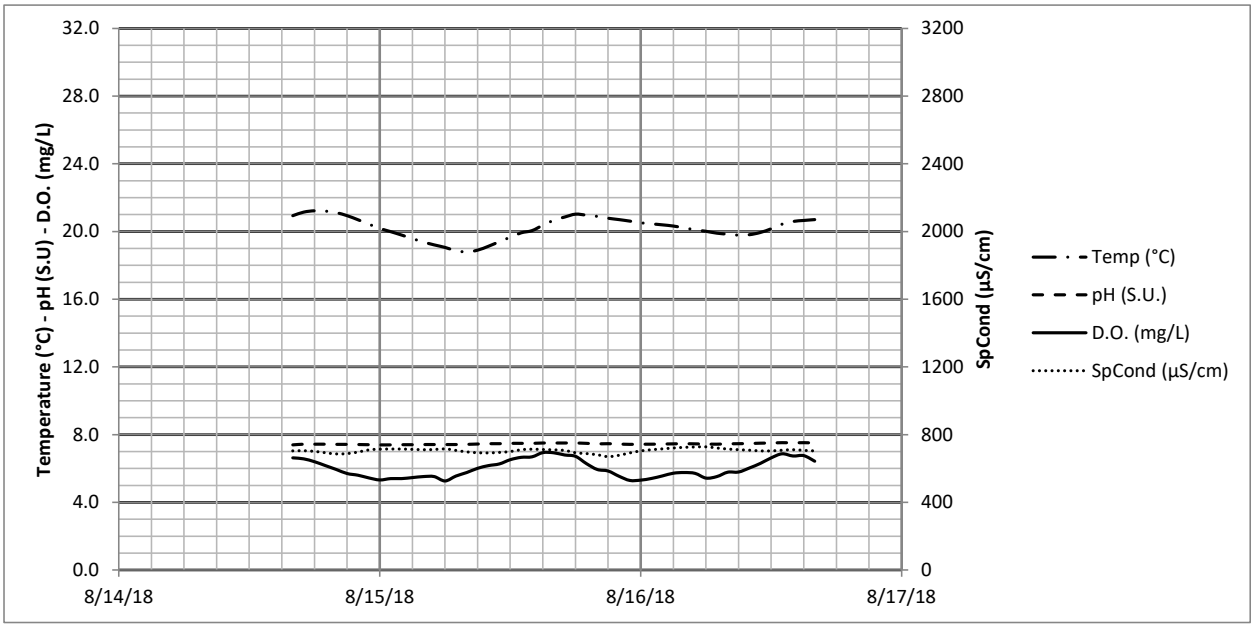


Figure 45: Plot of hourly data collected with a water quality sonde on Butternut Creek (RM 0.8; STORET: F01G07). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

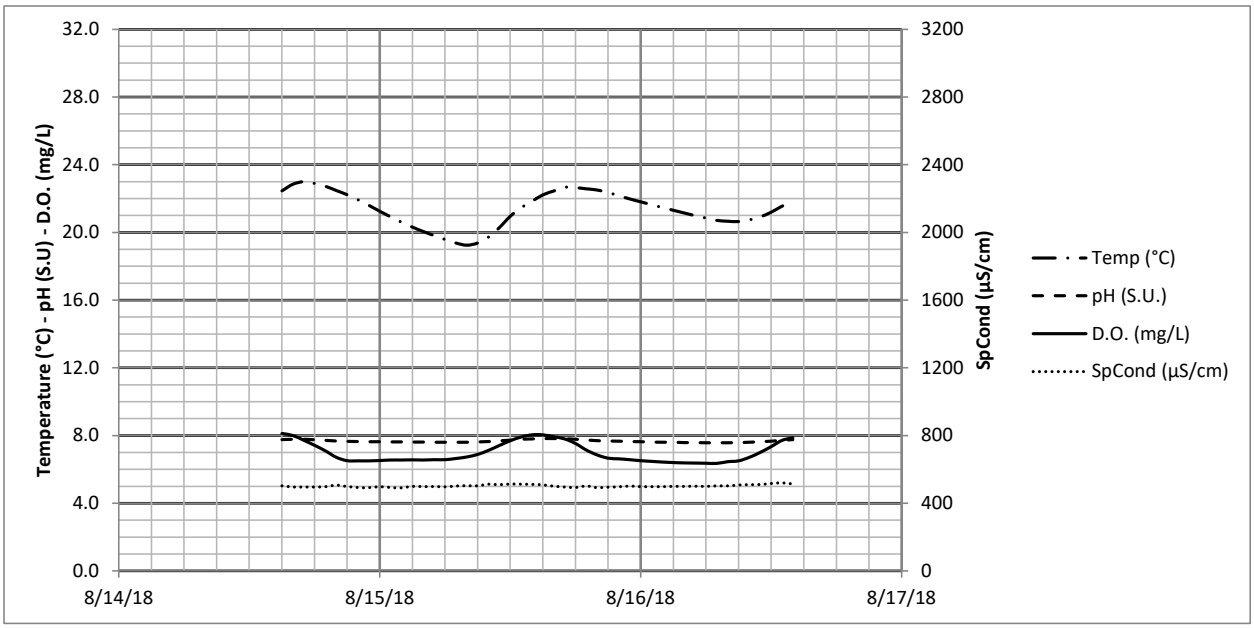


Figure 46: Plot of hourly data collected with a water quality sonde on Hopsons Creek (RM 0.6; STORET: F01G08). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

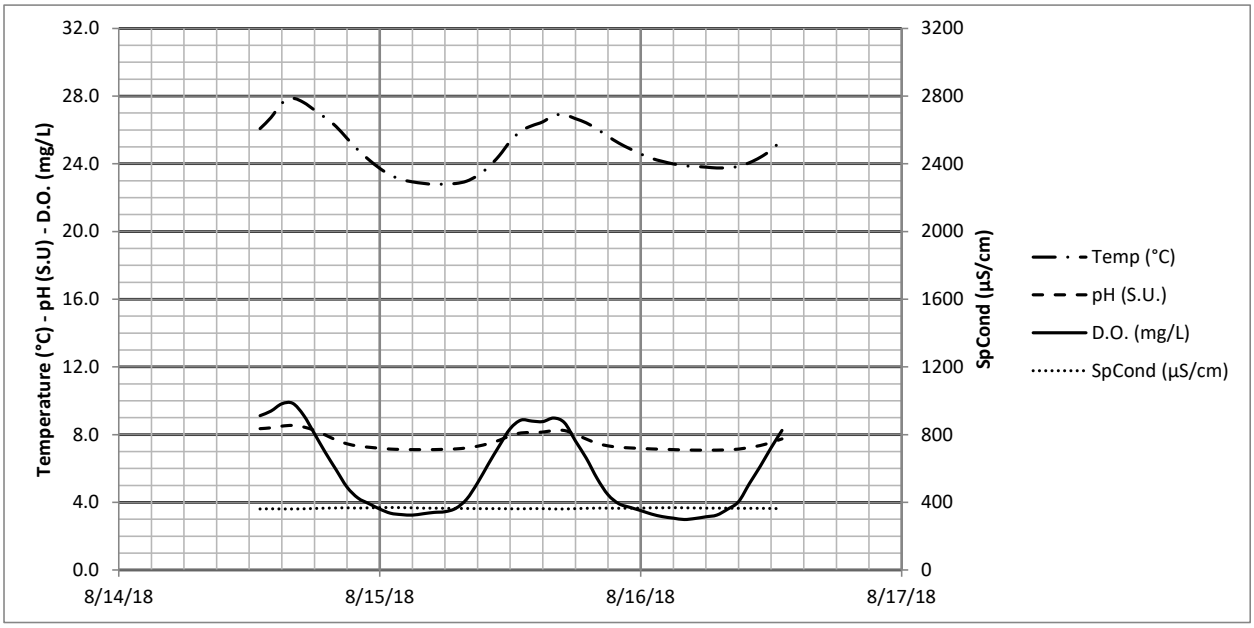


Figure 47: Plot of hourly data collected with a water quality sonde on Bridge Creek (RM 1.32; STORET: F01W75). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

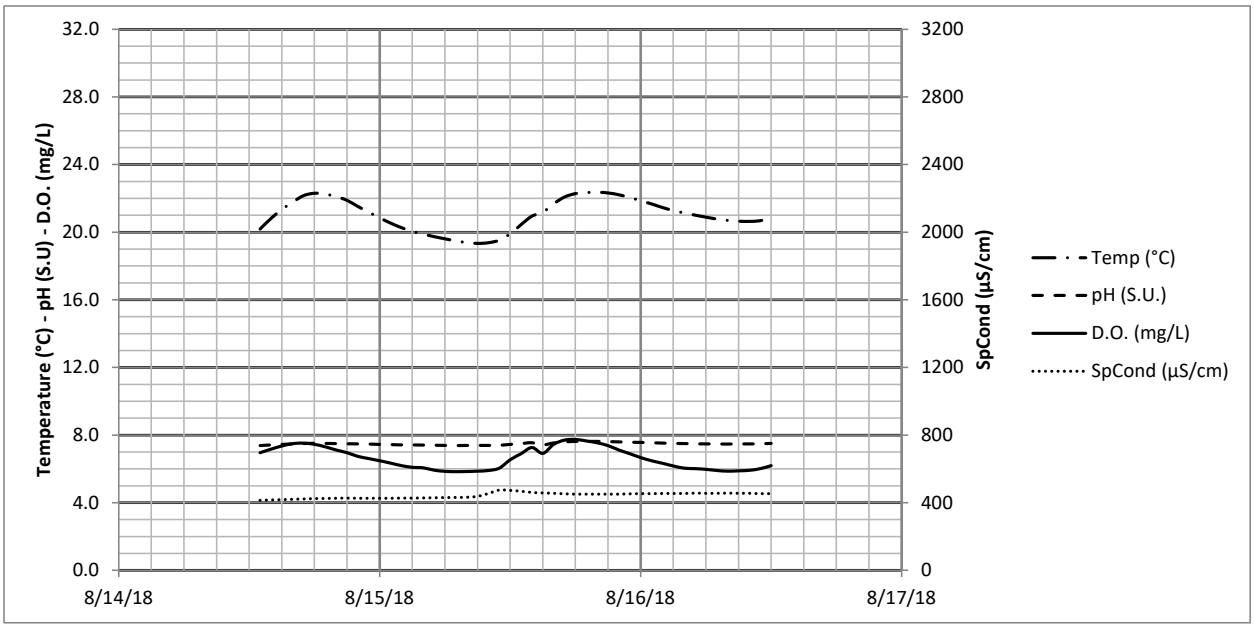


Figure 48: Plot of hourly data collected with a water quality sonde on Sawyer Brook (RM 0.3; STORET: F01G12). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

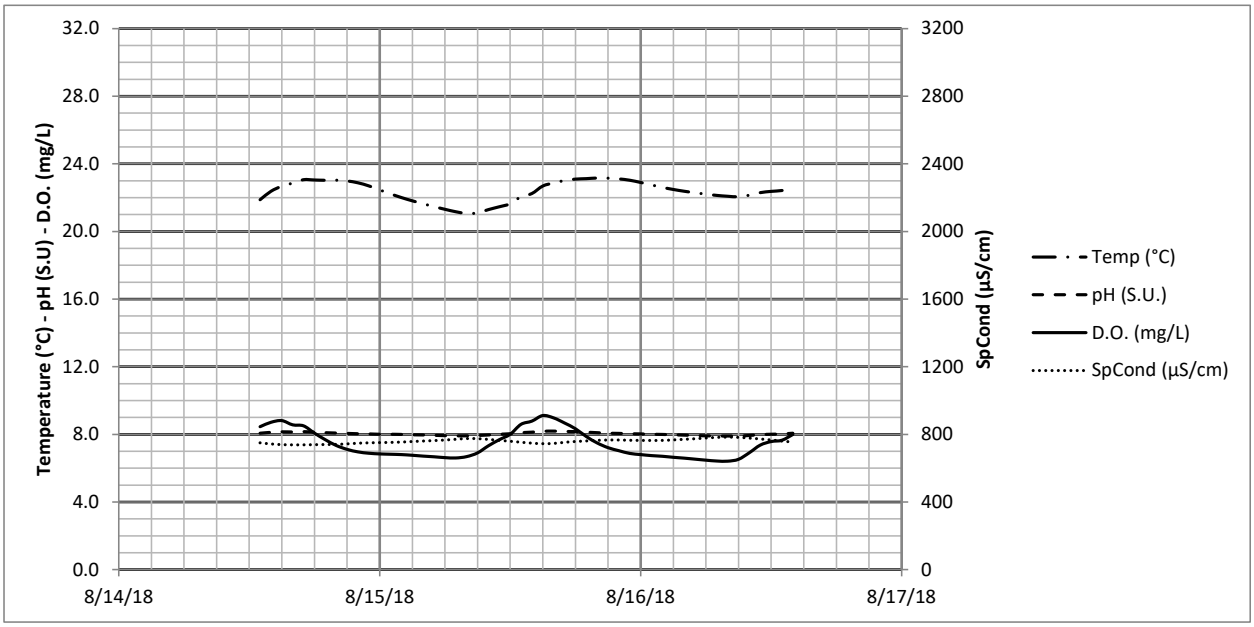


Figure 49: Plot of hourly data collected with a water quality sonde on Breakneck Creek (RM 3.08; STORET: F01S51). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

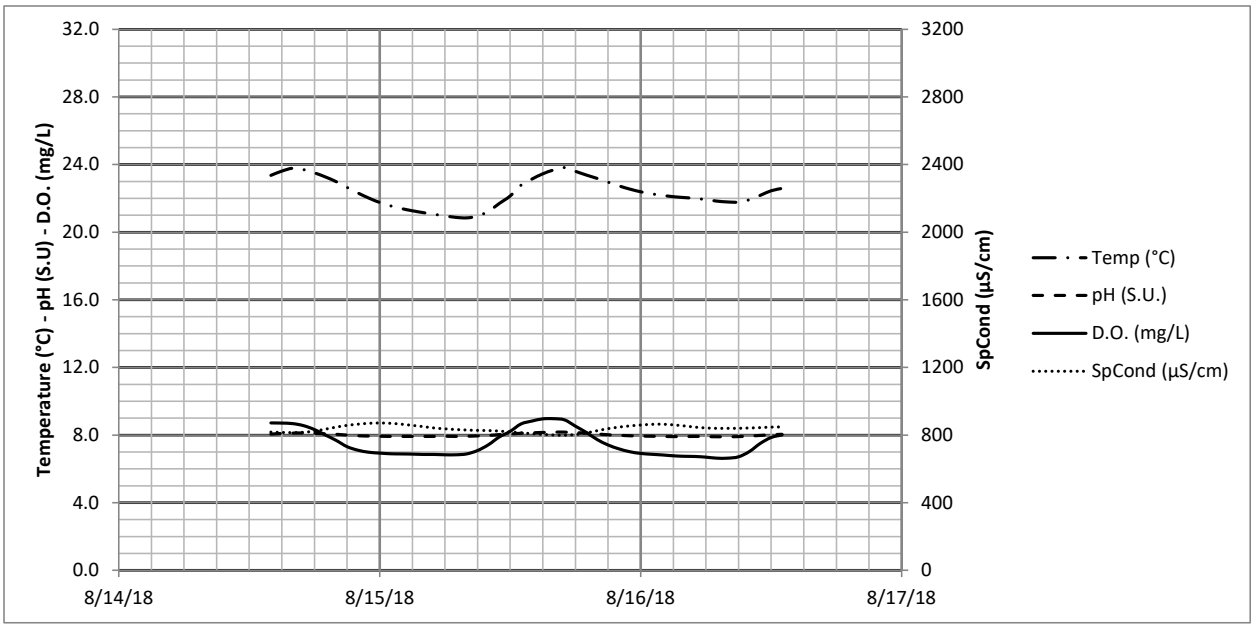


Figure 50: Plot of hourly data collected with a water quality sonde on Breakneck Creek (RM 0.05; STORET: F01W83). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

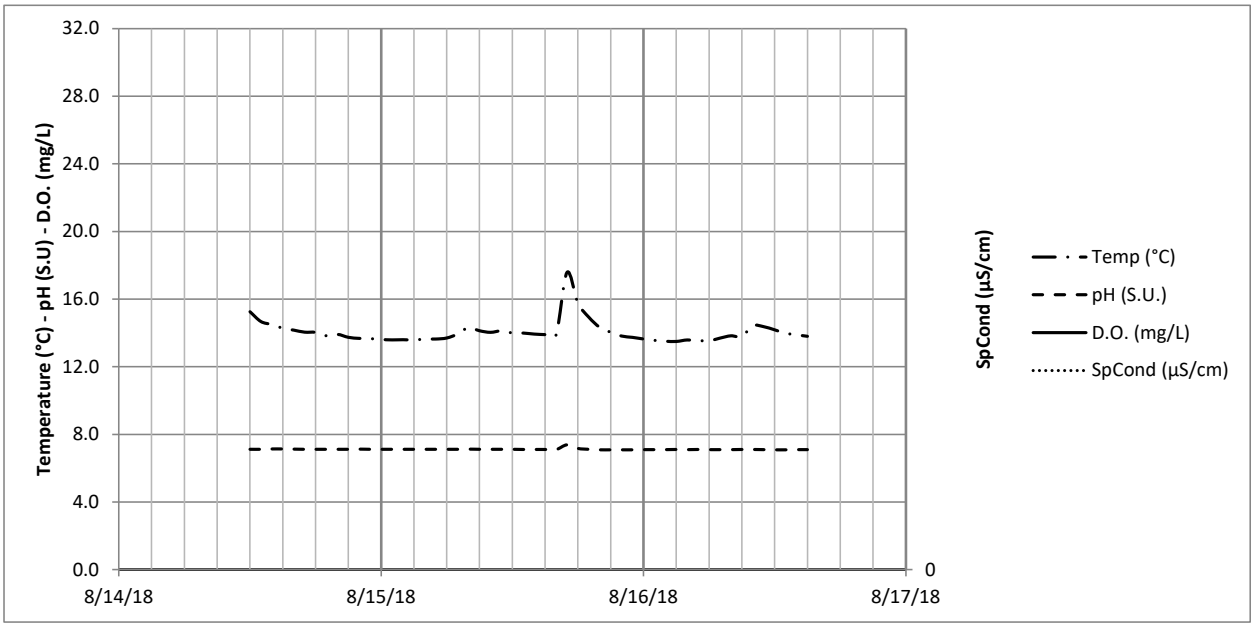


Figure 51: Plot of hourly data collected with a water quality sonde on Wahoo Ditch (RM 1.22; STORET: F01S53). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

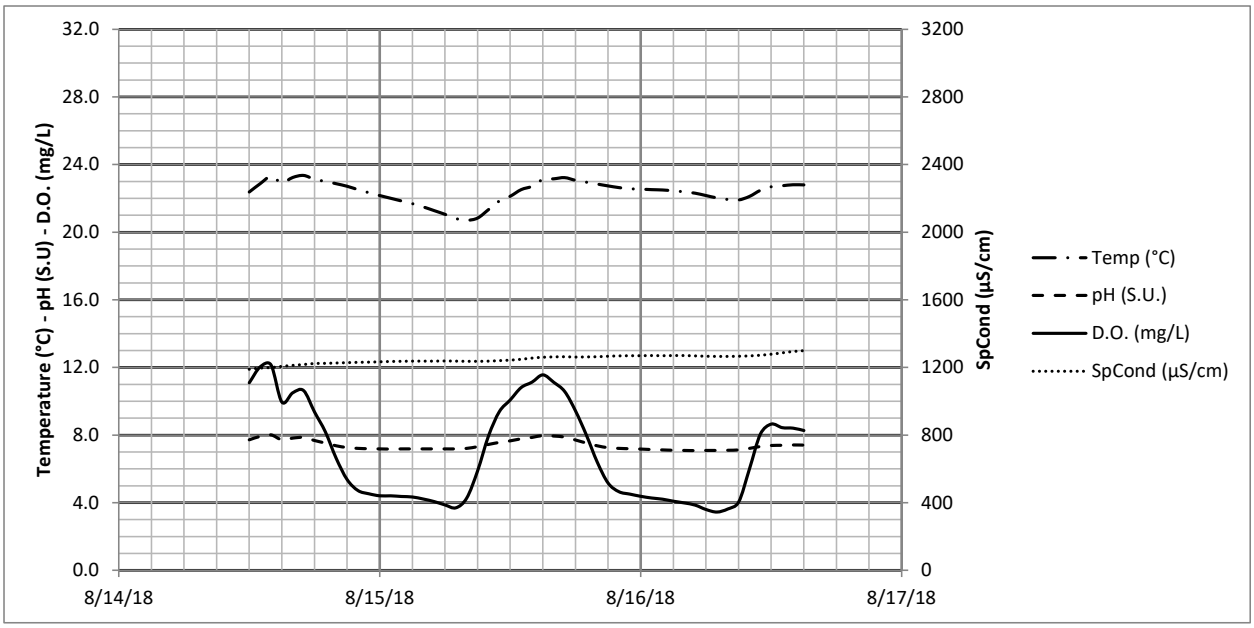


Figure 52: Plot of hourly data collected with a water quality sonde on Wahoo Ditch (RM 0.39; STORET: F01P32). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

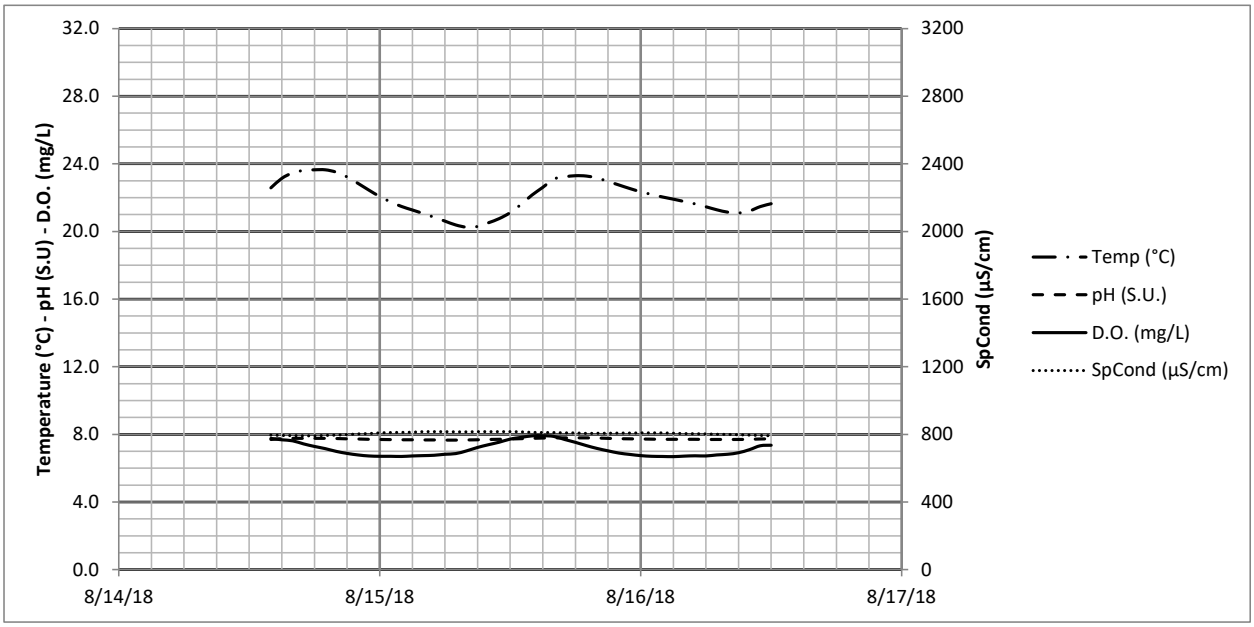


Figure 53: Plot of hourly data collected with a water quality sonde on Little Cuyahoga River (RM 11.2; STORET: F01S88). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

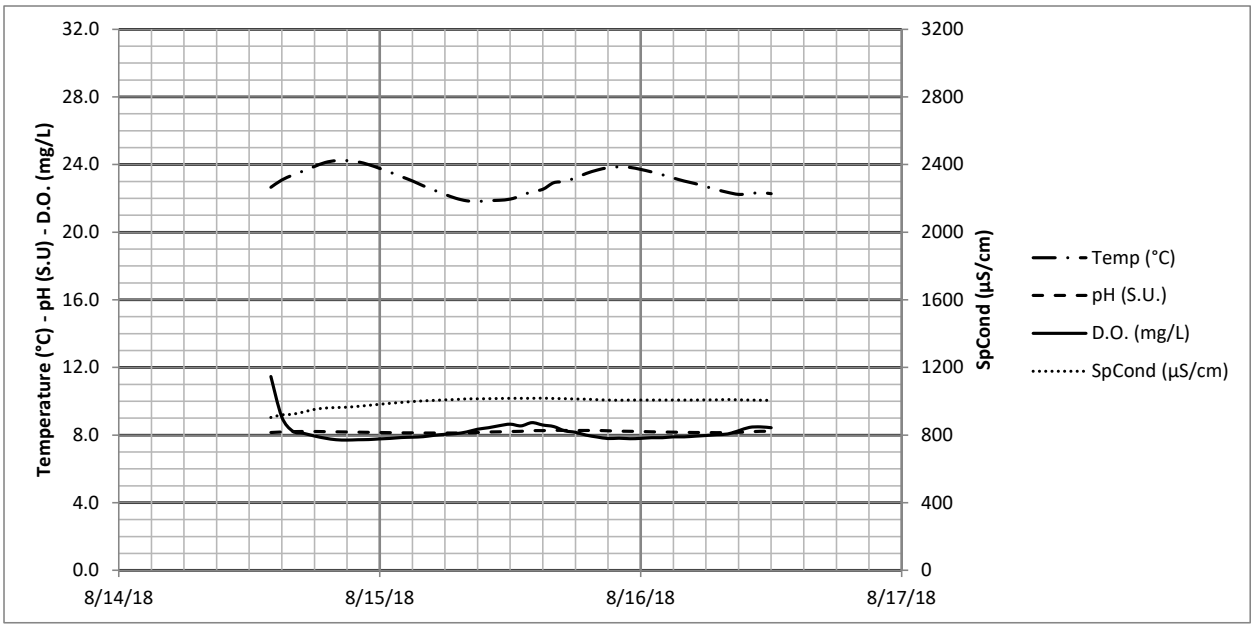


Figure 54: Plot of hourly data collected with a water quality sonde on Little Cuyahoga River (RM 5.11; STORET: F01S82). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

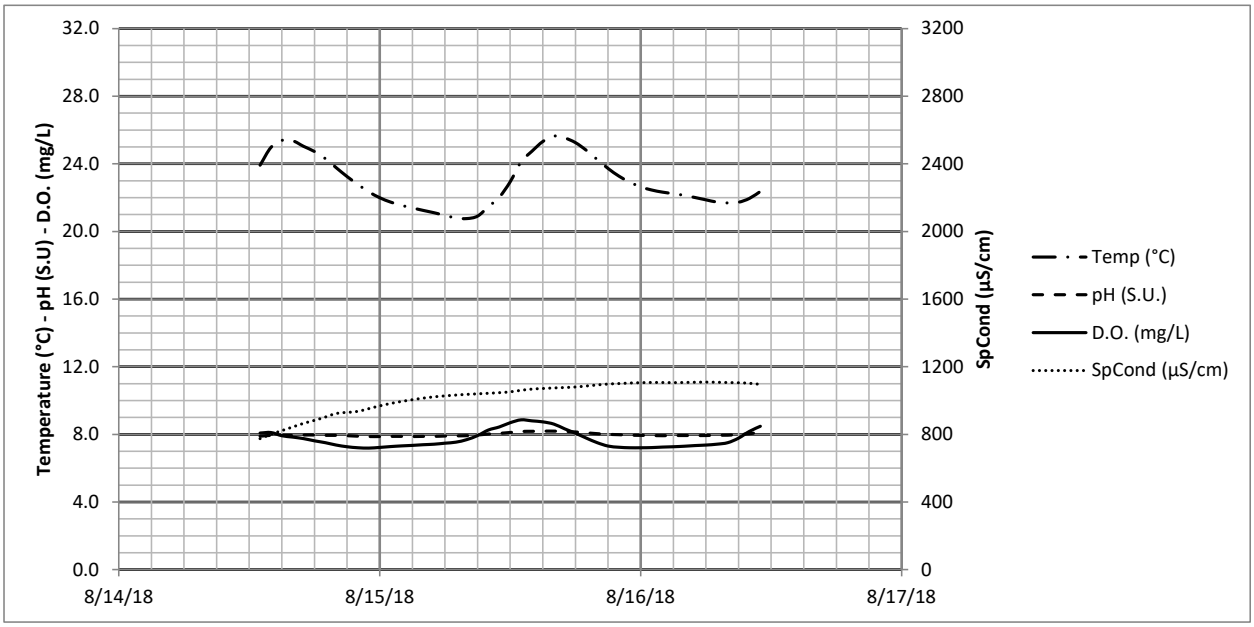


Figure 55: Plot of hourly data collected with a water quality sonde on Little Cuyahoga River (RM 0.3; STORET: 502180). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

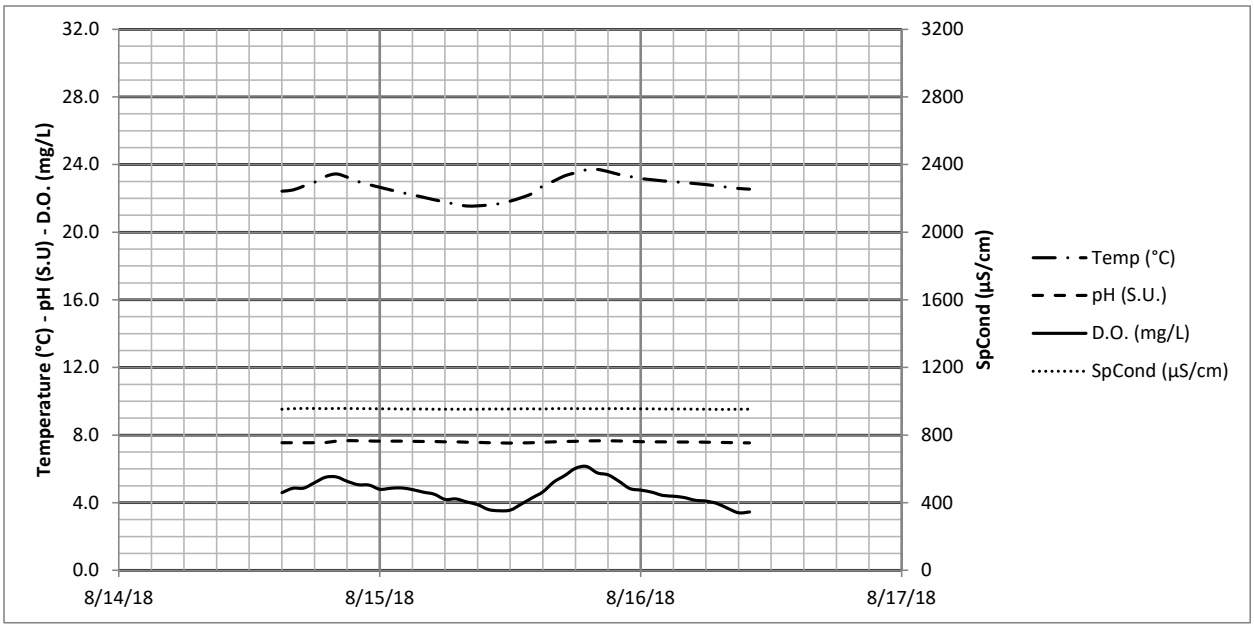


Figure 56: Plot of hourly data collected with a water quality sonde on Mud Brook (RM 8.34; STORET: F01P25). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

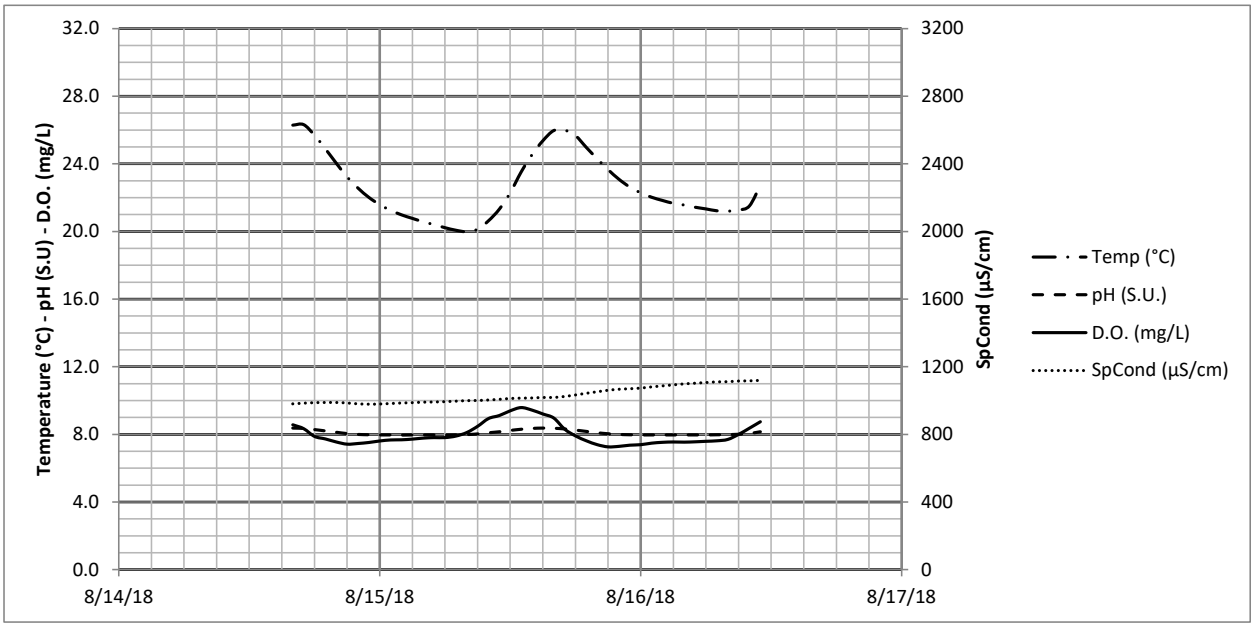


Figure 57: Plot of hourly data collected with a water quality sonde on Mud Brook (RM 0.18; STORET: F01P24). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

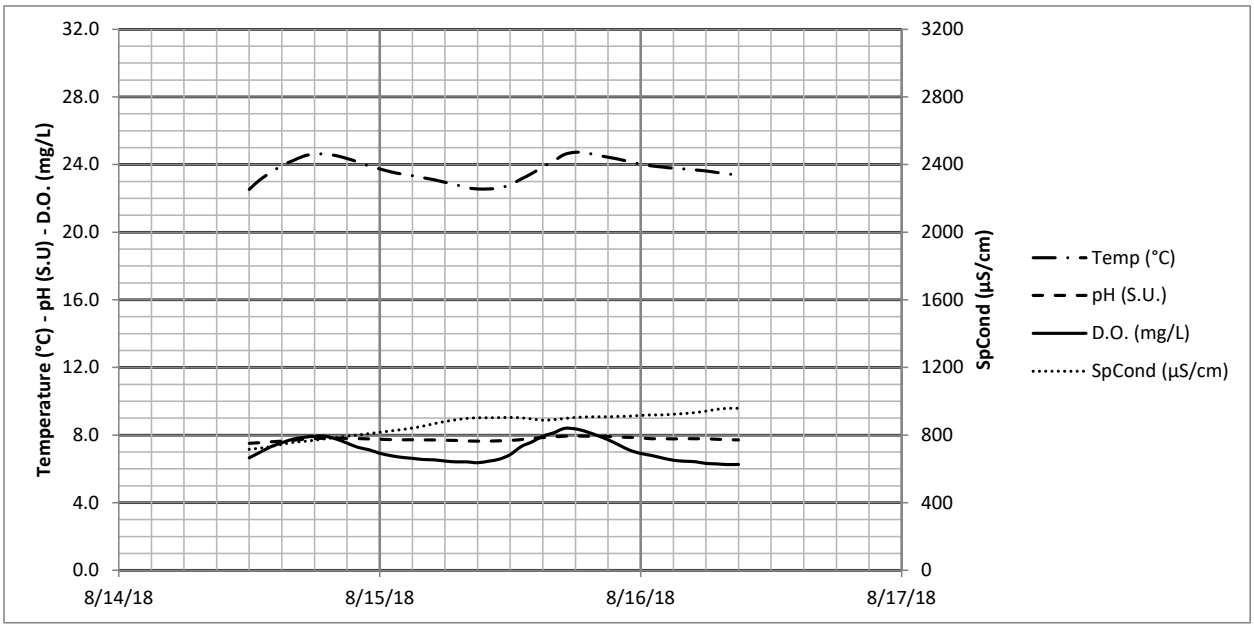


Figure 58: Plot of hourly data collected with a water quality sonde on Cuyahoga River (RM 33.2; STORET: 502010). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

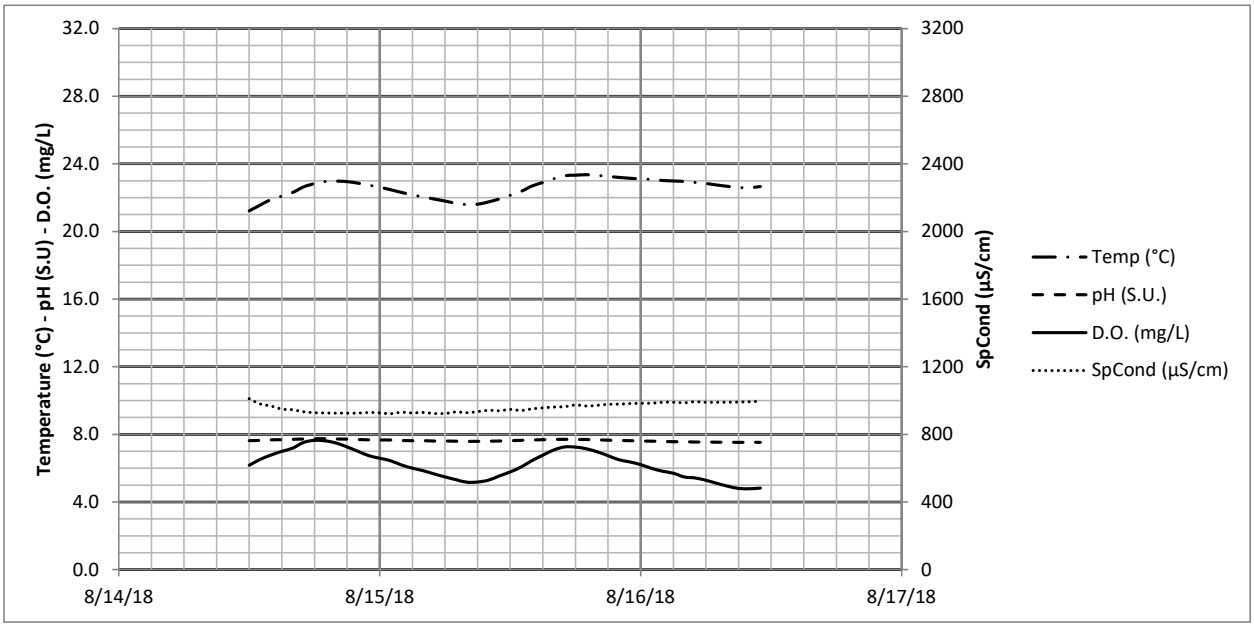


Figure 59: Plot of hourly data collected with a water quality sonde on Brandywine Creek (RM 4.27; STORET: F01P35). Temperature (°C), D.O. (mg/L), pH (S.U.) and specific conductance (µS/cm) are included. The data was collected from 8/14-16/2018.

Appendix M – Statistical Methods for Ecological Data Analysis

Techniques to describe how biological assemblages relate to environmental and stressor gradients are well-established and have been made accessible by the combination of modern computing power, open-source software, and highly approachable books (1), guides (2), and online texts (3). Ohio EPA's Division of Surface Water incorporates these techniques into making biological assessments and causal associations because these techniques help focus attention on likely causative stressors, eliminate spurious associations, and generally provide a more complete picture of how assessed sites are arrayed against stressor gradients. In this context, sites that are positioned down-gradient but nominally rated as passing or marginal can be identified and potentially reclassified as necessary, thus providing a rational bridge between independent application and weight-of-evidence (4). More generally, this context helps keep attention focused on the continuous nature of stressor gradients when navigating pass/fail or true/false constructs.

Numeric or narrative biological criteria are used in a binary sense to make a pass or fail assignment of condition status relative to a designated beneficial use. The binary nature of the assessment decision and the need to ascribe a cause in cases of failure sets the stage for just so (5) associations (for example, the concentration of ammonia was elevated at this site; therefore, ammonia is the culprit). This is not to say that assessments and associated causes are rife with errors. Errors are minimized by the disciplined process embodied by the compilation of the technical support document, as recently described in Norton et al. 2014 (6). Also, summary biotic index scores can be used in direct gradient analysis to help diagnose causes of impairment or identify significant stressors. A familiar example of direct gradient analysis is a bivariate x-y plot accompanied with a correlation coefficient. In simple cases, direct gradient analysis may be the most parsimonious route to stressor identification; however, as is often the case with environmental data sets, stressors are many, often colinear, and sometimes additive or covariate in nature. Applying direct gradient analysis in this context can obviously lead to misidentification of stressors.

When described in lay terms, the routine employed is remarkably straightforward: 1) group survey sites based on the similarity (or dis-similarity) of biological assemblages; 2) represent the assemblage data in 2- or 3-dimensional space as a plot with points color-coded by the groups identified in the previous step; and 3) overlay measured (for example, water quality data, QHEI habitat attributes) and derived (for example, GIS information such as land use, latitude/longitude, etc.) environmental variables in the plot to help understand how the points (survey sites) are related to the environmental gradients.

Distance Measures

Distance measures evaluate a similarity distance between sites in terms of the species abundances (or in the case of an environmental table, values of parameters). The most common distance measure used on biological assemblages is the Bray-Curtis distance (7). This distance is essentially the ratio between the total abundance of commonly held species between two sites, and the total abundance of all species collected at the two sites. With more species in common, the ratio will track closer to one. The other frequently used distance is Euclidean distance, and that can be thought of as the hypotenuse resulting if a given species abundance (or parameter measure) at two sites were taken as x-y coordinates (for instance, for three found at one site and four at the other, the coordinates would be 0,3 for the x; 0,4 for the y) (8). Euclidean distances are more typically calculated for the environmental table after the environmental measures have

1 Gauch, H.G., 1982. *Multivariate analysis in community ecology* (No. 1). Cambridge University Press.

2 McCune, B. and Mefford, M.J., 1999. PC-ord. *Multivariate analysis of ecological data, version*, *4*(0).

3 Oksanen, J., 2009. Multivariate analysis of ecological communities in R: vegan tutorial. *URL:[http://cc. oulu. fi/, jarioksa/opetus/metodi/vegantutor. pdf]*.

Zuur, A.F., Ieno, E.N., Walker, N.J., Saveliev, A.A. and Smith, G.M., 2009. Mixed effects models and extensions in ecology with R. Gail M, Krickeberg K, Samet JM, Tsiatis A, Wong W, editors. *New York, NY: Spring Science and Business Media*.

4 The converse is also true and nominally failing sites can be objectively classified as "impaired" due to natural causes, or the result of sampling error.

5 *sensu* Rudyard Kipling.

6 Norton, S.B., Cormier, S.M. and Suter II, G.W. eds., 2014. *Ecological causal assessment*. CRC Press.

7 Beals, E.W. (1984). Bray-Curtis ordination: an effective strategy for analysis of multivariate ecological data. Advances in Ecological Research, 14, 1-55.

8 Euclidean distances are actually calculated from squared differences.

been standardized based on how much each parameter at each assessment site deviated from the mean of all sites (z scores).

Hierarchical Clustering

Once distance measures have been calculated for the biological matrix, groups of sites can be identified using hierarchical clustering. Essentially, the clustering algorithm identifies the two most similar sites (or least dissimilar) and joins them with a branch, finds the next two most similar objects (for instance, the sites joined previously are considered an object) and joins them, and so forth. The results can be conveniently viewed as a dendrogram, or tree diagram, (Figure 1, Figure 3) where the branches represent distances; sites clustered together on one branch being more similar to each other than sites on another, such that the different branches represent different groups. In this case, fish and macroinvertebrate sampling sites were broken into eight groups each. The resulting eight groups can then be used as a categorical variable to color-code points, or to bin environmental variables, for example, as box plots (Figure 2, Figure 4).

Non-Metric Multi-Dimensional Scaling (NMDS)

NMDS can be thought of as a data reduction method that seeks to represent a large data set, in this case distance scores from a biological matrix, by a reduced number of dimensions. Here the dimensions are represented by axes, typically two or three. The degree of similarity between sites determines axes scores (coordinates) such that the sites can be plotted as a scatterplot (Figure 3, Figure 6). Clearly, sites clustering together on the plot have more similar biological assemblages compared to other sites, and in this regard, NMDS is analogous and complementary to hierarchical clustering. Color-coding the points on the NMDS plot by groups identified in the hierarchical clustering exercise is a way to cross-check the results to determine if a given site was misclassified and to gain confidence that the groups are meaningful.

Because NMDS transforms the biological matrix into linear constructs of two or more axes, associations with environmental variables can be measured, and the results plotted as vectors emanating from the center of the plot (Figure 3, Figure 6). For example, because stream gradient (GRADE) strongly correlates with the first NMDS axis (x-axis) and weakly correlates with the second or y-axis, it plots as a long arrow almost parallel with the x-axis; thus, sampling sites in fish group #4 tended to be in higher gradient stream reaches. In this way, the relationships between sites and environmental stressors or gradients can be visualized simultaneously, thus facilitating the identification of which stressor or gradient is most proximate to a given site.

Using the Resulting Information

Knowing how individual sites group together and relate to stressors or gradients provides for a more informed interpretation of bivariate plots of summary index scores (for example, IBI) or proxies (EPT richness) against identified stressors. For example, sites can be coded to the groups identified by hierarchical clustering, and separate regression lines drawn for the various groups. More generally, succinct narratives can be constructed for the various groups to quickly communicate ecological status in a way that is complementary to the traditional biological narratives, but arguably more literal and informative. For example, fish groups #1, 6, & 8 represent Cuyahoga mainstem sites; fish group #4 represents smaller-sized sampling locations in the lower portion of the watershed with higher quality habitat that show signatures of stormwater runoff (elevated TDS and metals). Results from the biological assemblage hierarchical clustering analysis are discussed more in-depth within the Aquatic Life Discussion portion of this technical support document.

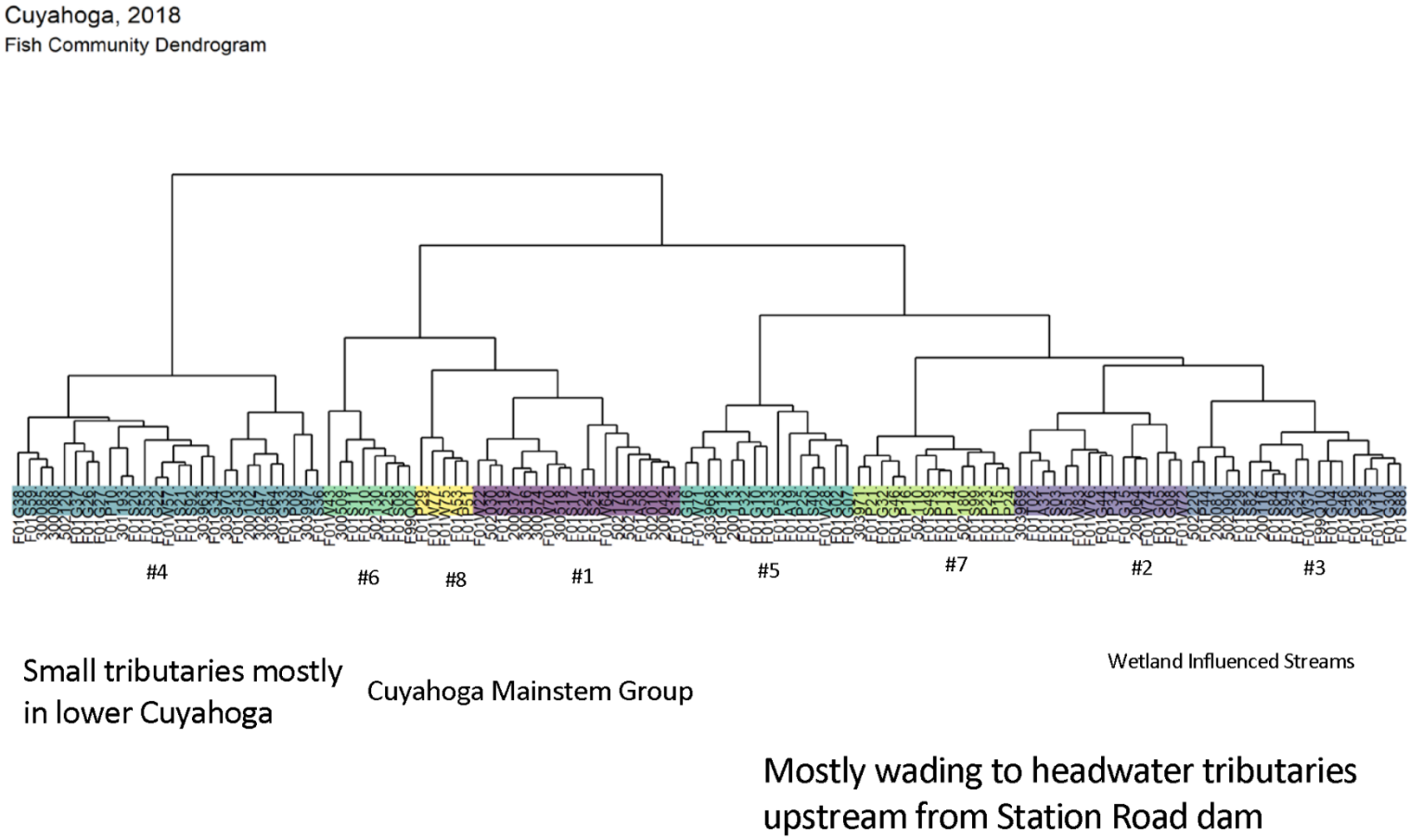
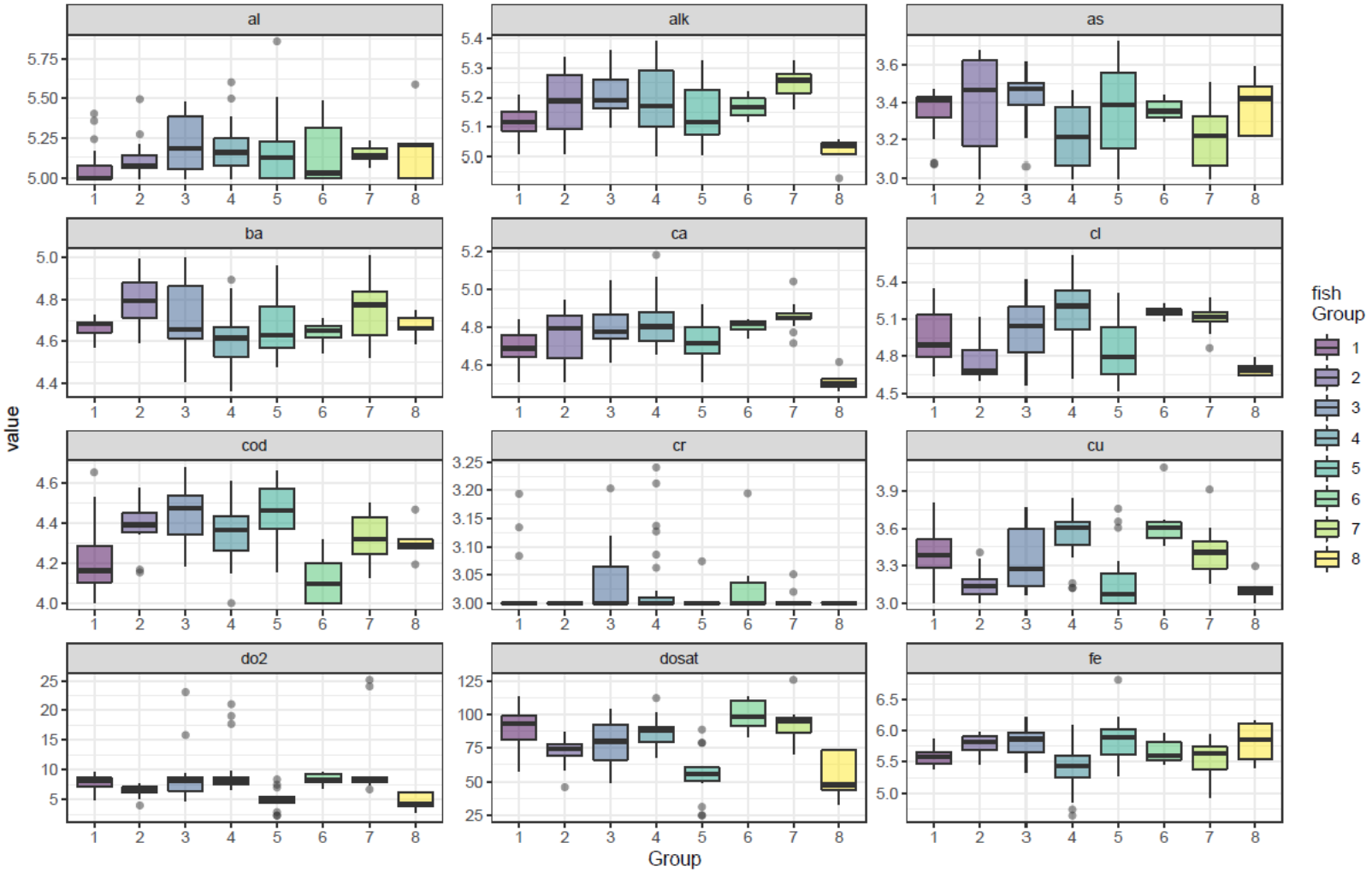
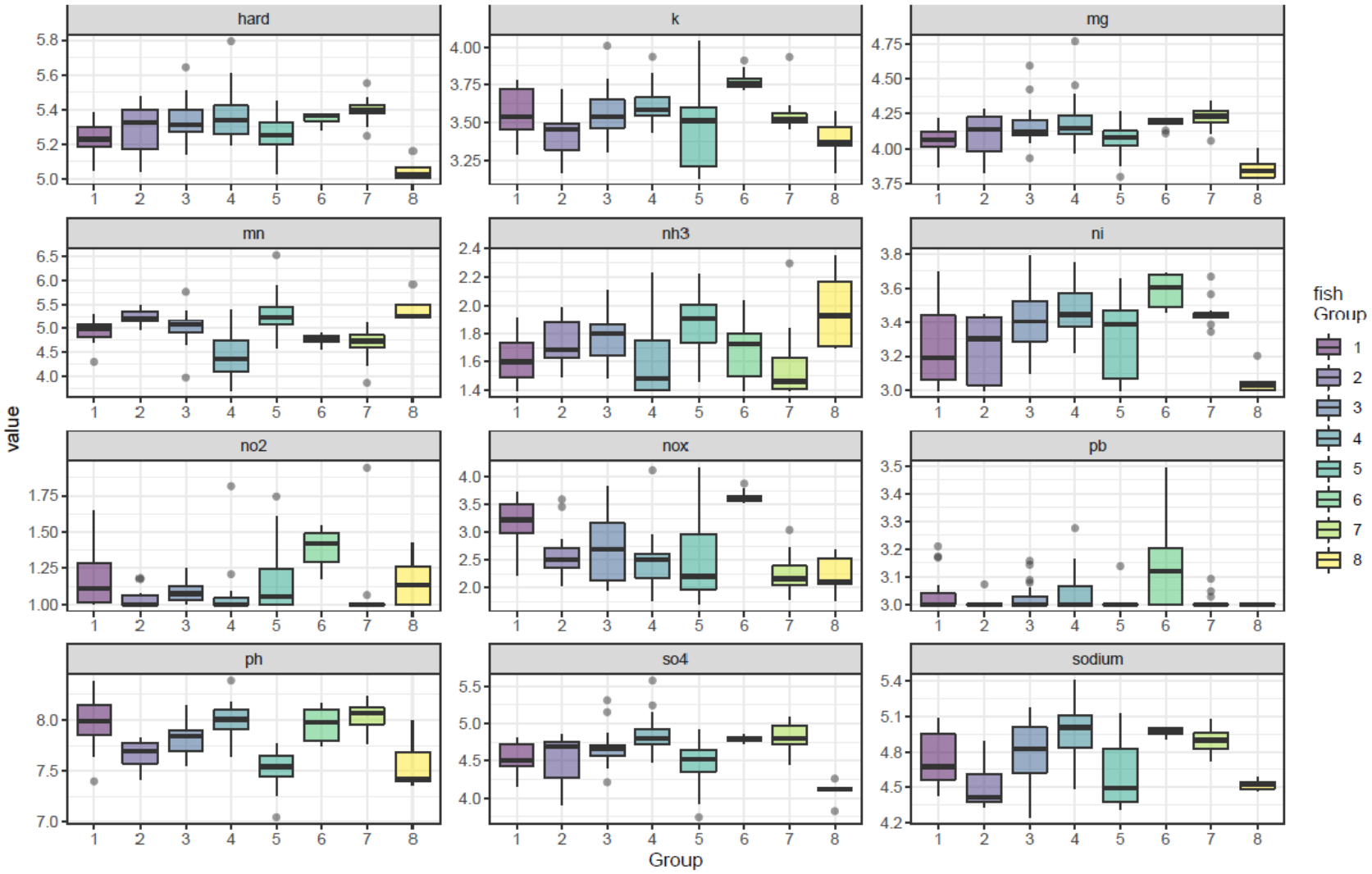


Figure 2 — A dendrogram resulting from hierarchical clustering of fish assemblages sampled from the Cuyahoga River watershed, 2017 & 2018. Labels hanging from the terminal branches are station codes. Numbers displayed correspond to the clustering groups for survey locations.

Boxplots: Environmental parameters by fish group

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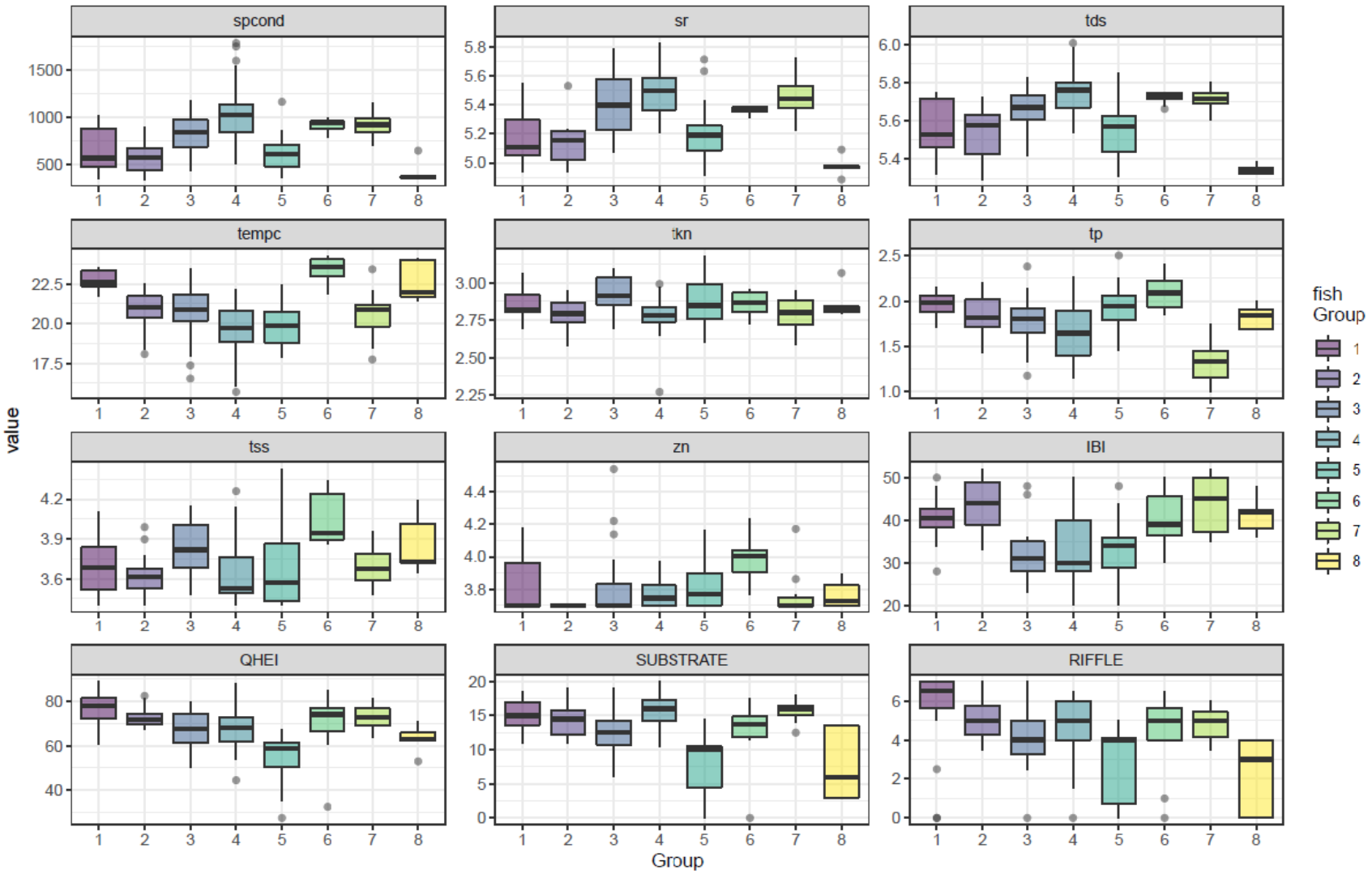
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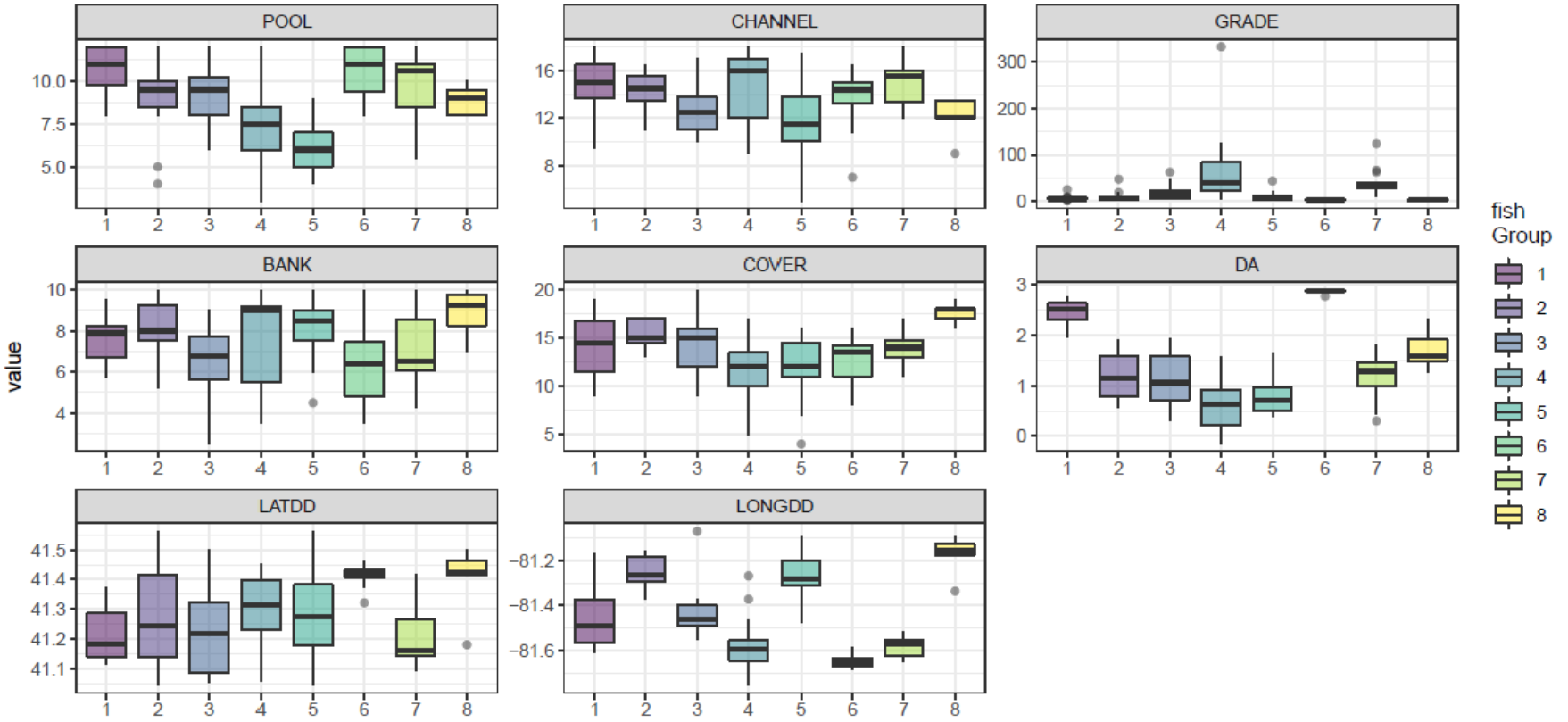


Figure 3 — Box plots showing the environmental parameters by fish assemblage cluster groups displayed in Figure 1.

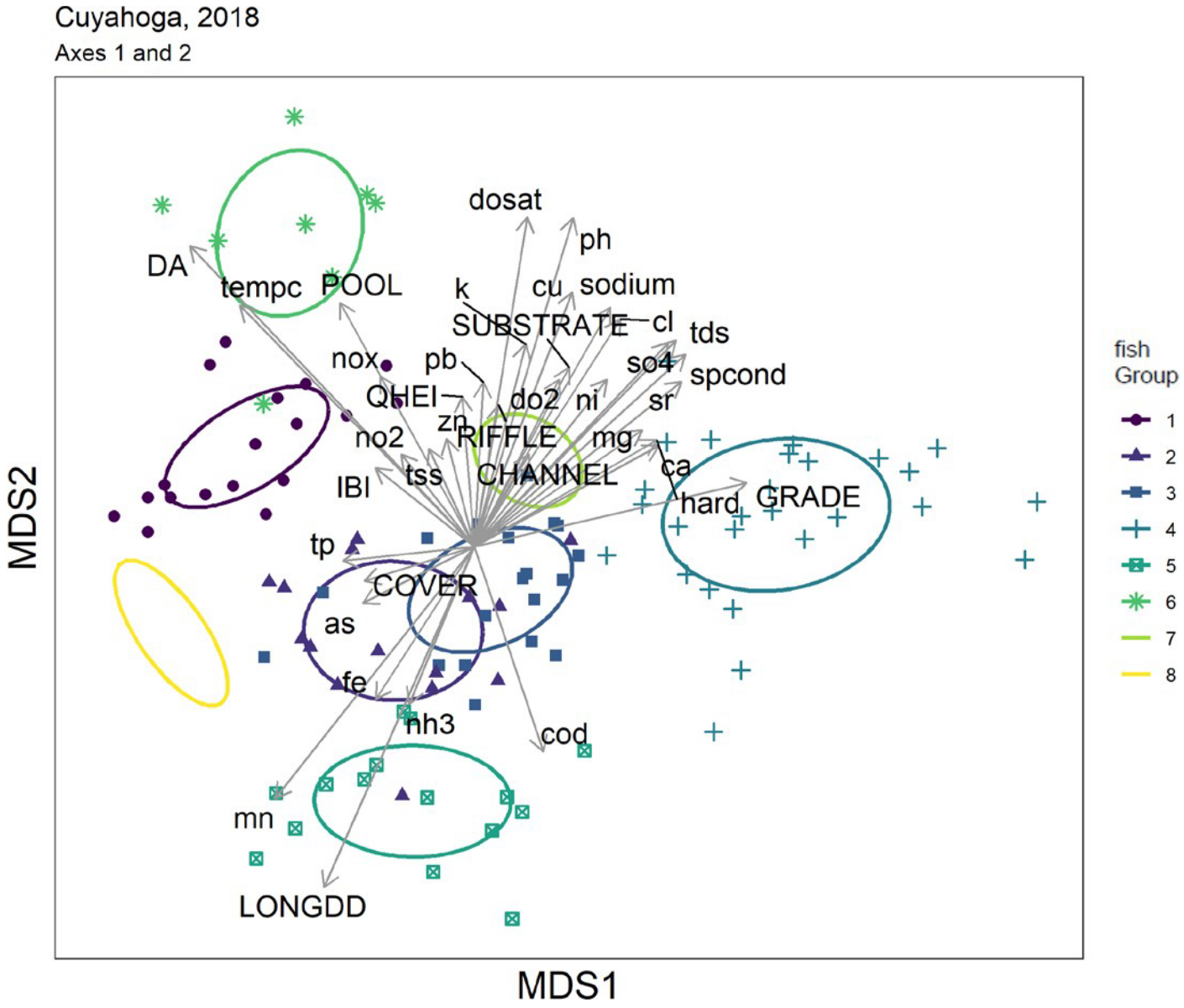


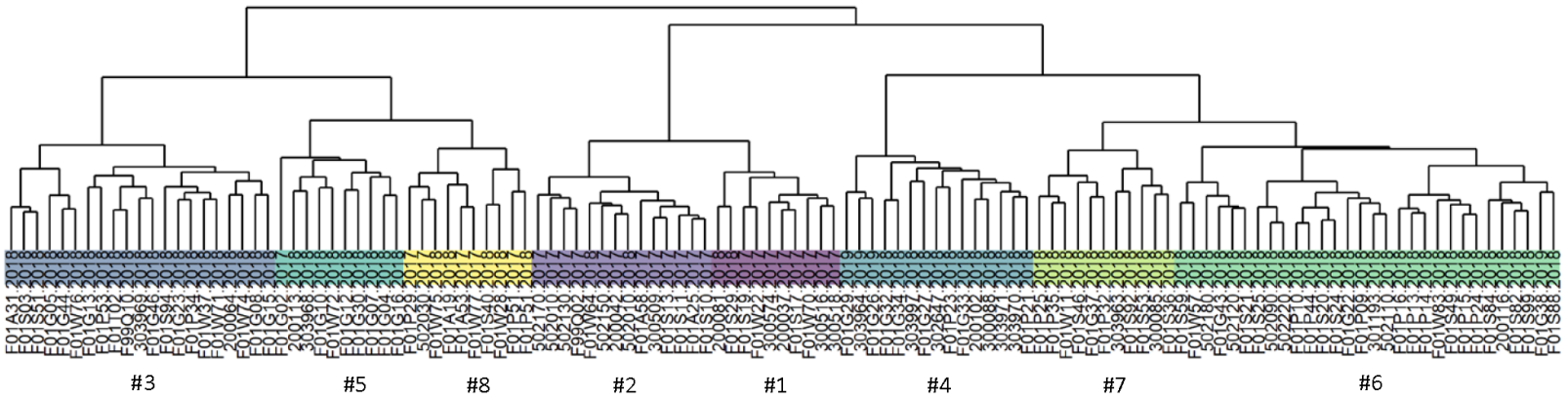
Figure 4 – Display of the eight fish assemblage ordination groupings separated in three-dimensional ordination space. Significant parameter associations ($p < 0.001$) are indicated by the grey vectors. The three-dimensional ordination had stress = 0.105. Only axes one and two are presented.

Table 2 – Results from the environmental fitting function to the fish assemblage ordination. Parameters with p-values less than or equal to 0.001 were displayed in Figure 3.

Parameter	NMDS1	NMDS2	NMDS3	R^2	*p* values
al	0.368615	0.008923	0.929539	0.050344	0.103
alk	0.837148	0.123643	-0.53282	0.113397	0.005
as	-0.56341	-0.28766	0.774482	0.1786	0.001
ba	-0.3214	-0.41045	-0.85336	0.129143	0.002
ca	0.875302	0.476676	-0.0814	0.202974	0.001
cl	0.486247	0.754448	0.440877	0.413294	0.001
cod	0.316521	-0.93614	0.15314	0.218938	0.001
cr	0.37364	0.499033	0.781894	0.116313	0.004
cu	0.307021	0.797228	0.519774	0.463866	0.001
do2	0.418194	0.822269	-0.38599	0.187461	0.001
dosat	0.159012	0.983337	-0.08811	0.511755	0.001
fe	-0.50352	-0.78271	0.365835	0.173746	0.001
hard	0.862157	0.501533	-0.07176	0.204916	0.001
k	0.183633	0.717166	0.672274	0.361965	0.001
mg	0.820886	0.567002	-0.06823	0.191224	0.001
mn	-0.61515	-0.7781	-0.12711	0.477307	0.001
nh3	-0.26754	-0.64779	0.713297	0.269282	0.001
ni	0.460676	0.578753	0.672921	0.378376	0.001
no2	-0.34552	0.436574	0.830675	0.202584	0.001
nox	-0.39243	0.710437	0.584189	0.260358	0.001
pb	0.043486	0.770286	0.636215	0.207077	0.001
ph	0.289088	0.956453	-0.04033	0.536896	0.001
so4	0.670871	0.703071	0.235845	0.382908	0.001
sodium	0.433478	0.760946	0.48276	0.450255	0.001
spcond	0.671196	0.608316	0.423613	0.453423	0.001
sr	0.706927	0.560405	0.431509	0.393726	0.001
tds	0.648913	0.661969	0.37511	0.442261	0.001
tempc	-0.67357	0.692252	0.259018	0.552014	0.001
tkn	-0.39176	-0.11235	0.91318	0.140742	0.003
tp	-0.51674	-0.05677	0.854256	0.293524	0.001
tss	-0.24071	0.52227	0.818103	0.159421	0.001
zn	-0.13746	0.536102	0.832886	0.184202	0.001
IBI	-0.32553	0.258336	-0.90955	0.421215	0.001
QHEI	-0.04271	0.541741	-0.83946	0.347688	0.001
SUBSTRATE	0.296245	0.558301	-0.77494	0.467902	0.001
RIFFLE	0.111686	0.650513	-0.75124	0.215303	0.001
POOL	-0.46724	0.84834	-0.249	0.37633	0.001
CHANNEL	0.216163	0.36315	-0.90631	0.29469	0.001
GRADE	0.928722	0.216802	-0.30079	0.392283	0.001

Cuyahoga, 2018

Bug Community Dendrogram



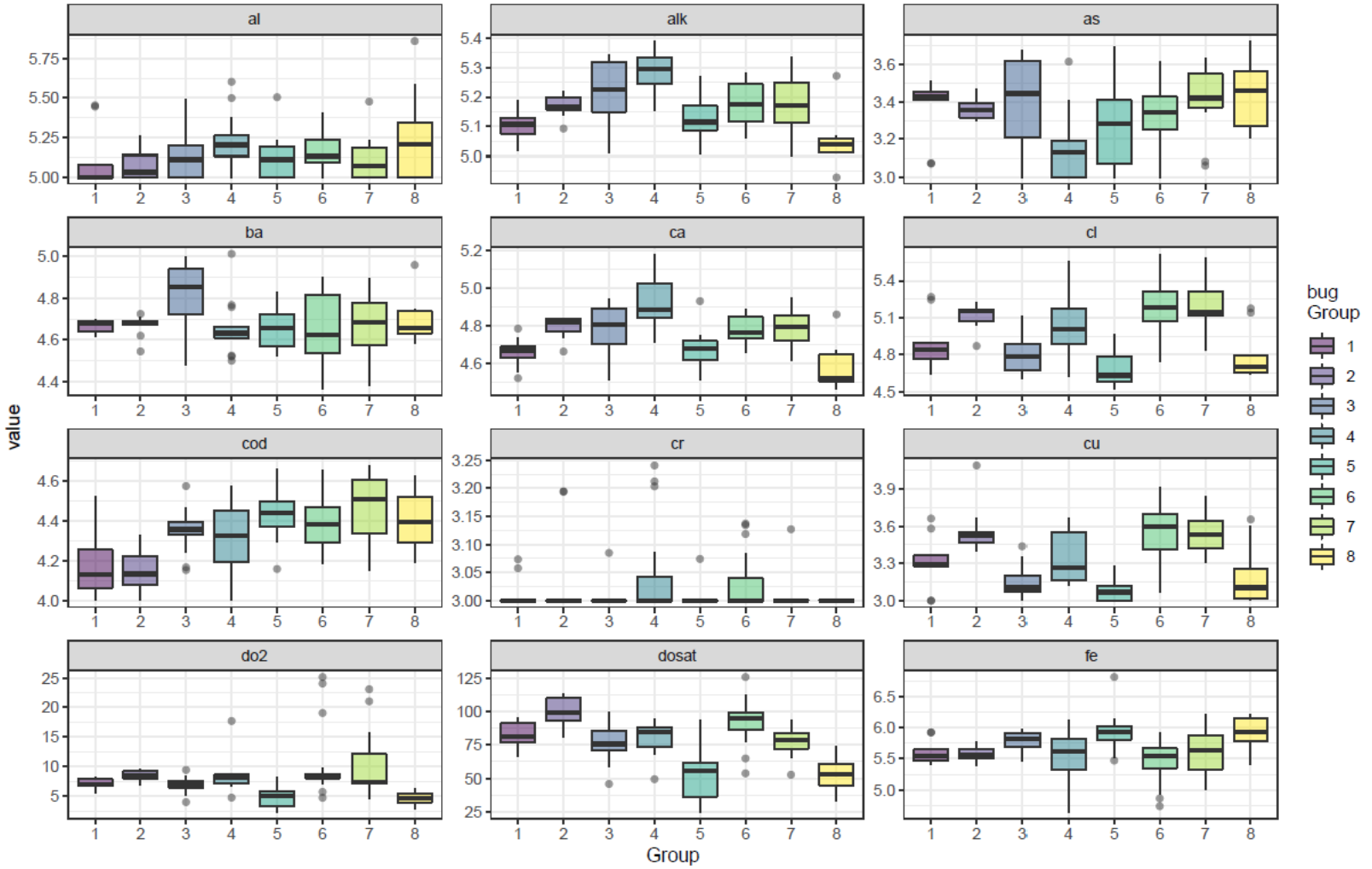
Mostly upper & middle basin tributaries from Yellow Creek upstream. Some upper reaches of lower basin tributaries.

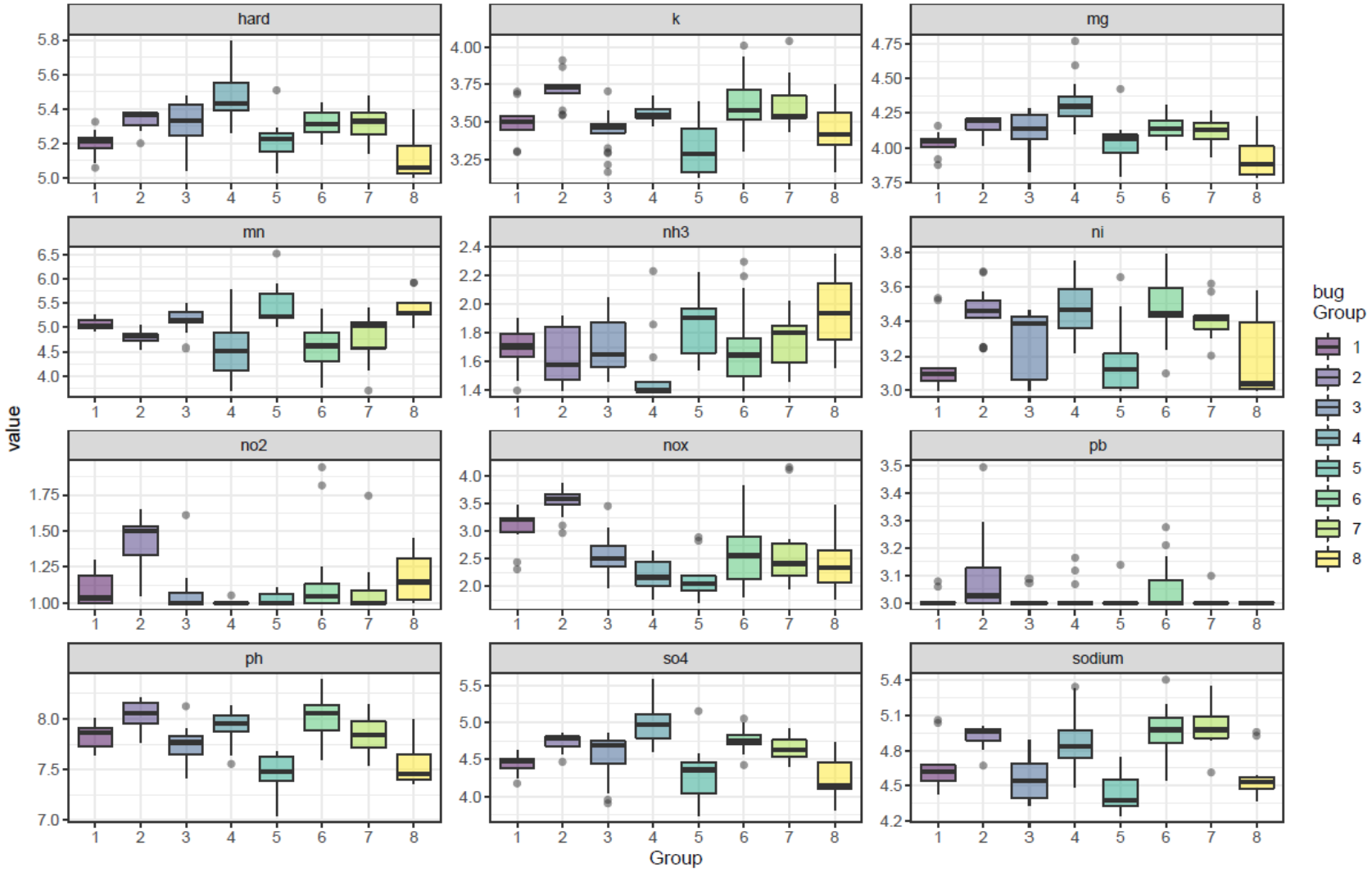
Lower and Middle Cuyahoga Mainstem

Mostly middle & lower basin tributaries from L. Cuyahoga downstream

Figure 5 — A dendrogram resulting from hierarchical clustering of macroinvertebrate assemblages sampled from the Cuyahoga River watershed, 2017 & 2018. Labels hanging from the terminal branches are station codes. Numbers displayed correspond to the clustering groups for survey locations.

Boxplots: Environmental parameters by bug group

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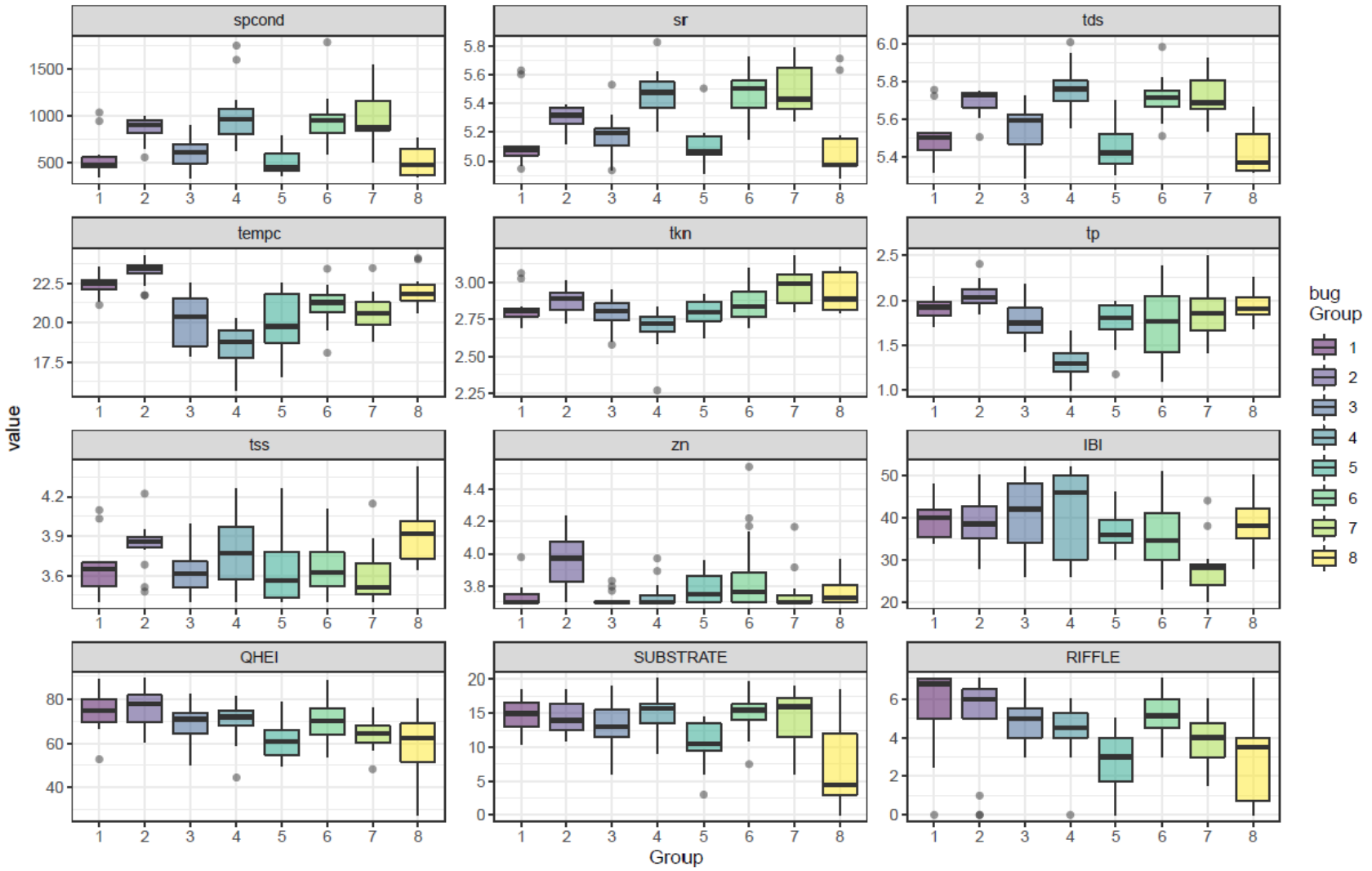
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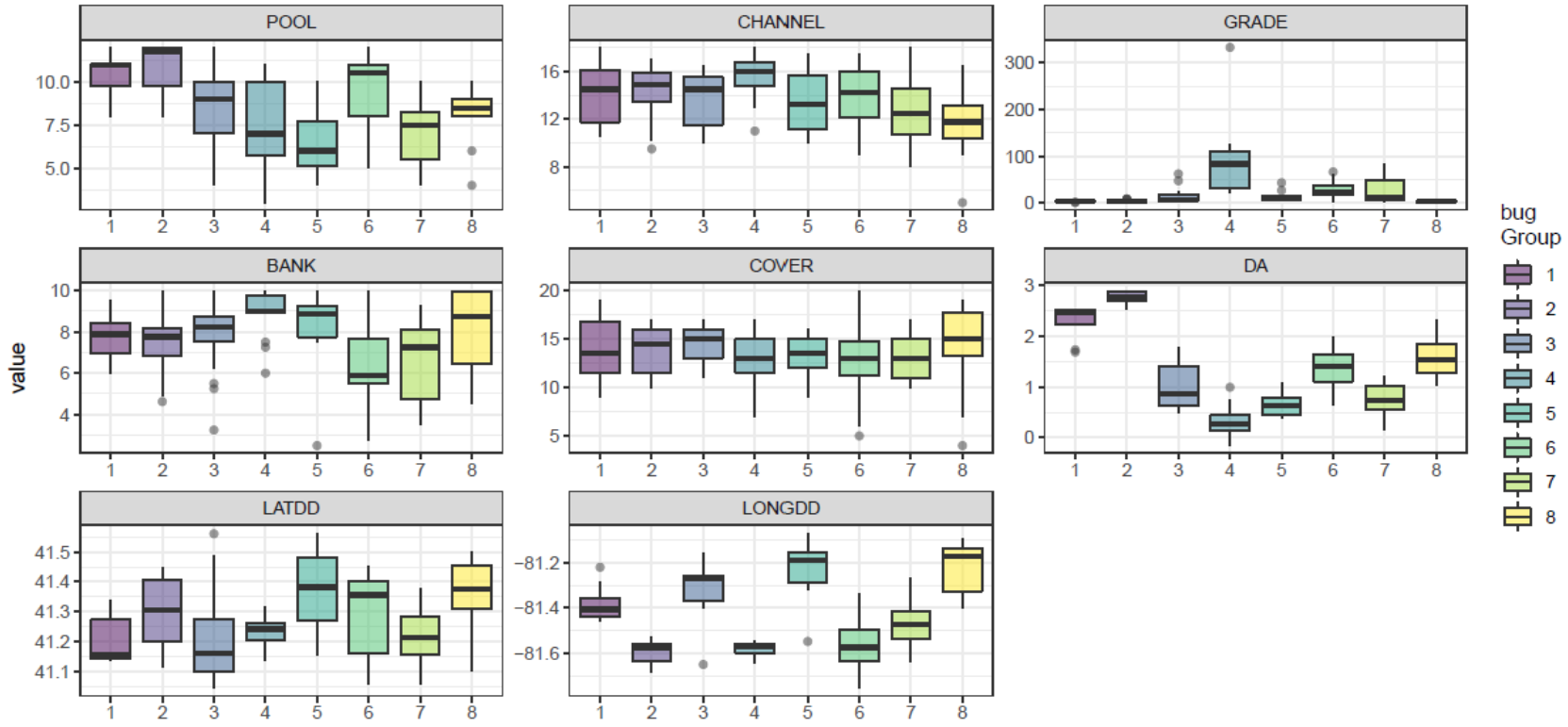

Figure 6 — Box plots showing the environmental parameters by macroinvertebrate assemblage cluster groups displayed in Figure 4.

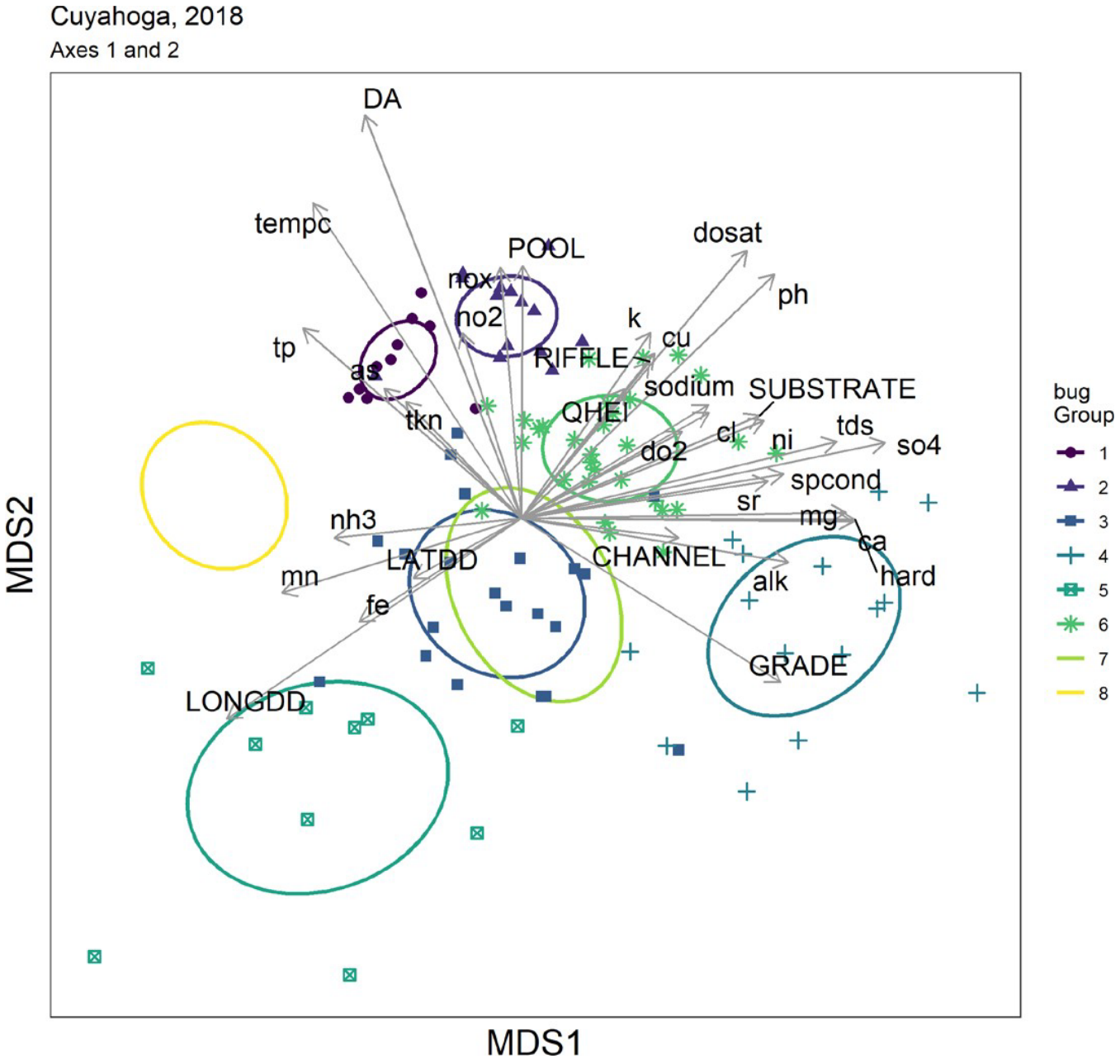

Figure 7 – Display of the eight aquatic macroinvertebrate assemblage ordination groupings well separated in three-dimensional ordination space. Significant parameter associations ($p < 0.001$) are indicated by the grey vectors. The three-dimensional ordination had stress = 0.16. Only axes one and two are presented.

Table 3 – Results from the environmental fitting function to the aquatic macroinvertebrate assemblage ordination. Parameters with p-values less than or equal to 0.001 were displayed in Figure 6.

Parameter	NMDS1	NMDS2	NMDS3	R^2	*p* value
al	0.445932	-0.89105	-0.08475	0.01621	0.583
alk	0.862402	-0.1411	-0.48616	0.386368	0.001
as	-0.72048	0.682964	0.120283	0.145935	0.001
ba	-0.08639	0.020109	-0.99606	0.105174	0.009
ca	0.986991	-0.00891	-0.16053	0.456394	0.001
cl	0.548964	0.307742	0.777132	0.47116	0.001
cod	-0.09461	-0.86936	0.485038	0.147618	0.002
cr	0.936792	0.267626	0.225382	0.059995	0.058
cu	0.378191	0.467504	0.799007	0.499701	0.001
do2	0.778442	0.418946	0.467453	0.171889	0.001
dosat	0.644409	0.764193	0.027329	0.493361	0.001
fe	-0.74713	-0.47498	-0.46496	0.189645	0.001
hard	0.981456	-0.0037	-0.19165	0.466639	0.001
k	0.423584	0.60847	0.671075	0.375483	0.001
mg	0.962447	0.017755	-0.27089	0.458559	0.001
mn	-0.77787	-0.24119	-0.58029	0.381856	0.001
nh3	-0.84302	-0.08776	0.530675	0.198378	0.001
ni	0.818601	0.329485	0.47046	0.353812	0.001
no2	-0.26823	0.843072	0.466137	0.194566	0.001
nox	-0.08008	0.968729	0.234841	0.268718	0.001
pb	0.199628	0.899848	0.387842	0.068563	0.044
ph	0.701088	0.675615	0.228078	0.525265	0.001
so4	0.97442	0.203048	0.096317	0.562131	0.001
sodium	0.535885	0.325264	0.779122	0.4898	0.001
spcond	0.738024	0.124374	0.663213	0.50902	0.001
sr	0.775838	0.117059	0.619978	0.407386	0.001

Appendix N – Sediment Chemistry Results

Inorganic Sediment Chemistry Results

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	48.70	331.0	04110002-03-05	41.14920	-81.45670

	23-OCT-2017
% Solids percent	51.8
Aluminum mg/kg	3900
Ammonia mg/kg	13.9
Arsenic mg/kg	10.9
Barium mg/kg	48.2
Beryllium mg/kg	.339
Cadmium mg/kg	1.06
Calcium mg/kg	5490
Carbon, Total Organic (TOC) percent	4.28
Chromium mg/kg	14.8
Cobalt mg/kg	4.4
Copper mg/kg	16.9
Iron mg/kg	12300
Lead mg/kg	29.9
Magnesium mg/kg	2200
Manganese mg/kg	528
Nickel mg/kg	9.9
pH su	7.62
Phosphorus mg/kg	491
Potassium mg/kg	<1310
Selenium mg/kg	<1.3
Sodium mg/kg	<3260
Strontium mg/kg	<19.6
Titanium mg/kg	<32.6
Vanadium mg/kg	<32.6
Zinc mg/kg	91

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	48.70	331.0	04110002-03-05	41.14920	-81.45670

	24-OCT-2017
% Solids percent	71.3
Aluminum mg/kg	2190
Ammonia mg/kg	10.1
Arsenic mg/kg	6.22
Barium mg/kg	23.6
Beryllium mg/kg	.0995
Cadmium mg/kg	.241
Calcium mg/kg	9770
Carbon, Total Organic (TOC) percent	2.31
Chromium mg/kg	4.03
Cobalt mg/kg	2.98
Copper mg/kg	8.7
Iron mg/kg	10600
Lead mg/kg	11.3
Magnesium mg/kg	3010
Manganese mg/kg	463
Nickel mg/kg	7.6
pH su	7.74
Phosphorus mg/kg	268[a]
Potassium mg/kg	<1010
Selenium mg/kg	<.914
Sodium mg/kg	<2520
Strontium mg/kg	<15.1
Titanium mg/kg	<25.2
Vanadium mg/kg	<25.2
Zinc mg/kg	62.1

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

200042 CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	39.70	433.0	04110002-04-05	41.13860	-81.55280

	23-OCT-2017
% Solids percent	61
Aluminum mg/kg	4560
Ammonia mg/kg	11.7
Arsenic mg/kg	7.95
Barium mg/kg	48.2
Beryllium mg/kg	.242
Cadmium mg/kg	.667
Calcium mg/kg	2460
Carbon, Total Organic (TOC) percent	3.45
Chromium mg/kg	17
Cobalt mg/kg	3.5
Copper mg/kg	12.1
Iron mg/kg	12800
Lead mg/kg	18.9
Magnesium mg/kg	1410
Manganese mg/kg	441
Nickel mg/kg	7.96
pH su	7.31
Phosphorus mg/kg	569[a]
Potassium mg/kg	<1080
Selenium mg/kg	<1.05
Sodium mg/kg	<2710
Strontium mg/kg	<16.3
Titanium mg/kg	<27.1
Vanadium mg/kg	<27.1
Zinc mg/kg	79.3

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

300516 CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	50.00	326.0	04110002-03-05	41.14090	-81.43527

	23-OCT-2017
% Solids percent	52
Aluminum mg/kg	4820
Ammonia mg/kg	13.8
Arsenic mg/kg	8.1
Barium mg/kg	79.1
Beryllium mg/kg	.217
Cadmium mg/kg	.587
Calcium mg/kg	4450
Carbon, Total Organic (TOC) percent	3.44
Chromium mg/kg	12.2
Cobalt mg/kg	3.98
Copper mg/kg	16
Iron mg/kg	15200
Lead mg/kg	18.6
Magnesium mg/kg	1950
Manganese mg/kg	1190
Nickel mg/kg	8.62
pH su	7.27
Phosphorus mg/kg	645[a]
Potassium mg/kg	<1450
Selenium mg/kg	<1.4
Sodium mg/kg	<3620
Strontium mg/kg	<21.7
Titanium mg/kg	<36.2
Vanadium mg/kg	<36.2
Zinc mg/kg	86.1

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

300518 CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	52.50	307.0	04110002-03-05	41.13931	-81.39185

	23-OCT-2017
% Solids percent	44.5
Aluminum mg/kg	7800
Ammonia mg/kg	32.1
Arsenic mg/kg	16.8
Barium mg/kg	84.1
Beryllium mg/kg	.475
Cadmium mg/kg	5.48
Calcium mg/kg	4420
Carbon, Total Organic (TOC) percent	5.68
Chromium mg/kg	86.4
Cobalt mg/kg	6.31
Copper mg/kg	30.5
Iron mg/kg	17700
Lead mg/kg	51.6
Magnesium mg/kg	1870
Manganese mg/kg	686
Nickel mg/kg	13.8
pH su	7.34
Phosphorus mg/kg	1730[a]
Potassium mg/kg	<1460
Selenium mg/kg	<1.73
Sodium mg/kg	<3640
Strontium mg/kg	<21.8
Titanium mg/kg	37.7
Vanadium mg/kg	<36.4
Zinc mg/kg	176

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	51.00	323.0	04110002-03-05	41.13690	-81.41830

	23-OCT-2018
% Solids percent	34.1
Aluminum mg/kg	6500
Ammonia mg/kg	63.1
Arsenic mg/kg	24.3
Barium mg/kg	86.6
Beryllium mg/kg	.521
Cadmium mg/kg	1.3
Calcium mg/kg	53800
Carbon, Total Organic (TOC) percent	10.4
Chromium mg/kg	31
Cobalt mg/kg	7.61
Copper mg/kg	74.8
Iron mg/kg	25900
Lead mg/kg	72.2
Magnesium mg/kg	9210
Manganese mg/kg	403
Nickel mg/kg	22.4
pH su	7.56 H
Phosphorus mg/kg	724
Potassium mg/kg	<1950
Selenium mg/kg	<2.14
Sodium mg/kg	<4880
Strontium mg/kg	50.6
Substrate - clay, fine/medium percent	22.6
Substrate - claypan soil percent	6.15
Substrate - sand, coarse percent	32.3
Substrate - silt, coarse percent	2.05
Substrate - silt, fine percent	20.5
Substrate - silt, medium percent	8.2
Substrate - silt, very fine percent	8.2
Titanium mg/kg	72.2
Vanadium mg/kg	<48.8
Zinc mg/kg	406

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

302337 ADAMS RUN AT AKRON @ ESSEX ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-031-001	0.20	1.9	04110002-03-03	41.04780	-81.46584

	22-AUG-2017
% Solids percent	56
Aluminum mg/kg	8630
Ammonia mg/kg	76.6
Arsenic mg/kg	14.3
Barium mg/kg	<121
Beryllium mg/kg	.542
Cadmium mg/kg	.865
Calcium mg/kg	14500
Carbon, Total Organic (TOC) percent	1.56
Chromium mg/kg	20
Cobalt mg/kg	9.91
Copper mg/kg	39
Iron mg/kg	28300
Lead mg/kg	37.8
Magnesium mg/kg	6420
Manganese mg/kg	466
Nickel mg/kg	30
pH su	6.95
Phosphorus mg/kg	818[a]
Potassium mg/kg	<1210
Selenium mg/kg	<1.21
Sodium mg/kg	<3030
Strontium mg/kg	27.5
Titanium mg/kg	<30.3
Vanadium mg/kg	<30.3
Zinc mg/kg	209

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

303830 Cuyahoga R. @ Scranton Rd Habitat Restoration

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	2.70	806.0	04110002--	41.48798	-81.69375

	24-OCT-2017
% Solids percent	62.1
Aluminum mg/kg	4560
Ammonia mg/kg	23
Arsenic mg/kg	11.9
Barium mg/kg	39
Beryllium mg/kg	.267
Cadmium mg/kg	.402
Calcium mg/kg	7730
Carbon, Total Organic (TOC) percent	1.42
Chromium mg/kg	8.06
Cobalt mg/kg	5.6
Copper mg/kg	16.7
Iron mg/kg	17800
Lead mg/kg	19
Magnesium mg/kg	3220
Manganese mg/kg	490
Nickel mg/kg	13
pH su	7.52
Phosphorus mg/kg	633
Potassium mg/kg	<1170
Selenium mg/kg	<1.13
Sodium mg/kg	<2930
Strontium mg/kg	<17.6
Titanium mg/kg	<29.3
Vanadium mg/kg	<29.3
Zinc mg/kg	90.7

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	33.20	480.0	04110002-04-05	41.20190	-81.56860

	18-SEP-2017
% Solids percent	69.6
Aluminum mg/kg	2570
Ammonia mg/kg	20.5
Arsenic mg/kg	7.65
Barium mg/kg	<114
Beryllium mg/kg	.221
Cadmium mg/kg	.234
Calcium mg/kg	5430
Carbon, Total Organic (TOC) percent	.837
Chromium mg/kg	6.48
Cobalt mg/kg	4.1
Copper mg/kg	9.4
Iron mg/kg	11900
Lead mg/kg	10.7
Magnesium mg/kg	1970
Manganese mg/kg	286
Nickel mg/kg	9.93
pH su	7.72
Phosphorus mg/kg	383
Potassium mg/kg	<1140
Selenium mg/kg	<1.04
Sodium mg/kg	<2850
Strontium mg/kg	<17.1
Titanium mg/kg	<28.5
Vanadium mg/kg	<28.5
Zinc mg/kg	63.9

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	13.08	707.0	04110002-06-02	41.39464	-81.62927

	03-AUG-2017
% Solids percent	27.6
Aluminum mg/kg	10200
Ammonia mg/kg	77.7
Arsenic mg/kg	14.6
Barium mg/kg	<252
Beryllium mg/kg	.795
Cadmium mg/kg	.78
Calcium mg/kg	6470
Carbon, Total Organic (TOC) percent	4.56
Chromium mg/kg	13.1
Cobalt mg/kg	8.87
Copper mg/kg	15.8
Iron mg/kg	25100
Lead mg/kg	21.7
Magnesium mg/kg	3250
Manganese mg/kg	2770
Nickel mg/kg	16.7
pH su	6.85
Phosphorus mg/kg	1360
Potassium mg/kg	<2520
Selenium mg/kg	<2.52
Sodium mg/kg	<6300
Strontium mg/kg	<37.8
Titanium mg/kg	<63
Vanadium mg/kg	<63
Zinc mg/kg	115

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	75.83	151.0	04110002-02-03	41.34060	-81.16690

	13-AUG-2018
% Solids percent	71.6
Aluminum mg/kg	5240
Ammonia mg/kg	20.4
Arsenic mg/kg	9.55
Barium mg/kg	<94
Beryllium mg/kg	.461
Cadmium mg/kg	1.01
Calcium mg/kg	25600
Carbon, Total Organic (TOC) percent	3.19
Chromium mg/kg	19.2
Cobalt mg/kg	6.2
Copper mg/kg	59.9
Iron mg/kg	18500
Lead mg/kg	41.5
Magnesium mg/kg	5360
Manganese mg/kg	357
Nickel mg/kg	27.3
pH su	7.69
Phosphorus mg/kg	524
Potassium mg/kg	<940
Selenium mg/kg	<.846
Sodium mg/kg	<2350
Strontium mg/kg	37.2
Substrate - clay, fine/medium percent	10.1
Substrate - claypan soil percent	2.03
Substrate - sand, coarse percent	73.7
Substrate - silt, coarse percent	2.03
Substrate - silt, fine percent	4.05
Substrate - silt, medium percent	6.08
Substrate - silt, very fine percent	2.03
Titanium mg/kg	<23.5
Vanadium mg/kg	<23.5
Zinc mg/kg	198

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	0.12	18.5	04110002-06-01	41.41780	-81.63830

	13-AUG-2018
% Solids percent	79.6
Aluminum mg/kg	4930
Ammonia mg/kg	8.99
Arsenic mg/kg	13.8
Barium mg/kg	<98.6
Beryllium mg/kg	.5
Cadmium mg/kg	1.07
Calcium mg/kg	10300
Carbon, Total Organic (TOC) percent	1.47
Chromium mg/kg	19.6
Cobalt mg/kg	6.16
Copper mg/kg	28
Iron mg/kg	24000
Lead mg/kg	37
Magnesium mg/kg	3950
Manganese mg/kg	286
Nickel mg/kg	24.3
pH su	7.95^{-}
Phosphorus mg/kg	387
Potassium mg/kg	<986
Selenium mg/kg	<.827
Sodium mg/kg	<2460
Strontium mg/kg	19.4
Substrate - clay, fine/medium percent	6.08
Substrate - claypan soil percent	2.03
Substrate - sand, coarse percent	81.8
Substrate - silt, coarse percent	0
Substrate - silt, fine percent	4.05
Substrate - silt, medium percent	4.05
Substrate - silt, very fine percent	2.03
Titanium mg/kg	<24.6
Vanadium mg/kg	<24.6
Zinc mg/kg	164

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502120 BIG CREEK @ JENNINGS AVE.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-005-000	0.23	37.1	04110002-06-03	41.44670	-81.68830

	18-SEP-2017
% Solids percent	59.4
Aluminum mg/kg	5110
Ammonia mg/kg	24
Arsenic mg/kg	10.8
Barium mg/kg	<124
Beryllium mg/kg	.426
Cadmium mg/kg	1.15
Calcium mg/kg	10800
Carbon, Total Organic (TOC) percent	1.27
Chromium mg/kg	24.2
Cobalt mg/kg	7.25
Copper mg/kg	40.9
Iron mg/kg	18200
Lead mg/kg	57.9
Magnesium mg/kg	4070
Manganese mg/kg	416
Nickel mg/kg	47.3
pH su	7.31
Phosphorus mg/kg	694
Potassium mg/kg	<1240
Selenium mg/kg	<1.17
Sodium mg/kg	<3100
Strontium mg/kg	20.8
Titanium mg/kg	<31
Vanadium mg/kg	<31
Zinc mg/kg	139

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	7.10	786.0	04110002-06-05	41.44736	-81.68473

	24-OCT-2017
% Solids percent	63.1
Aluminum mg/kg	2710
Ammonia mg/kg	67.8
Arsenic mg/kg	7.77
Barium mg/kg	36.4
Beryllium mg/kg	.214
Cadmium mg/kg	.451
Calcium mg/kg	4120
Carbon, Total Organic (TOC) percent	3.09
Chromium mg/kg	7.77
Cobalt mg/kg	3.78
Copper mg/kg	11.1
Iron mg/kg	12400
Lead mg/kg	24.2
Magnesium mg/kg	1760
Manganese mg/kg	532
Nickel mg/kg	9
pH su	7.36
Phosphorus mg/kg	460[a]
Potassium mg/kg	<1140
Selenium mg/kg	<1.11
Sodium mg/kg	<2860
Strontium mg/kg	<17.2
Titanium mg/kg	<28.6
Vanadium mg/kg	<28.6
Zinc mg/kg	70.8

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502150 CUYAHOGA R. AT AKRON @ CUYAHOGA ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	42.60	340.0	04110002-03-05	41.11690	-81.52500

	24-OCT-2017
% Solids percent	51.1
Aluminum mg/kg	7980
Ammonia mg/kg	55.8
Arsenic mg/kg	17.4
Barium mg/kg	56.7
Beryllium mg/kg	.409
Cadmium mg/kg	.537
Calcium mg/kg	12500
Carbon, Total Organic (TOC) percent	2.06
Chromium mg/kg	13.1
Cobalt mg/kg	9.11
Copper mg/kg	22.2
Iron mg/kg	24100
Lead mg/kg	22.4
Magnesium mg/kg	4720
Manganese mg/kg	729
Nickel mg/kg	22.2
pH su	7.38
Phosphorus mg/kg	850
Potassium mg/kg	<1400
Selenium mg/kg	<1.55
Sodium mg/kg	<3500
Strontium mg/kg	26.1
Titanium mg/kg	<35
Vanadium mg/kg	<35
Zinc mg/kg	123

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502170 CUYAHOGA R. @ STATION RD. (IMPOUNDED)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	20.80	583.0	04110002-05-05	41.31932	-81.58763

	23-OCT-2018
% Solids percent	71.3
Aluminum mg/kg	2760
Ammonia mg/kg	30.2
Arsenic mg/kg	8.97
Barium mg/kg	42.2
Beryllium mg/kg	.232
Cadmium mg/kg	.451
Calcium mg/kg	13900
Carbon, Total Organic (TOC) percent	2.5
Chromium mg/kg	12.9
Cobalt mg/kg	3.84
Copper mg/kg	25.9
Iron mg/kg	14000
Lead mg/kg	48.7
Magnesium mg/kg	4060
Manganese mg/kg	281
Nickel mg/kg	11.4
pH su	7.26
Phosphorus mg/kg	386
Potassium mg/kg	<885
Selenium mg/kg	<.979
Sodium mg/kg	<2210
Strontium mg/kg	17.8
Substrate - clay, fine/medium percent	7.53
Substrate - claypan soil percent	1.25
Substrate - sand, coarse percent	71.1
Substrate - silt, coarse percent	3.76
Substrate - silt, fine percent	2.51
Substrate - silt, medium percent	11.3
Substrate - silt, very fine percent	2.51
Titanium mg/kg	29.4
Vanadium mg/kg	<22.1
Zinc mg/kg	140

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	0.30	61.7	04110002-03-04	41.11469	-81.52795

	18-SEP-2017
% Solids percent	61.5
Aluminum mg/kg	4060
Ammonia mg/kg	11.6
Arsenic mg/kg	9.61
Barium mg/kg	<113
Beryllium mg/kg	.306
Cadmium mg/kg	.482
Calcium mg/kg	8630
Carbon, Total Organic (TOC) percent	1.16
Chromium mg/kg	11.1
Cobalt mg/kg	5.24
Copper mg/kg	18.1
Iron mg/kg	17500
Lead mg/kg	29.3
Magnesium mg/kg	2870
Manganese mg/kg	320
Nickel mg/kg	13.7
pH su	7.25
Phosphorus mg/kg	570
Potassium mg/kg	<1130
Selenium mg/kg	<1.12
Sodium mg/kg	<2820
Strontium mg/kg	<16.9
Titanium mg/kg	<28.2
Vanadium mg/kg	<28.2
Zinc mg/kg	120

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01A25 CUYAHOGA R. UPST. NEORSD SOUTHERLY WWTP

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	10.95	743.0	04110002-06-04	41.41818	-81.64767

	23-OCT-2018
% Solids percent	43.8
Aluminum mg/kg	11000
Ammonia mg/kg	49
Arsenic mg/kg	17.3
Barium mg/kg	207
Beryllium mg/kg	.57
Cadmium mg/kg	.786
Calcium mg/kg	5320
Carbon, Total Organic (TOC) percent	5.05
Chromium mg/kg	9.34
Cobalt mg/kg	8.12
Copper mg/kg	13.5
Iron mg/kg	26300
Lead mg/kg	19.8
Magnesium mg/kg	2440
Manganese mg/kg	1120
Nickel mg/kg	13.5
pH su	7.4[–]
Phosphorus mg/kg	1050
Potassium mg/kg	<1410
Selenium mg/kg	<1.67
Sodium mg/kg	<3520
Strontium mg/kg	<21.1
Substrate - clay, fine/medium percent	28.4
Substrate - claypan soil percent	6.09
Substrate - sand, coarse percent	35.1
Substrate - silt, coarse percent	2.03
Substrate - silt, fine percent	4.06
Substrate - silt, medium percent	18.3
Substrate - silt, very fine percent	6.09
Titanium mg/kg	<35.2
Vanadium mg/kg	<35.2
Zinc mg/kg	114

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	14.60	42.3	04110002-02-02	41.08920	-81.29140

	03-AUG-2017
% Solids percent	64.2
Aluminum mg/kg	19800
Ammonia mg/kg	22.2
Arsenic mg/kg	7.24
Barium mg/kg	134
Beryllium mg/kg	.803
Cadmium mg/kg	.585
Calcium mg/kg	6610
Carbon, Total Organic (TOC) percent	2.46
Chromium mg/kg	19.7
Cobalt mg/kg	7.25
Copper mg/kg	11.2
Iron mg/kg	23600
Lead mg/kg	14
Magnesium mg/kg	3510
Manganese mg/kg	458
Nickel mg/kg	17.4
pH su	7.14
Phosphorus mg/kg	491
Potassium mg/kg	2010
Selenium mg/kg	<.967
Sodium mg/kg	<2420
Strontium mg/kg	25.6
Titanium mg/kg	45.8
Vanadium mg/kg	26.2
Zinc mg/kg	71.5

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01A53 CUYAHOGA R. AT BURTON @ ST. RT. 87

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	87.26	38.0	04110002-01-03	41.46472	-81.12727

	24-OCT-2017
% Solids percent	58.8
Aluminum mg/kg	4030
Ammonia mg/kg	36.6
Arsenic mg/kg	11.2
Barium mg/kg	43.3
Beryllium mg/kg	.259
Cadmium mg/kg	.33
Calcium mg/kg	7770
Carbon, Total Organic (TOC) percent	1.59
Chromium mg/kg	8.04
Cobalt mg/kg	8.02
Copper mg/kg	16.2
Iron mg/kg	16000
Lead mg/kg	17.5
Magnesium mg/kg	2880
Manganese mg/kg	567
Nickel mg/kg	13.3
pH su	7.67
Phosphorus mg/kg	732
Potassium mg/kg	<1250
Selenium mg/kg	<1.34
Sodium mg/kg	<3130
Strontium mg/kg	<18.8
Titanium mg/kg	<31.3
Vanadium mg/kg	<31.3
Zinc mg/kg	104

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01A58 CUYAHOGA R. @ BOSTON MILLS RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	26.50	499.0	04110002-04-05	41.26280	-81.56030

	03-AUG-2017
% Solids percent	41.5
Aluminum mg/kg	11100
Ammonia mg/kg	85.6
Arsenic mg/kg	7.39
Barium mg/kg	<157
Beryllium mg/kg	.543
Cadmium mg/kg	.79
Calcium mg/kg	5620
Carbon, Total Organic (TOC) percent	3.21
Chromium mg/kg	13.1
Cobalt mg/kg	7.9
Copper mg/kg	15.3
Iron mg/kg	22200
Lead mg/kg	15.9
Magnesium mg/kg	3840
Manganese mg/kg	829
Nickel mg/kg	16.5
pH su	6.84
Phosphorus mg/kg	959
Potassium mg/kg	<1570
Selenium mg/kg	<1.57
Sodium mg/kg	<3920
Strontium mg/kg	<23.5
Titanium mg/kg	<39.2
Vanadium mg/kg	<39.2
Zinc mg/kg	119

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01G02 CUYAHOGA R. @ CHARDON-WINDSOR RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	96.20	6.3	04110002-01-01	41.56250	-81.09240

	09-OCT-2018
% Solids percent	76.4
Aluminum mg/kg	1930
Ammonia mg/kg	9.32
Arsenic mg/kg	3.17
Barium mg/kg	15
Beryllium mg/kg	.153
Cadmium mg/kg	.109
Calcium mg/kg	<931
Carbon, Total Organic (TOC) percent	.683
Chromium mg/kg	2.71
Cobalt mg/kg	2.32
Copper mg/kg	3.59
Iron mg/kg	6690
Lead mg/kg	4.6
Magnesium mg/kg	614
Manganese mg/kg	171
Nickel mg/kg	3.99
pH su	7.3^{-}
Phosphorus mg/kg	162
Potassium mg/kg	<931
Selenium mg/kg	<.931
Sodium mg/kg	<2330
Strontium mg/kg	<14
Substrate - clay, fine/medium percent	5.01
Substrate - claypan soil percent	1.25
Substrate - sand, coarse percent	86.2
Substrate - silt, coarse percent	3.76
Substrate - silt, fine percent	1.25
Substrate - silt, medium percent	2.51
Substrate - silt, very fine percent	0
Titanium mg/kg	<23.3
Vanadium mg/kg	<23.3
Zinc mg/kg	14.5

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01G04 TARE CREEK @ BURTON-WINDSOR RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-038-000	3.10	4.5	04110002-01-03	41.50130	-81.07010

	09-OCT-2018	11-OCT-2018
% Solids percent	78.4	74
Aluminum mg/kg	2890	
Ammonia mg/kg	<4.47	
Arsenic mg/kg	9.02	
Barium mg/kg	14.7	
Beryllium mg/kg	.163	
Cadmium mg/kg	.204	
Calcium mg/kg	2990	
Carbon, Total Organic (TOC) percent	.512	
Chromium mg/kg	4.79	
Cobalt mg/kg	3.69	
Copper mg/kg	10.6	
Iron mg/kg	12000	
Lead mg/kg	5.84	
Magnesium mg/kg	1430	
Manganese mg/kg	277	
Nickel mg/kg	9.57	
pH su	8.19⁻	
Phosphorus mg/kg	207	
Potassium mg/kg	<823	
Selenium mg/kg	<.823	
Sodium mg/kg	<2060	
Strontium mg/kg	<12.4	
Substrate - clay, fine/medium percent	6.32	
Substrate - claypan soil percent	1.26	
Substrate - sand, coarse percent	82.3	
Substrate - silt, coarse percent	2.53	
Substrate - silt, fine percent	2.53	
Substrate - silt, medium percent	3.79	
Substrate - silt, very fine percent	1.26	
Titanium mg/kg	<20.6	
Vanadium mg/kg	<20.6	
Zinc mg/kg	50.8	

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-023-000	0.60	2.9	04110002-04-05	41.15940	-81.56490

	13-AUG-2018
% Solids percent	68.1
Aluminum mg/kg	6220
Ammonia mg/kg	21
Arsenic mg/kg	15.7
Barium mg/kg	<108
Beryllium mg/kg	.477
Cadmium mg/kg	.657
Calcium mg/kg	5590
Carbon, Total Organic (TOC) percent	1.69
Chromium mg/kg	10.9
Cobalt mg/kg	8.3
Copper mg/kg	18
Iron mg/kg	24400
Lead mg/kg	15.6
Magnesium mg/kg	2890
Manganese mg/kg	394
Nickel mg/kg	21.1
pH su	7.96
Phosphorus mg/kg	487
Potassium mg/kg	<1080
Selenium mg/kg	<.906
Sodium mg/kg	<2700
Strontium mg/kg	19.8
Substrate - clay, fine/medium percent	12.2
Substrate - claypan soil percent	2.03
Substrate - sand, coarse percent	63.5
Substrate - silt, coarse percent	4.06
Substrate - silt, fine percent	4.06
Substrate - silt, medium percent	8.11
Substrate - silt, very fine percent	6.08
Titanium mg/kg	<27
Vanadium mg/kg	<27
Zinc mg/kg	84.2

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01G38 SAGAMORE CREEK @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-011	0.20	6.2	04110002-05-05	41.35140	-81.59230

	13-AUG-2018
% Solids percent	74.1
Aluminum mg/kg	7770
Ammonia mg/kg	19.3
Arsenic mg/kg	22.9
Barium mg/kg	<91.2
Beryllium mg/kg	.687
Cadmium mg/kg	.662
Calcium mg/kg	5060
Carbon, Total Organic (TOC) percent	.828
Chromium mg/kg	17.9
Cobalt mg/kg	12.7
Copper mg/kg	42
Iron mg/kg	41600
Lead mg/kg	65.6
Magnesium mg/kg	2940
Manganese mg/kg	456
Nickel mg/kg	33.1
pH su	7.84[–]
Phosphorus mg/kg	518
Potassium mg/kg	1310
Selenium mg/kg	<1.04
Sodium mg/kg	<2280
Strontium mg/kg	16.9
Substrate - clay, fine/medium percent	10.2
Substrate - claypan soil percent	4.06
Substrate - sand, coarse percent	65.5
Substrate - silt, coarse percent	2.03
Substrate - silt, fine percent	4.06
Substrate - silt, medium percent	8.12
Substrate - silt, very fine percent	6.09
Titanium mg/kg	<22.8
Vanadium mg/kg	<22.8
Zinc mg/kg	163

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01G43 WEST CREEK AT PARMA @ BROADVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	3.70	4.8	04110002-06-04	41.41120	-81.69280

	13-AUG-2018
% Solids percent	75.1
Aluminum mg/kg	4710
Ammonia mg/kg	9.51
Arsenic mg/kg	5.8
Barium mg/kg	<93
Beryllium mg/kg	.492
Cadmium mg/kg	.41
Calcium mg/kg	24600
Carbon, Total Organic (TOC) percent	1.29
Chromium mg/kg	11.9
Cobalt mg/kg	5.93
Copper mg/kg	47.5
Iron mg/kg	16300
Lead mg/kg	14.7
Magnesium mg/kg	6220
Manganese mg/kg	268
Nickel mg/kg	16.9
pH su	8.08
Phosphorus mg/kg	376
Potassium mg/kg	<930
Selenium mg/kg	<1.04
Sodium mg/kg	<2320
Strontium mg/kg	30.4
Substrate - clay, fine/medium percent	10.1
Substrate - claypan soil percent	2.01
Substrate - sand, coarse percent	65.8
Substrate - silt, coarse percent	4.03
Substrate - silt, fine percent	4.03
Substrate - silt, medium percent	10.1
Substrate - silt, very fine percent	4.03
Titanium mg/kg	28.3
Vanadium mg/kg	<23.2
Zinc mg/kg	136

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P09 MILL CREEK @ BROADWAY RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-006-000	4.20	12.5	04110002-06-01	41.43360	-81.60580

	13-AUG-2018
% Solids percent	75
Aluminum mg/kg	6020
Ammonia mg/kg	<4.68
Arsenic mg/kg	18.2
Barium mg/kg	<87
Beryllium mg/kg	.613
Cadmium mg/kg	.813
Calcium mg/kg	8560
Carbon, Total Organic (TOC) percent	1.25
Chromium mg/kg	17
Cobalt mg/kg	9.36
Copper mg/kg	27.8
Iron mg/kg	28300
Lead mg/kg	35.4
Magnesium mg/kg	3340
Manganese mg/kg	282
Nickel mg/kg	24
pH su	8.1[—]
Phosphorus mg/kg	403
Potassium mg/kg	902
Selenium mg/kg	<.986
Sodium mg/kg	<2170
Strontium mg/kg	18.9
Substrate - clay, fine/medium percent	12.1
Substrate - claypan soil percent	2.02
Substrate - sand, coarse percent	61.7
Substrate - silt, coarse percent	4.04
Substrate - silt, fine percent	8.07
Substrate - silt, medium percent	8.07
Substrate - silt, very fine percent	4.04
Titanium mg/kg	<21.7
Vanadium mg/kg	<21.7
Zinc mg/kg	150

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGER RD.)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-004	0.19	13.2	04110002-06-04	41.41470	-81.64780

	13-AUG-2018
% Solids percent	61.5
Aluminum mg/kg	5870
Ammonia mg/kg	11.7
Arsenic mg/kg	12
Barium mg/kg	<117
Beryllium mg/kg	.411
Cadmium mg/kg	.399
Calcium mg/kg	12800
Carbon, Total Organic (TOC) percent	1.27
Chromium mg/kg	10.2
Cobalt mg/kg	7.92
Copper mg/kg	17
Iron mg/kg	23100
Lead mg/kg	16
Magnesium mg/kg	3850
Manganese mg/kg	364
Nickel mg/kg	17.8
pH su	7.74[—]
Phosphorus mg/kg	400
Potassium mg/kg	<1170
Selenium mg/kg	<1.11
Sodium mg/kg	<2930
Strontium mg/kg	24.7
Substrate - clay, fine/medium percent	12.1
Substrate - claypan soil percent	4.04
Substrate - sand, coarse percent	53.5
Substrate - silt, coarse percent	4.04
Substrate - silt, fine percent	8.08
Substrate - silt, medium percent	14.1
Substrate - silt, very fine percent	4.04
Titanium mg/kg	<29.3
Vanadium mg/kg	<29.3
Zinc mg/kg	80

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P13 CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-009-000	0.36	17.6	04110002-05-03	41.31712	-81.59210

	18-OCT-2018
% Solids percent	74.3
Aluminum mg/kg	3900
Ammonia mg/kg	9.57
Arsenic mg/kg	11.1
Barium mg/kg	30.5
Beryllium mg/kg	.268
Cadmium mg/kg	.329
Calcium mg/kg	13500
Carbon, Total Organic (TOC) percent	.882
Chromium mg/kg	6.33
Cobalt mg/kg	5.88
Copper mg/kg	12.4
Iron mg/kg	22100
Lead mg/kg	9.26
Magnesium mg/kg	5340
Manganese mg/kg	346
Nickel mg/kg	13.5
pH su	7.79^{-}
Phosphorus mg/kg	369
Potassium mg/kg	<1040
Selenium mg/kg	<1.04
Sodium mg/kg	<2590
Strontium mg/kg	16.6
Substrate - clay, fine/medium percent	9.98
Substrate - claypan soil percent	2
Substrate - sand, coarse percent	56.1
Substrate - silt, coarse percent	5.99
Substrate - silt, fine percent	7.98
Substrate - silt, medium percent	14
Substrate - silt, very fine percent	3.99
Titanium mg/kg	<25.9
Vanadium mg/kg	<25.9
Zinc mg/kg	52.6

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-020-000	0.27	20.3	04110002-04-03	41.20152	-81.57335

	18-OCT-2018
% Solids percent	64.7
Aluminum mg/kg	5340
Ammonia mg/kg	11
Arsenic mg/kg	14.5
Barium mg/kg	42.2
Beryllium mg/kg	.343
Cadmium mg/kg	.468
Calcium mg/kg	12200
Carbon, Total Organic (TOC) percent	1.18
Chromium mg/kg	8.24
Cobalt mg/kg	7.02
Copper mg/kg	18.4
Iron mg/kg	21800
Lead mg/kg	13.1
Magnesium mg/kg	3980
Manganese mg/kg	398
Nickel mg/kg	17.5
pH su	7.64^{-}
Phosphorus mg/kg	454
Potassium mg/kg	<988
Selenium mg/kg	<.988
Sodium mg/kg	<2470
Strontium mg/kg	18.7
Substrate - clay, fine/medium percent	14.2
Substrate - claypan soil percent	2.03
Substrate - sand, coarse percent	45.2
Substrate - silt, coarse percent	6.09
Substrate - silt, fine percent	8.11
Substrate - silt, medium percent	18.3
Substrate - silt, very fine percent	6.09
Titanium mg/kg	<24.7
Vanadium mg/kg	<24.7
Zinc mg/kg	78.8

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-021-000	0.14	31.0	04110002-04-02	41.16353	-81.57627

	18-OCT-2018
% Solids percent	72.8
Aluminum mg/kg	2850
Ammonia mg/kg	9.8
Arsenic mg/kg	9.04
Barium mg/kg	21.8
Beryllium mg/kg	.182
Cadmium mg/kg	.215
Calcium mg/kg	4670
Carbon, Total Organic (TOC) percent	.754
Chromium mg/kg	5.24
Cobalt mg/kg	3.83
Copper mg/kg	12.3
Iron mg/kg	12500
Lead mg/kg	8.73
Magnesium mg/kg	2310
Manganese mg/kg	157
Nickel mg/kg	9.5
pH su	7.45[—]
Phosphorus mg/kg	295
Potassium mg/kg	<937
Selenium mg/kg	<.937
Sodium mg/kg	<2340
Strontium mg/kg	<14.1
Substrate - clay, fine/medium percent	5.52
Substrate - claypan soil percent	1.84[a]
Substrate - sand, coarse percent	70.5
Substrate - silt, coarse percent	5.52
Substrate - silt, fine percent	5.52
Substrate - silt, medium percent	11
Substrate - silt, very fine percent	0
Titanium mg/kg	<23.4
Vanadium mg/kg	<23.4
Zinc mg/kg	44.3

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-024-000	0.18	29.3	04110002-04-01	41.13889	-81.54826

	22-OCT-2018
% Solids percent	54.6
Aluminum mg/kg	7900
Ammonia mg/kg	26.2
Arsenic mg/kg	10.9
Barium mg/kg	139
Beryllium mg/kg	.6
Cadmium mg/kg	1.04
Calcium mg/kg	7520
Carbon, Total Organic (TOC) percent	6.59
Chromium mg/kg	203
Cobalt mg/kg	6.37
Copper mg/kg	49
Iron mg/kg	18300
Lead mg/kg	86.6
Magnesium mg/kg	3140
Manganese mg/kg	571
Nickel mg/kg	19.3
pH su	7.44
Phosphorus mg/kg	1630
Potassium mg/kg	<1430
Selenium mg/kg	<1.43
Sodium mg/kg	<3570
Strontium mg/kg	26.4
Substrate - clay, fine/medium percent	24.3
Substrate - claypan soil percent	4.06
Substrate - sand, coarse percent	45.2
Substrate - silt, coarse percent	2.03
Substrate - silt, fine percent	12.2
Substrate - silt, medium percent	6.08
Substrate - silt, very fine percent	6.08
Titanium mg/kg	<35.7
Vanadium mg/kg	<35.7
Zinc mg/kg	266

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-002	0.39	5.5	04110002-02-02	41.15166	-81.27950

	23-OCT-2018
% Solids percent	62.4
Aluminum mg/kg	3480
Ammonia mg/kg	11.4
Arsenic mg/kg	13.6
Barium mg/kg	46
Beryllium mg/kg	.224
Cadmium mg/kg	.266
Calcium mg/kg	5060
Carbon, Total Organic (TOC) percent	3.03
Chromium mg/kg	5.88
Cobalt mg/kg	4.09
Copper mg/kg	8.96
Iron mg/kg	12500
Lead mg/kg	9.09
Magnesium mg/kg	1850
Manganese mg/kg	274
Nickel mg/kg	8.44
pH su	7.36
Phosphorus mg/kg	476
Potassium mg/kg	<994
Selenium mg/kg	<1.26
Sodium mg/kg	<2490
Strontium mg/kg	<14.9
Substrate - clay, fine/medium percent	18.1
Substrate - claypan soil percent	4.02
Substrate - sand, coarse percent	57.8
Substrate - silt, coarse percent	0
Substrate - silt, fine percent	4.02
Substrate - silt, medium percent	14.1
Substrate - silt, very fine percent	2.01
Titanium mg/kg	<24.9
Vanadium mg/kg	<24.9
Zinc mg/kg	47.7

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-027-000	0.15	13.1	04110002-03-04	41.14060	-81.37280

	03-AUG-2017
% Solids percent	70.3
Aluminum mg/kg	7750
Ammonia mg/kg	10.2
Arsenic mg/kg	5.67
Barium mg/kg	<98.6
Beryllium mg/kg	.424
Cadmium mg/kg	.437
Calcium mg/kg	5210
Carbon, Total Organic (TOC) percent	1.75
Chromium mg/kg	9.03
Cobalt mg/kg	5.45
Copper mg/kg	8.61
Iron mg/kg	15000
Lead mg/kg	18.6
Magnesium mg/kg	3360
Manganese mg/kg	360
Nickel mg/kg	11.6
pH su	7.23
Phosphorus mg/kg	445
Potassium mg/kg	<986
Selenium mg/kg	<.986
Sodium mg/kg	<2470
Strontium mg/kg	<14.8
Titanium mg/kg	29
Vanadium mg/kg	<24.7
Zinc mg/kg	76.6

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01P51 CUYAHOGA R. NEAR MIDDLEFIELD @ ST. RT. 608

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	90.86	18.6	04110002-01-03	41.50183	-81.09629

	22-OCT-2018
% Solids percent	45.9
Aluminum mg/kg	7170
Ammonia mg/kg	46.6
Arsenic mg/kg	13.7
Barium mg/kg	126
Beryllium mg/kg	.525
Cadmium mg/kg	.629
Calcium mg/kg	6650
Carbon, Total Organic (TOC) percent	3
Chromium mg/kg	12.6
Cobalt mg/kg	7.79
Copper mg/kg	16.9
Iron mg/kg	22300
Lead mg/kg	27.7
Magnesium mg/kg	3050
Manganese mg/kg	846
Nickel mg/kg	15.2
pH su	7.3^{-}
Phosphorus mg/kg	698
Potassium mg/kg	<1350
Selenium mg/kg	<1.35
Sodium mg/kg	<3380
Strontium mg/kg	<20.3
Substrate - clay, fine/medium percent	29
Substrate - claypan soil percent	4.46
Substrate - sand, coarse percent	42
Substrate - silt, coarse percent	0
Substrate - silt, fine percent	13.4
Substrate - silt, medium percent	4.46
Substrate - silt, very fine percent	6.69
Titanium mg/kg	<33.8
Vanadium mg/kg	<33.8
Zinc mg/kg	131

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	7.00	56.2	04110002-02-02	41.13940	-81.27080

	22-AUG-2017
% Solids percent	48.2
Aluminum mg/kg	5380
Ammonia mg/kg	74.4
Arsenic mg/kg	10.3
Barium mg/kg	<158
Beryllium mg/kg	.333
Cadmium mg/kg	.606
Calcium mg/kg	10600
Carbon, Total Organic (TOC) percent	1.28
Chromium mg/kg	12.3
Cobalt mg/kg	6.37
Copper mg/kg	23.2
Iron mg/kg	18800
Lead mg/kg	23
Magnesium mg/kg	3820
Manganese mg/kg	549
Nickel mg/kg	16.7
pH su	7.18
Phosphorus mg/kg	808
Potassium mg/kg	<1580
Selenium mg/kg	<1.58
Sodium mg/kg	<3940
Strontium mg/kg	<23.7
Titanium mg/kg	<39.4
Vanadium mg/kg	<39.4
Zinc mg/kg	136

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S09 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	9.70	744.0	04110002-06-04	41.42690	-81.66580

	18-SEP-2017
% Solids percent	45.3
Aluminum mg/kg	7230
Ammonia mg/kg	47.3
Arsenic mg/kg	12.6
Barium mg/kg	<140
Beryllium mg/kg	.464
Cadmium mg/kg	.704
Calcium mg/kg	15400
Carbon, Total Organic (TOC) percent	1.64
Chromium mg/kg	32.7
Cobalt mg/kg	7.51
Copper mg/kg	32.1
Iron mg/kg	27500
Lead mg/kg	62.4
Magnesium mg/kg	4950
Manganese mg/kg	935
Nickel mg/kg	21.6
pH su	7.54
Phosphorus mg/kg	840
Potassium mg/kg	<1400
Selenium mg/kg	<1.46
Sodium mg/kg	<3500
Strontium mg/kg	31.7
Titanium mg/kg	<35
Vanadium mg/kg	<35
Zinc mg/kg	169

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 21

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	11.33	730.0	04110002-06-04	41.41780	-81.64170

	24-OCT-2017
% Solids percent	53.2
Aluminum mg/kg	7160
Ammonia mg/kg	53.9
Arsenic mg/kg	12.6
Barium mg/kg	54
Beryllium mg/kg	.363
Cadmium mg/kg	.516
Calcium mg/kg	10100
Carbon, Total Organic (TOC) percent	1.83
Chromium mg/kg	11.9
Cobalt mg/kg	7.15
Copper mg/kg	21
Iron mg/kg	22100
Lead mg/kg	23.5
Magnesium mg/kg	3900
Manganese mg/kg	722
Nickel mg/kg	17.6
pH su	7.65
Phosphorus mg/kg	842
Potassium mg/kg	<1280
Selenium mg/kg	<1.3
Sodium mg/kg	<3190
Strontium mg/kg	22.7
Titanium mg/kg	<31.9
Vanadium mg/kg	<31.9
Zinc mg/kg	129

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S11 CUYAHOGA R. @ HILLSIDE RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	15.61	698.0	04110002-06-02	41.37326	-81.61479

	24-OCT-2017
% Solids percent	59.4
Aluminum mg/kg	5460
Ammonia mg/kg	36.1
Arsenic mg/kg	10.3
Barium mg/kg	48.6
Beryllium mg/kg	.296
Cadmium mg/kg	.424
Calcium mg/kg	8990
Carbon, Total Organic (TOC) percent	1.52
Chromium mg/kg	9.57
Cobalt mg/kg	5.65
Copper mg/kg	15.8
Iron mg/kg	18300
Lead mg/kg	22
Magnesium mg/kg	3310
Manganese mg/kg	619
Nickel mg/kg	13.5
pH su	7.69
Phosphorus mg/kg	652
Potassium mg/kg	<1150
Selenium mg/kg	<1.19
Sodium mg/kg	<2870
Strontium mg/kg	18.7
Titanium mg/kg	<28.7
Vanadium mg/kg	<28.7
Zinc mg/kg	123

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S12 CUYAHOGA R. @ FITZWATER RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	17.30	597.0	04110002-05-05	41.35670	-81.59810

	24-OCT-2017
% Solids percent	54.2
Aluminum mg/kg	6220
Ammonia mg/kg	52.7
Arsenic mg/kg	14.1
Barium mg/kg	62.8
Beryllium mg/kg	.337
Cadmium mg/kg	.543
Calcium mg/kg	11300
Carbon, Total Organic (TOC) percent	2.04
Chromium mg/kg	11.4
Cobalt mg/kg	7.68
Copper mg/kg	22.3
Iron mg/kg	24200
Lead mg/kg	37.2
Magnesium mg/kg	4200
Manganese mg/kg	826
Nickel mg/kg	18
pH su	7.41
Phosphorus mg/kg	886
Potassium mg/kg	<1470
Selenium mg/kg	<1.36
Sodium mg/kg	<3680
Strontium mg/kg	23.5
Titanium mg/kg	<36.8
Vanadium mg/kg	<36.8
Zinc mg/kg	133

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S13 CUYAHOGA R. AT JAITE @ HIGHLAND RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	24.10	555.0	04110002-05-05	41.28876	-81.56504

	23-OCT-2017
% Solids percent	52.9
Aluminum mg/kg	6660
Ammonia mg/kg	13.6
Arsenic mg/kg	10.4
Barium mg/kg	72
Beryllium mg/kg	.336
Cadmium mg/kg	4.07
Calcium mg/kg	5990
Carbon, Total Organic (TOC) percent	8.03
Chromium mg/kg	47.3
Cobalt mg/kg	3.79
Copper mg/kg	30.7
Iron mg/kg	14700
Lead mg/kg	74
Magnesium mg/kg	1550
Manganese mg/kg	655
Nickel mg/kg	9.35
pH su	7.1
Phosphorus mg/kg	820[a]
Potassium mg/kg	<1390
Selenium mg/kg	<1.27
Sodium mg/kg	<3480
Strontium mg/kg	25.6
Titanium mg/kg	60.6
Vanadium mg/kg	<34.8
Zinc mg/kg	113

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S17 CUYAHOGA R. UPST. KENT WWTP @ FULLER PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	54.32	293.0	04110002-03-05	41.14940	-81.36750

	03-AUG-2017
% Solids percent	50.6
Aluminum mg/kg	5240
Ammonia mg/kg	28.3
Arsenic mg/kg	8.49
Barium mg/kg	<125
Beryllium mg/kg	.291
Cadmium mg/kg	.351
Calcium mg/kg	2110
Carbon, Total Organic (TOC) percent	3.04
Chromium mg/kg	6.79
Cobalt mg/kg	4.64
Copper mg/kg	8.53
Iron mg/kg	13800
Lead mg/kg	12.4
Magnesium mg/kg	1450
Manganese mg/kg	885
Nickel mg/kg	9.01
pH su	7.2
Phosphorus mg/kg	695
Potassium mg/kg	<1250
Selenium mg/kg	<1.25
Sodium mg/kg	<3130
Strontium mg/kg	<18.8
Titanium mg/kg	<31.3
Vanadium mg/kg	<31.3
Zinc mg/kg	69.8

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	64.30	178.0	04110002-02-03	41.24500	-81.28600

	09-OCT-2018	11-OCT-2018
% Solids percent	68.9	58.2
Aluminum mg/kg	3380	
Ammonia mg/kg	<5.08	
Arsenic mg/kg	8.61	
Barium mg/kg	20.2	
Beryllium mg/kg	.219	
Cadmium mg/kg	.6	
Calcium mg/kg	9930	
Carbon, Total Organic (TOC) percent	1.22	
Chromium mg/kg	6.65	
Cobalt mg/kg	4.47	
Copper mg/kg	12.1	
Iron mg/kg	13400	
Lead mg/kg	10.4	
Magnesium mg/kg	3440	
Manganese mg/kg	233	
Nickel mg/kg	11.8	
pH su	7.56	
Phosphorus mg/kg	369	
Potassium mg/kg	<1020	
Selenium mg/kg	<1.02	
Sodium mg/kg	<2540	
Strontium mg/kg	16.5	
Substrate - clay, fine/medium percent	8.78	
Substrate - claypan soil percent	1.25	
Substrate - sand, coarse percent	73.7	
Substrate - silt, coarse percent	3.76	
Substrate - silt, fine percent	2.51	
Substrate - silt, medium percent	7.53	
Substrate - silt, very fine percent	2.51	
Titanium mg/kg	<25.4	
Vanadium mg/kg	<25.4	
Zinc mg/kg	52.9	

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	0.10	96.0	04110002-05-04	41.36489	-81.60862

	09-OCT-2018
% Solids percent	71.5
Aluminum mg/kg	3470
Ammonia mg/kg	19.9
Arsenic mg/kg	5.67
Barium mg/kg	30.4
Beryllium mg/kg	.241
Cadmium mg/kg	.232
Calcium mg/kg	3890
Carbon, Total Organic (TOC) percent	1.33
Chromium mg/kg	5.81
Cobalt mg/kg	4.13
Copper mg/kg	8.06
Iron mg/kg	11200
Lead mg/kg	7.4
Magnesium mg/kg	1930
Manganese mg/kg	342
Nickel mg/kg	8.5
pH su	7.57
Phosphorus mg/kg	403
Potassium mg/kg	<1040
Selenium mg/kg	<1.04
Sodium mg/kg	<2590
Strontium mg/kg	<15.5
Substrate - clay, fine/medium percent	8.86
Substrate - claypan soil percent	1.27
Substrate - sand, coarse percent	74.7
Substrate - silt, coarse percent	2.53
Substrate - silt, fine percent	2.53
Substrate - silt, medium percent	7.6
Substrate - silt, very fine percent	2.53
Titanium mg/kg	<25.9
Vanadium mg/kg	<25.9
Zinc mg/kg	49.8

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-007-000	13.80	53.5	04110002-05-04	41.33702	-81.45662

	13-AUG-2018
% Solids percent	72.1
Aluminum mg/kg	4560
Ammonia mg/kg	9.85
Arsenic mg/kg	11.8
Barium mg/kg	<96.2
Beryllium mg/kg	.338
Cadmium mg/kg	.27
Calcium mg/kg	3330
Carbon, Total Organic (TOC) percent	.953
Chromium mg/kg	7.45
Cobalt mg/kg	7.26
Copper mg/kg	12.9
Iron mg/kg	17400
Lead mg/kg	10.6
Magnesium mg/kg	2180
Manganese mg/kg	309
Nickel mg/kg	15.5
pH su	7.81^{-}
Phosphorus mg/kg	372
Potassium mg/kg	<962
Selenium mg/kg	<.965
Sodium mg/kg	<2410
Strontium mg/kg	<14.4
Substrate - clay, fine/medium percent	8.05
Substrate - claypan soil percent	2.01
Substrate - sand, coarse percent	61.8
Substrate - silt, coarse percent	6.04
Substrate - silt, fine percent	6.04
Substrate - silt, medium percent	12.1
Substrate - silt, very fine percent	4.03
Titanium mg/kg	<24.1
Vanadium mg/kg	<24.1
Zinc mg/kg	59.3

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	0.26	27.2	04110002-04-04	41.28590	-81.56150

	23-OCT-2018
% Solids percent	61.7
Aluminum mg/kg	3810
Ammonia mg/kg	34.6
Arsenic mg/kg	9.41
Barium mg/kg	58.8
Beryllium mg/kg	.344
Cadmium mg/kg	.595
Calcium mg/kg	18300
Carbon, Total Organic (TOC) percent	6.7
Chromium mg/kg	21.9
Cobalt mg/kg	4
Copper mg/kg	23.7
Iron mg/kg	15800
Lead mg/kg	44
Magnesium mg/kg	5810
Manganese mg/kg	474
Nickel mg/kg	11.3
pH su	7.44^{-}
Phosphorus mg/kg	504
Potassium mg/kg	<1120
Selenium mg/kg	<1.1
Sodium mg/kg	<2800
Strontium mg/kg	24.2
Substrate - clay, fine/medium percent	14.2
Substrate - claypan soil percent	4.05
Substrate - sand, coarse percent	61.5
Substrate - silt, coarse percent	2.02
Substrate - silt, fine percent	4.05
Substrate - silt, medium percent	10.1
Substrate - silt, very fine percent	4.05
Titanium mg/kg	40
Vanadium mg/kg	<28
Zinc mg/kg	205

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-030-000	5.11	47.0	04110002-03-04	41.07329	-81.48453

	13-AUG-2018
% Solids percent	67.2
Aluminum mg/kg	4590
Ammonia mg/kg	21.3
Arsenic mg/kg	10
Barium mg/kg	<114
Beryllium mg/kg	.367
Cadmium mg/kg	.363
Calcium mg/kg	8760
Carbon, Total Organic (TOC) percent	1.76
Chromium mg/kg	11.9
Cobalt mg/kg	5.42
Copper mg/kg	17.5
Iron mg/kg	15400
Lead mg/kg	13.7
Magnesium mg/kg	3380
Manganese mg/kg	406
Nickel mg/kg	13
pH su	7.75^{-}
Phosphorus mg/kg	495
Potassium mg/kg	<1140
Selenium mg/kg	<.996
Sodium mg/kg	<2850
Strontium mg/kg	20
Substrate - clay, fine/medium percent	14.2
Substrate - claypan soil percent	4.05
Substrate - sand, coarse percent	59.5
Substrate - silt, coarse percent	4.05
Substrate - silt, fine percent	4.05
Substrate - silt, medium percent	12.1
Substrate - silt, very fine percent	2.02
Titanium mg/kg	<28.5
Vanadium mg/kg	<28.5
Zinc mg/kg	68.6

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-010-000	7.02	8.7	04110002-04-04	41.26020	-81.48910

	03-AUG-2017
% Solids percent	56.3
Aluminum mg/kg	6120
Ammonia mg/kg	25.3
Arsenic mg/kg	8.29
Barium mg/kg	<121
Beryllium mg/kg	.431
Cadmium mg/kg	.49
Calcium mg/kg	2010
Carbon, Total Organic (TOC) percent	2.98
Chromium mg/kg	8.04
Cobalt mg/kg	5.56
Copper mg/kg	9.25
Iron mg/kg	15200
Lead mg/kg	16.9
Magnesium mg/kg	1440
Manganese mg/kg	836
Nickel mg/kg	10.7
pH su	7.21
Phosphorus mg/kg	489
Potassium mg/kg	<1210
Selenium mg/kg	<1.21
Sodium mg/kg	<3030
Strontium mg/kg	<18.2
Titanium mg/kg	<30.3
Vanadium mg/kg	<30.3
Zinc mg/kg	78

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W22 CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	69.96	159.0	04110002-02-03	41.28260	-81.22000

	13-AUG-2018
% Solids percent	70.6
Aluminum mg/kg	2660
Ammonia mg/kg	20.1
Arsenic mg/kg	7.69
Barium mg/kg	<104
Beryllium mg/kg	.235
Cadmium mg/kg	.265
Calcium mg/kg	5450
Carbon, Total Organic (TOC) percent	2.54
Chromium mg/kg	6.85
Cobalt mg/kg	3.39
Copper mg/kg	10.4
Iron mg/kg	12600
Lead mg/kg	12.9
Magnesium mg/kg	2140
Manganese mg/kg	347
Nickel mg/kg	8.84
pH su	7.54^{-}
Phosphorus mg/kg	515
Potassium mg/kg	<1040
Selenium mg/kg	<1
Sodium mg/kg	<2600
Strontium mg/kg	<15.6
Substrate - clay, fine/medium percent	10.2
Substrate - claypan soil percent	0
Substrate - sand, coarse percent	53.1
Substrate - silt, coarse percent	24.5
Substrate - silt, fine percent	2.04
Substrate - silt, medium percent	6.12
Substrate - silt, very fine percent	4.08
Titanium mg/kg	<26
Vanadium mg/kg	<26
Zinc mg/kg	66

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W37 FISH CREEK AT KENT @ N. RIVER RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-026-000	0.38	11.4	04110002-03-05	41.14580	-81.39720

	22-AUG-2017
% Solids percent	50.6
Aluminum mg/kg	8160
Ammonia mg/kg	184
Arsenic mg/kg	15.3
Barium mg/kg	<145
Beryllium mg/kg	.543
Cadmium mg/kg	1.41
Calcium mg/kg	12600
Carbon, Total Organic (TOC) percent	1.78
Chromium mg/kg	26
Cobalt mg/kg	9.44
Copper mg/kg	41.2
Iron mg/kg	28000
Lead mg/kg	34.8
Magnesium mg/kg	5540
Manganese mg/kg	629
Nickel mg/kg	29.9
pH su	7.09
Phosphorus mg/kg	890
Potassium mg/kg	<1450
Selenium mg/kg	<1.45
Sodium mg/kg	<3620
Strontium mg/kg	25.4
Titanium mg/kg	<36.2
Vanadium mg/kg	<36.2
Zinc mg/kg	172

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W43 CUYAHOGA R. @ LTV FOOTBRIDGE

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	5.90	788.0	04110002-06-05	41.46330	-81.68060

	23-OCT-2017
% Solids percent	39.5
Ammonia mg/kg	36.2
Arsenic mg/kg	19.3
Beryllium mg/kg	.537
Cadmium mg/kg	1.71
Carbon, Total Organic (TOC) percent	4.9
Chromium mg/kg	102
Cobalt mg/kg	7.86
Copper mg/kg	68.7
Lead mg/kg	29.6
Nickel mg/kg	18.7
pH su	6.76
Phosphorus mg/kg	1340[a]
Selenium mg/kg	<1.77
Zinc mg/kg	166

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W70 CUYAHOGA R. @ STANDING ROCK CEMETERY (FREE FLOWING)

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	55.80	292.0	04110002-03-05	41.16500	-81.35170

	22-OCT-2018
% Solids percent	31.3
Aluminum mg/kg	7380
Ammonia mg/kg	45.6
Arsenic mg/kg	21.8
Barium mg/kg	221
Beryllium mg/kg	.565
Cadmium mg/kg	.911
Calcium mg/kg	13000
Carbon, Total Organic (TOC) percent	9.25
Chromium mg/kg	9.51
Cobalt mg/kg	7.14
Copper mg/kg	20.7
Iron mg/kg	24500
Lead mg/kg	22.3
Magnesium mg/kg	2480
Manganese mg/kg	947
Nickel mg/kg	13.8
pH su	7.59[—]
Phosphorus mg/kg	1570
Potassium mg/kg	<2200
Selenium mg/kg	<2.29
Sodium mg/kg	<5490
Strontium mg/kg	<33
Substrate - clay, fine/medium percent	26.4
Substrate - claypan soil percent	8.79
Substrate - sand, coarse percent	25.3
Substrate - silt, coarse percent	4.39
Substrate - silt, fine percent	19.8
Substrate - silt, medium percent	8.79
Substrate - silt, very fine percent	6.59
Titanium mg/kg	<54.9
Vanadium mg/kg	<54.9
Zinc mg/kg	109

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W71 POTTER CREEK @ TRARES RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-005	1.47	3.2	04110002-02-01	41.04280	-81.29580

	09-OCT-2018
% Solids percent	67.1
Aluminum mg/kg	3020
Ammonia mg/kg	10.6
Arsenic mg/kg	1.98
Barium mg/kg	38.3
Beryllium mg/kg	.17
Cadmium mg/kg	.253
Calcium mg/kg	1380
Carbon, Total Organic (TOC) percent	1.49
Chromium mg/kg	3.9
Cobalt mg/kg	2.82
Copper mg/kg	4.85
Iron mg/kg	5920
Lead mg/kg	4.72
Magnesium mg/kg	864
Manganese mg/kg	125
Nickel mg/kg	6.16
pH su	7.45^{-}
Phosphorus mg/kg	158
Potassium mg/kg	<1190
Selenium mg/kg	<1.19
Sodium mg/kg	<2970
Strontium mg/kg	<17.8
Substrate - clay, fine/medium percent	3.79
Substrate - claypan soil percent	0
Substrate - sand, coarse percent	89.9
Substrate - silt, coarse percent	1.26
Substrate - silt, fine percent	1.26
Substrate - silt, medium percent	2.52
Substrate - silt, very fine percent	1.26
Titanium mg/kg	<29.7
Vanadium mg/kg	<29.7
Zinc mg/kg	28.7

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD.

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-036-000	0.87	35.4	04110002-01-02	41.45060	-81.15890

	03-AUG-2017
% Solids percent	70.9
Aluminum mg/kg	7320
Ammonia mg/kg	20.1
Arsenic mg/kg	4.75
Barium mg/kg	<103
Beryllium mg/kg	.386
Cadmium mg/kg	.371
Calcium mg/kg	12000
Carbon, Total Organic (TOC) percent	1.36
Chromium mg/kg	8.58
Cobalt mg/kg	4.56
Copper mg/kg	10.5
Iron mg/kg	13500
Lead mg/kg	16.4
Magnesium mg/kg	3160
Manganese mg/kg	272
Nickel mg/kg	10.9
pH su	7.39
Phosphorus mg/kg	418
Potassium mg/kg	<1030
Selenium mg/kg	<1.03
Sodium mg/kg	<2570
Strontium mg/kg	20
Titanium mg/kg	<25.7
Vanadium mg/kg	<25.7
Zinc mg/kg	60.1

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W77 CUYAHOGA R. @ RUSSELL PARK

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	83.80	82.0	04110002-01-06	41.42500	-81.15670

	22-OCT-2018
% Solids percent	60.8
Aluminum mg/kg	4060
Ammonia mg/kg	23.4
Arsenic mg/kg	8.47
Barium mg/kg	74
Beryllium mg/kg	.306
Cadmium mg/kg	.404
Calcium mg/kg	2960
Carbon, Total Organic (TOC) percent	4.78
Chromium mg/kg	24.4
Cobalt mg/kg	4.54
Copper mg/kg	13.2
Iron mg/kg	12600
Lead mg/kg	17.3
Magnesium mg/kg	1310
Manganese mg/kg	569
Nickel mg/kg	9.06
pH su	7.38^{-}
Phosphorus mg/kg	636
Potassium mg/kg	<1050
Selenium mg/kg	<1.02
Sodium mg/kg	<2640
Strontium mg/kg	<15.8
Substrate - clay, fine/medium percent	22.1
Substrate - claypan soil percent	2.01
Substrate - sand, coarse percent	51.8
Substrate - silt, coarse percent	4.02
Substrate - silt, fine percent	4.02
Substrate - silt, medium percent	12
Substrate - silt, very fine percent	4.02
Titanium mg/kg	<26.4
Vanadium mg/kg	<26.4
Zinc mg/kg	69.4

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F01W83 BREAKNECK CREEK NEAR MOUTH

Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-028-000	0.05	78.7	04110002-02-02	41.16949	-81.33769

	22-AUG-2017
% Solids percent	63.8
Aluminum mg/kg	2910
Ammonia mg/kg	56
Arsenic mg/kg	7.74
Barium mg/kg	<118
Beryllium mg/kg	.249
Cadmium mg/kg	.439
Calcium mg/kg	6210
Carbon, Total Organic (TOC) percent	.767
Chromium mg/kg	7.93
Cobalt mg/kg	4.27
Copper mg/kg	12.7
Iron mg/kg	12900
Lead mg/kg	15.6
Magnesium mg/kg	2160
Manganese mg/kg	271
Nickel mg/kg	10.6
pH su	7.19
Phosphorus mg/kg	503
Potassium mg/kg	<1180
Selenium mg/kg	<1.18
Sodium mg/kg	<2940
Strontium mg/kg	<17.7
Titanium mg/kg	<29.4
Vanadium mg/kg	<29.4
Zinc mg/kg	96.3

Appdendix Table 3. Sediment inorganic results for samples collected during the Cuyahoga basin survey, 2017 - 2018.

F99Q02		CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP			
Rivercode	River Mile	Drainage Area	Hydro Unit	Lat	Long
19-001-000	10.30	744.0	04110002-06-04	41.42122	-81.65907

¡ Deteced in Blank; º Exceeds Calibration; ¿ QC Criteria Not Met; ± Invalid Colony Count; ¥ CoAnalyeCorrelation; £ Matrix Interference; ªEstimatedValue; ¯Holding/Shipping Time Exceeded; ¤ PesticideGCDiff

Inorganic Sediment Chemistry Results

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
200037 CUYAHOGA R. AT CUYAHOGA FALLS, UPST. WATERWORKS PARI			
OTHER	**23-OCT-2017**		
PCB-1016	<38.3		ug/kg
PCB-1221	<38.3		ug/kg
PCB-1232	<38.3		ug/kg
PCB-1242	<38.3		ug/kg
PCB-1248	<38.3		ug/kg
PCB-1254	<38.3[i]		ug/kg
PCB-1254	<38.3		ug/kg
PCB-1260	<38.3		ug/kg
4,4'-DDD	<7.66		ug/kg
4,4-DDE	<7.66		ug/kg
4,4'-DDT	<7.66		ug/kg
Aldrin	<7.66		ug/kg
Dieldrin	<7.66		ug/kg
Endosulfan I	<7.66		ug/kg
Endosulfan II	<7.66		ug/kg
Endosulfan sulfate	<7.66		ug/kg
Endrin	<7.66		ug/kg
Endrin aldehyde	<7.66		ug/kg
Heptachlor	<7.66		ug/kg
Heptachlor epoxide	<7.66		ug/kg
Hexachlorobenzene	<7.66		ug/kg
Methoxychlor	<7.66		ug/kg
Mirex	<7.66		ug/kg
a-BHC	<7.66		ug/kg
b-BHC	<7.66		ug/kg
d-BHC	<7.66		ug/kg
y-BHC	<7.66		ug/kg
1,2,4,5-Tetrachlorobenzene	<.769		mg/kg
1,2,4-Trichlorobenzene	<.769		mg/kg
1,2-Dichlorobenzene	<.769		mg/kg
1,3-Dichlorobenzene	<.769		mg/kg
1,3-Dinitrobenzene	<.769		mg/kg
1,4-Dichlorobenzene	<.769		mg/kg
2,3,4,6-Tetrachlorophenol	<.769		mg/kg
2,4,5-Trichlorophenol	<.769		mg/kg
2,4,6-Trichlorophenol	<.769		mg/kg
2,4-Dichlorophenol	<.769		mg/kg
2,4-Dimethylphenol	<.769		mg/kg
2,4-Dinitrophenol	<3.84		mg/kg
2,4-Dinitrotoluene	<.769		mg/kg
2,6-Dichlorophenol	<.769		mg/kg
2,6-Dinitrotoluene	<.769		mg/kg
2-Acetylaminofluorene	<.769		mg/kg
2-Chloronaphthalene	<.769		mg/kg
2-Chlorophenol	<.769		mg/kg
2-Methylphenol	<.769		mg/kg
2-Nitroaniline	<.769		mg/kg
2-Nitrophenol	<.769		mg/kg
2-Picoline	<.769		mg/kg
3-,4-methylphenol	<.769		mg/kg
3,3'-Dichlorobenzidine	<.769		mg/kg
4,6-Dinitro-2-methylphenol	<3.84		mg/kg
4-Bromophenyl-phenylether	<.769		mg/kg
4-Chloro-3-methylphenol	<3.84		mg/kg
4-Chlorophenyl-phenylether	<.769		mg/kg
4-Nitroaniline	<.769		mg/kg
4-Nitrophenol	<3.84		mg/kg
7,12-Dimethylbenz[a]anthracene	<.769		mg/kg
7,12-Dimethylbenz[a]anthracene	<.769[a]		mg/kg
Acetophenone	<.769		mg/kg
Aniline	<.769		mg/kg
Benzyl Alcohol	<.769		mg/kg
Butylbenzylphthalate	<.769		mg/kg
Di-n-butylphthalate	<.769		mg/kg
Di-n-octylphthalate	<.769		mg/kg
Diethylphthalate	<.769		mg/kg
Dimethylphthalate	<.769		mg/kg
Dinoseb	<.769		mg/kg
Diphenylamine	<.769		mg/kg
Ethyl methanesulfonate	<.769		mg/kg
Hexachlorobenzene	<.769		mg/kg
Hexachlorobutadiene	<.769		mg/kg
Hexachlorocyclopentadiene	<.769		mg/kg
Hexachlorocyclopentadiene	<.769[a]		mg/kg
Hexachloroethane	<.769		mg/kg
Hexachloropropene	<.769		mg/kg
Isophorone	<.769		mg/kg
Methyl methanesulfonate	<.769		mg/kg
N-Nitroso-di-n-butylamine	<.769		mg/kg
N-Nitroso-di-n-propylamine	<.769		mg/kg
N-Nitrosomorpholine	<.769		mg/kg
N-Nitrosopiperidine	<.769		mg/kg
N-Nitrosopyrrolidine	<.769		mg/kg
Nitrobenzene	<.769		mg/kg
Pentachlorobenzene	<.769		mg/kg
Pentachlorophenol	<3.84		mg/kg
Phenacetin	<.769		mg/kg
Phenol	<.769		mg/kg
Pronamide	<.769		mg/kg
Safrole	<.769		mg/kg
bis(2-Chloroethoxy)methane	<.769		mg/kg
bis(2-Chloroethyl)ether	<.769		mg/kg
bis(2-Chloroisopropyl)ether	<.769		mg/kg
bis(2-Ethylhexyl)phthalate	<.769		mg/kg
p-Dimethylaminoazobenzene	<.769		mg/kg
PAH	**23-OCT-2017**		
1,4-Naphthoquinone	<.769	9	mg/kg
2-Methylnaphthalene	<.769	9	mg/kg
3-Methylcholanthrene	<.769	9	mg/kg
Acenaphthene	<.769	9	mg/kg
Acenaphthylene	<.769	9	mg/kg
Anthracene	<.769	9	mg/kg
Benzo(a)anthracene	.92	21	mg/kg
Benzo(a)pyrene	1.26	29	mg/kg
Benzo[b]fluoranthene	1.72	40	mg/kg
Benzo[g,h,i]perylene	.939	22	mg/kg
Benzo[k]fluoranthene	1.21	28	mg/kg
Chrysene	1.54	36	mg/kg
Dibenz[a,h]anthracene	<.769	9	mg/kg
Dibenzofuran	<.769	9	mg/kg
Fluoranthene	1.93	45	mg/kg
Fluorene	<.769	9	mg/kg
Indeno[1,2,3-cd]pyrene	1.12	26	mg/kg
Naphthalene	<.769	9	mg/kg
Phenanthrene	<.769	9	mg/kg
Pyrene	1.93	45	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
200042 CUYAHOGA R. AT AKRON, 0.5 MI. DST. OLD PORTAGE TRAIL			
OTHER	**24-OCT-2017**		
PCB-1016	<27.9		ug/kg
PCB-1221	<27.9		ug/kg
PCB-1232	<27.9		ug/kg
PCB-1242	<27.9		ug/kg
PCB-1248	<27.9		ug/kg
PCB-1254	31.6		ug/kg
PCB-1260	<27.9		ug/kg
4,4'-DDD	<5.57		ug/kg
4,4-DDE	<5.57		ug/kg
4,4'-DDT	<5.57		ug/kg
Aldrin	<5.57		ug/kg
Dieldrin	<5.57		ug/kg
Endosulfan I	<5.57		ug/kg
Endosulfan II	<5.57		ug/kg
Endosulfan sulfate	<5.57		ug/kg
Endrin	<5.57		ug/kg
Endrin aldehyde	<5.57		ug/kg
Heptachlor	<5.57		ug/kg
Heptachlor epoxide	<5.57		ug/kg
Hexachlorobenzene	<5.57		ug/kg
Methoxychlor	11.5[i]		ug/kg
Mirex	<5.57		ug/kg
a-BHC	<5.57		ug/kg
b-BHC	<5.57		ug/kg
d-BHC	<5.57		ug/kg
y-BHC	<5.57		ug/kg
1,2,4,5-Tetrachlorobenzene	<.557		mg/kg
1,2,4-Trichlorobenzene	<.557		mg/kg
1,2-Dichlorobenzene	<.557		mg/kg
1,3-Dichlorobenzene	<.557		mg/kg
1,3-Dinitrobenzene	<.557		mg/kg
1,4-Dichlorobenzene	<.557		mg/kg
2,3,4,6-Tetrachlorophenol	<.557		mg/kg
2,4,5-Trichlorophenol	<.557		mg/kg
2,4,6-Trichlorophenol	<.557		mg/kg
2,4-Dichlorophenol	<.557		mg/kg
2,4-Dimethylphenol	<.557		mg/kg
2,4-Dinitrophenol	<2.78		mg/kg
2,4-Dinitrotoluene	<.557		mg/kg
2,6-Dichlorophenol	<.557		mg/kg
2,6-Dinitrotoluene	<.557		mg/kg
2-Acetylaminofluorene	<.557		mg/kg
2-Chloronaphthalene	<.557		mg/kg
2-Chlorophenol	<.557		mg/kg
2-Methylphenol	<.557		mg/kg
2-Nitroaniline	<.557		mg/kg
2-Nitrophenol	<.557		mg/kg
2-Picoline	<.557		mg/kg
3-,4-methylphenol	<.557		mg/kg
3,3'-Dichlorobenzidine	<.557		mg/kg
4,6-Dinitro-2-methylphenol	<2.78		mg/kg
4-Bromophenyl-phenylether	<.557		mg/kg
4-Chloro-3-methylphenol	<2.78		mg/kg
4-Chlorophenyl-phenylether	<.557		mg/kg
4-Nitroaniline	<.557		mg/kg
4-Nitrophenol	<2.78		mg/kg
7,12-Dimethylbenz[a]anthracene	<.557		mg/kg
7,12-Dimethylbenz[a]anthracene	<.557[a]		mg/kg
Acetophenone	<.557		mg/kg
Aniline	<.557		mg/kg
Benzyl Alcohol	<.557		mg/kg
Butylbenzylphthalate	<.557		mg/kg
Di-n-butylphthalate	<.557		mg/kg
Di-n-octylphthalate	<.557		mg/kg
Diethylphthalate	<.557		mg/kg
Dimethylphthalate	<.557		mg/kg
Dinoseb	<.557		mg/kg
Diphenylamine	<.557		mg/kg
Ethyl methanesulfonate	<.557		mg/kg
Hexachlorobenzene	<.557		mg/kg
Hexachlorobutadiene	<.557		mg/kg
Hexachlorocyclopentadiene	<.557		mg/kg
Hexachlorocyclopentadiene	<.557[a]		mg/kg
Hexachloroethane	<.557		mg/kg
Hexachloropropene	<.557		mg/kg
Isophorone	<.557		mg/kg
Methyl methanesulfonate	<.557		mg/kg
N-Nitroso-di-n-butylamine	<.557		mg/kg
N-Nitroso-di-n-propylamine	<.557		mg/kg
N-Nitrosomorpholine	<.557		mg/kg
N-Nitrosopiperidine	<.557		mg/kg
N-Nitrosopyrrolidine	<.557		mg/kg
Nitrobenzene	<.557		mg/kg
Pentachlorobenzene	<.557		mg/kg
Pentachlorophenol	<2.78		mg/kg
Phenacetin	<.557		mg/kg
Phenol	<.557		mg/kg
Pronamide	<.557		mg/kg
Safrole	<.557		mg/kg
bis(2-Chloroethoxy)methane	<.557		mg/kg
bis(2-Chloroethyl)ether	<.557		mg/kg
bis(2-Chloroisopropyl)ether	<.557		mg/kg
bis(2-Ethylhexyl)phthalate	<.557		mg/kg
p-Dimethylaminoazobenzene	<.557		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.557	12	mg/kg
2-Methylnaphthalene	<.557	12	mg/kg
3-Methylcholanthrene	<.557	12	mg/kg
Acenaphthene	<.557	12	mg/kg
Acenaphthylene	<.557	12	mg/kg
Anthracene	<.557	12	mg/kg
Benzo(a)anthracene	<.557	12	mg/kg
Benzo(a)pyrene	<.557	12	mg/kg
Benzo[b]fluoranthene	<.557	12	mg/kg
Benzo[g,h,i]perylene	<.557	12	mg/kg
Benzo[k]fluoranthene	<.557	12	mg/kg
Chrysene	<.557	12	mg/kg
Dibenz[a,h]anthracene	<.557	12	mg/kg
Dibenzofuran	<.557	12	mg/kg
Fluoranthene	<.557	12	mg/kg
Fluorene	<.557	12	mg/kg
Indeno[1,2,3-cd]pyrene	<.557	12	mg/kg
Naphthalene	<.557	12	mg/kg
Phenanthrene	<.557	12	mg/kg
Pyrene	<.557	12	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
300516 CUYAHOGA R. AT MUNROE FALLS, UPST. OLD DAM (FREE FLOW			
OTHER	**23-OCT-2017**		
PCB-1016	<32.7		ug/kg
PCB-1221	<32.7		ug/kg
PCB-1232	<32.7		ug/kg
PCB-1242	<32.7		ug/kg
PCB-1248	<32.7		ug/kg
PCB-1254	<32.7		ug/kg
PCB-1254	<32.7[i]		ug/kg
PCB-1260	<32.7		ug/kg
4,4'-DDD	<6.53		ug/kg
4,4-DDE	<6.53		ug/kg
4,4'-DDT	<6.53		ug/kg
Aldrin	<6.53		ug/kg
Dieldrin	<6.53		ug/kg
Endosulfan I	<6.53		ug/kg
Endosulfan II	<6.53		ug/kg
Endosulfan sulfate	<6.53		ug/kg
Endrin	<6.53		ug/kg
Endrin aldehyde	<6.53		ug/kg
Heptachlor	<6.53		ug/kg
Heptachlor epoxide	<6.53		ug/kg
Hexachlorobenzene	<6.53		ug/kg
Methoxychlor	<6.53		ug/kg
Mirex	<6.53		ug/kg
a-BHC	<6.53		ug/kg
b-BHC	<6.53		ug/kg
d-BHC	<6.53		ug/kg
y-BHC	<6.53		ug/kg
1,2,4,5-Tetrachlorobenzene	<.652		mg/kg
1,2,4-Trichlorobenzene	<.652		mg/kg
1,2-Dichlorobenzene	<.652		mg/kg
1,3-Dichlorobenzene	<.652		mg/kg
1,3-Dinitrobenzene	<.652		mg/kg
1,4-Dichlorobenzene	<.652		mg/kg
2,3,4,6-Tetrachlorophenol	<.652		mg/kg
2,4,5-Trichlorophenol	<.652		mg/kg
2,4,6-Trichlorophenol	<.652		mg/kg
2,4-Dichlorophenol	<.652		mg/kg
2,4-Dimethylphenol	<.652		mg/kg
2,4-Dinitrophenol	<3.26		mg/kg
2,4-Dinitrotoluene	<.652		mg/kg
2,6-Dichlorophenol	<.652		mg/kg
2,6-Dinitrotoluene	<.652		mg/kg
2-Acetylaminofluorene	<.652		mg/kg
2-Chloronaphthalene	<.652		mg/kg
2-Chlorophenol	<.652		mg/kg
2-Methylphenol	<.652		mg/kg
2-Nitroaniline	<.652		mg/kg
2-Nitrophenol	<.652		mg/kg
2-Picoline	<.652		mg/kg
3-,4-methylphenol	<.652		mg/kg
3,3'-Dichlorobenzidine	<.652		mg/kg
4,6-Dinitro-2-methylphenol	<3.26		mg/kg
4-Bromophenyl-phenylether	<.652		mg/kg
4-Chloro-3-methylphenol	<3.26		mg/kg
4-Chlorophenyl-phenylether	<.652		mg/kg
4-Nitroaniline	<.652		mg/kg
4-Nitrophenol	<3.26		mg/kg
7,12-Dimethylbenz[a]anthracene	<.652		mg/kg
7,12-Dimethylbenz[a]anthracene	<.652[a]		mg/kg
Acetophenone	<.652		mg/kg
Aniline	<.652		mg/kg
Benzyl Alcohol	<.652		mg/kg
Butylbenzylphthalate	<.652		mg/kg
Di-n-butylphthalate	<.652		mg/kg
Di-n-octylphthalate	<.652		mg/kg
Diethylphthalate	<.652		mg/kg
Dimethylphthalate	<.652		mg/kg
Dinoseb	<.652		mg/kg
Diphenylamine	<.652		mg/kg
Ethyl methanesulfonate	<.652		mg/kg
Hexachlorobenzene	<.652		mg/kg
Hexachlorobutadiene	<.652		mg/kg
Hexachlorocyclopentadiene	<.652[a]		mg/kg
Hexachlorocyclopentadiene	<.652		mg/kg
Hexachloroethane	<.652		mg/kg
Hexachloropropene	<.652		mg/kg
Isophorone	<.652		mg/kg
Methyl methanesulfonate	<.652		mg/kg
N-Nitroso-di-n-butylamine	<.652		mg/kg
N-Nitroso-di-n-propylamine	<.652		mg/kg
N-Nitrosomorpholine	<.652		mg/kg
N-Nitrosopiperidine	<.652		mg/kg
N-Nitrosopyrrolidine	<.652		mg/kg
Nitrobenzene	<.652		mg/kg
Pentachlorobenzene	<.652		mg/kg
Pentachlorophenol	<3.26		mg/kg
Phenacetin	<.652		mg/kg
Phenol	<.652		mg/kg
Pronamide	<.652		mg/kg
Safrole	<.652		mg/kg
bis(2-Chloroethoxy)methane	<.652		mg/kg
bis(2-Chloroethyl)ether	<.652		mg/kg
bis(2-Chloroisopropyl)ether	<.652		mg/kg
bis(2-Ethylhexyl)phthalate	<.652		mg/kg
p-Dimethylaminoazobenzene	<.652		mg/kg
PAH	**23-OCT-2017**		
1,4-Naphthoquinone	<.652	9	mg/kg
2-Methylnaphthalene	<.652	9	mg/kg
3-Methylcholanthrene	<.652	9	mg/kg
Acenaphthene	<.652	9	mg/kg
Acenaphthylene	<.652	9	mg/kg
Anthracene	<.652	9	mg/kg
Benzo(a)anthracene	<.652	9	mg/kg
Benzo(a)pyrene	<.652	9	mg/kg
Benzo[b]fluoranthene	<.652	9	mg/kg
Benzo[g,h,i]perylene	<.652	9	mg/kg
Benzo[k]fluoranthene	<.652	9	mg/kg
Chrysene	<.652	9	mg/kg
Dibenz[a,h]anthracene	<.652	9	mg/kg
Dibenzofuran	<.652	9	mg/kg
Fluoranthene	.817	24	mg/kg
Fluorene	<.652	9	mg/kg
Indeno[1,2,3-cd]pyrene	<.652	9	mg/kg
Naphthalene	<.652	9	mg/kg
Phenanthrene	<.652	9	mg/kg
Pyrene	.722	21	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
300518 CUYAHOGA R. AT KENT, UPST OLD DAM (FREE FLOWING)			
OTHER	**23-OCT-2017**		
PCB-1016	<38.4		ug/kg
PCB-1221	<38.4		ug/kg
PCB-1232	<38.4		ug/kg
PCB-1242	<38.4		ug/kg
PCB-1248	<38.4		ug/kg
PCB-1254	<38.4		ug/kg
PCB-1254	<38.4[i]		ug/kg
PCB-1260	<38.4		ug/kg
4,4'-DDD	9.68		ug/kg
4,4-DDE	<7.69		ug/kg
4,4'-DDT	11		ug/kg
Aldrin	<7.69		ug/kg
Dieldrin	<7.69		ug/kg
Endosulfan I	<7.69		ug/kg
Endosulfan II	<7.69		ug/kg
Endosulfan sulfate	<7.69		ug/kg
Endrin	<7.69		ug/kg
Endrin aldehyde	<7.69		ug/kg
Heptachlor	<7.69		ug/kg
Heptachlor epoxide	<7.69		ug/kg
Hexachlorobenzene	<7.69		ug/kg
Methoxychlor	<7.69		ug/kg
Mirex	<7.69		ug/kg
a-BHC	<7.69		ug/kg
b-BHC	<7.69		ug/kg
d-BHC	<7.69		ug/kg
y-BHC	<7.69		ug/kg
1,2,4,5-Tetrachlorobenzene	<.766		mg/kg
1,2,4-Trichlorobenzene	<.766		mg/kg
1,2-Dichlorobenzene	<.766		mg/kg
1,3-Dichlorobenzene	<.766		mg/kg
1,3-Dinitrobenzene	<.766		mg/kg
1,4-Dichlorobenzene	<.766		mg/kg
2,3,4,6-Tetrachlorophenol	<.766		mg/kg
2,4,5-Trichlorophenol	<.766		mg/kg
2,4,6-Trichlorophenol	<.766		mg/kg
2,4-Dichlorophenol	<.766		mg/kg
2,4-Dimethylphenol	<.766		mg/kg
2,4-Dinitrophenol	<3.83		mg/kg
2,4-Dinitrotoluene	<.766		mg/kg
2,6-Dichlorophenol	<.766		mg/kg
2,6-Dinitrotoluene	<.766		mg/kg
2-Acetylaminofluorene	<.766		mg/kg
2-Chloronaphthalene	<.766		mg/kg
2-Chlorophenol	<.766		mg/kg
2-Methylphenol	<.766		mg/kg
2-Nitroaniline	<.766		mg/kg
2-Nitrophenol	<.766		mg/kg
2-Picoline	<.766		mg/kg
3-,4-methylphenol	<.766		mg/kg
3,3'-Dichlorobenzidine	<.766		mg/kg
4,6-Dinitro-2-methylphenol	<3.83		mg/kg
4-Bromophenyl-phenylether	<.766		mg/kg
4-Chloro-3-methylphenol	<3.83		mg/kg
4-Chlorophenyl-phenylether	<.766		mg/kg
4-Nitroaniline	<.766		mg/kg
4-Nitrophenol	<3.83		mg/kg
7,12-Dimethylbenz[a]anthracene	<.766[a]		mg/kg
7,12-Dimethylbenz[a]anthracene	<.766		mg/kg
Acetophenone	<.766		mg/kg
Aniline	<.766		mg/kg
Benzyl Alcohol	<.766		mg/kg
Butylbenzylphthalate	<.766		mg/kg
Di-n-butylphthalate	<.766		mg/kg
Di-n-octylphthalate	<.766		mg/kg
Diethylphthalate	<.766		mg/kg
Dimethylphthalate	<.766		mg/kg
Dinoseb	<.766		mg/kg
Diphenylamine	<.766		mg/kg
Ethyl methanesulfonate	<.766		mg/kg
Hexachlorobenzene	<.766		mg/kg
Hexachlorobutadiene	<.766		mg/kg
Hexachlorocyclopentadiene	<.766		mg/kg
Hexachlorocyclopentadiene	<.766[a]		mg/kg
Hexachloroethane	<.766		mg/kg
Hexachloropropene	<.766		mg/kg
Isophorone	<.766		mg/kg
Methyl methanesulfonate	<.766		mg/kg
N-Nitroso-di-n-butylamine	<.766		mg/kg
N-Nitroso-di-n-propylamine	<.766		mg/kg
N-Nitrosomorpholine	<.766		mg/kg
N-Nitrosopiperidine	<.766		mg/kg
N-Nitrosopyrrolidine	<.766		mg/kg
Nitrobenzene	<.766		mg/kg
Pentachlorobenzene	<.766		mg/kg
Pentachlorophenol	<3.83		mg/kg
Phenacetin	<.766		mg/kg
Phenol	<.766		mg/kg
Pronamide	<.766		mg/kg
Safrole	<.766		mg/kg
bis(2-Chloroethoxy)methane	<.766		mg/kg
bis(2-Chloroethyl)ether	<.766		mg/kg
bis(2-Chloroisopropyl)ether	<.766		mg/kg
bis(2-Ethylhexyl)phthalate	<.766		mg/kg
p-Dimethylaminoazobenzene	<.766		mg/kg
PAH	**23-OCT-2017**		
1,4-Naphthoquinone	<.766	11	mg/kg
2-Methylnaphthalene	<.766	11	mg/kg
3-Methylcholanthrene	<.766	11	mg/kg
Acenaphthene	<.766	11	mg/kg
Acenaphthylene	<.766	11	mg/kg
Anthracene	<.766	11	mg/kg
Benzo(a)anthracene	<.766	11	mg/kg
Benzo(a)pyrene	<.766	11	mg/kg
Benzo[b]fluoranthene	.9	26	mg/kg
Benzo[g,h,i]perylene	<.766	11	mg/kg
Benzo[k]fluoranthene	<.766	11	mg/kg
Chrysene	.912	27	mg/kg
Dibenz[a,h]anthracene	<.766	11	mg/kg
Dibenzofuran	<.766	11	mg/kg
Fluoranthene	1.64	48	mg/kg
Fluorene	<.766	11	mg/kg
Indeno[1,2,3-cd]pyrene	<.766	11	mg/kg
Naphthalene	<.766	11	mg/kg
Phenanthrene	<.766	11	mg/kg
Pyrene	1.3	38	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
300574 CUYAHOGA R. DST. FISH CREEK WWTP (FREE FLOWING)			
OTHER	**23-OCT-2017**		
PCB-1016	<44.5		ug/kg
PCB-1221	<44.5		ug/kg
PCB-1232	<44.5		ug/kg
PCB-1242	<44.5		ug/kg
PCB-1248	<44.5		ug/kg
PCB-1254	<44.5[i]		ug/kg
PCB-1254	<44.5		ug/kg
PCB-1260	<44.5		ug/kg
4,4'-DDD	<8.9		ug/kg
4,4-DDE	<8.9		ug/kg
4,4'-DDT	<8.9		ug/kg
Aldrin	<8.9		ug/kg
Dieldrin	<8.9		ug/kg
Endosulfan I	<8.9		ug/kg
Endosulfan II	<8.9		ug/kg
Endosulfan sulfate	<8.9		ug/kg
Endrin	<8.9		ug/kg
Endrin aldehyde	<8.9		ug/kg
Heptachlor	<8.9		ug/kg
Heptachlor epoxide	<8.9		ug/kg
Hexachlorobenzene	<8.9		ug/kg
Methoxychlor	<8.9		ug/kg
Mirex	<8.9		ug/kg
a-BHC	<8.9		ug/kg
b-BHC	<8.9		ug/kg
d-BHC	<8.9		ug/kg
y-BHC	<8.9		ug/kg
1,2,4,5-Tetrachlorobenzene	<.895		mg/kg
1,2,4-Trichlorobenzene	<.895		mg/kg
1,2-Dichlorobenzene	<.895		mg/kg
1,3-Dichlorobenzene	<.895		mg/kg
1,3-Dinitrobenzene	<.895		mg/kg
1,4-Dichlorobenzene	<.895		mg/kg
2,3,4,6-Tetrachlorophenol	<.895		mg/kg
2,4,5-Trichlorophenol	<.895		mg/kg
2,4,6-Trichlorophenol	<.895		mg/kg
2,4-Dichlorophenol	<.895		mg/kg
2,4-Dimethylphenol	<.895		mg/kg
2,4-Dinitrophenol	<4.48		mg/kg
2,4-Dinitrotoluene	<.895		mg/kg
2,6-Dichlorophenol	<.895		mg/kg
2,6-Dinitrotoluene	<.895		mg/kg
2-Acetylaminofluorene	<.895		mg/kg
2-Chloronaphthalene	<.895		mg/kg
2-Chlorophenol	<.895		mg/kg
2-Methylphenol	<.895		mg/kg
2-Nitroaniline	<.895		mg/kg
2-Nitrophenol	<.895		mg/kg
2-Picoline	<.895		mg/kg
3-,4-methylphenol	<.895		mg/kg
3,3'-Dichlorobenzidine	<.895		mg/kg
4,6-Dinitro-2-methylphenol	<4.48		mg/kg
4-Bromophenyl-phenylether	<.895		mg/kg
4-Chloro-3-methylphenol	<4.48		mg/kg
4-Chlorophenyl-phenylether	<.895		mg/kg
4-Nitroaniline	<.895		mg/kg
4-Nitrophenol	<4.48		mg/kg
7,12-Dimethylbenz[a]anthracene	<.895		mg/kg
7,12-Dimethylbenz[a]anthracene	<.895[a]		mg/kg
Acetophenone	<.895		mg/kg
Aniline	<.895		mg/kg
Benzyl Alcohol	<.895		mg/kg
Butylbenzylphthalate	<.895		mg/kg
Di-n-butylphthalate	<.895		mg/kg
Di-n-octylphthalate	<.895		mg/kg
Diethylphthalate	<.895		mg/kg
Dimethylphthalate	<.895		mg/kg
Dinoseb	<.895		mg/kg
Diphenylamine	<.895		mg/kg
Ethyl methanesulfonate	<.895		mg/kg
Hexachlorobenzene	<.895		mg/kg
Hexachlorobutadiene	<.895		mg/kg
Hexachlorocyclopentadiene	<.895		mg/kg
Hexachlorocyclopentadiene	<.895[a]		mg/kg
Hexachloroethane	<.895		mg/kg
Hexachloropropene	<.895		mg/kg
Isophorone	<.895		mg/kg
Methyl methanesulfonate	<.895		mg/kg
N-Nitroso-di-n-butylamine	<.895		mg/kg
N-Nitroso-di-n-propylamine	<.895		mg/kg
N-Nitrosomorpholine	<.895		mg/kg
N-Nitrosopiperidine	<.895		mg/kg
N-Nitrosopyrrolidine	<.895		mg/kg
Nitrobenzene	<.895		mg/kg
Pentachlorobenzene	<.895		mg/kg
Pentachlorophenol	<4.48		mg/kg
Phenacetin	<.895		mg/kg
Phenol	<.895		mg/kg
Pronamide	<.895		mg/kg
Safrole	<.895		mg/kg
bis(2-Chloroethoxy)methane	<.895		mg/kg
bis(2-Chloroethyl)ether	<.895		mg/kg
bis(2-Chloroisopropyl)ether	<.895		mg/kg
bis(2-Ethylhexyl)phthalate	<.895		mg/kg
p-Dimethylaminoazobenzene	<.895		mg/kg
PAH	**23-OCT-2017**		
1,4-Naphthoquinone	<.895	8	mg/kg
2-Methylnaphthalene	<.895	8	mg/kg
3-Methylcholanthrene	<.895	8	mg/kg
Acenaphthene	<.895	8	mg/kg
Acenaphthylene	<.895	8	mg/kg
Anthracene	<.895	8	mg/kg
Benzo(a)anthracene	<.895	8	mg/kg
Benzo(a)pyrene	<.895	8	mg/kg
Benzo[b]fluoranthene	.932	16	mg/kg
Benzo[g,h,i]perylene	<.895	8	mg/kg
Benzo[k]fluoranthene	<.895	8	mg/kg
Chrysene	1.15	20	mg/kg
Dibenz[a,h]anthracene	<.895	8	mg/kg
Dibenzofuran	<.895	8	mg/kg
Fluoranthene	1.95	34	mg/kg
Fluorene	<.895	8	mg/kg
Indeno[1,2,3-cd]pyrene	<.895	8	mg/kg
Naphthalene	<.895	8	mg/kg
Phenanthrene	1.19	21	mg/kg
Pyrene	1.75	31	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
302337 ADAMS RUN AT AKRON @ ESSEX ST.			
OTHER	**23-OCT-2018**		
PCB-1016	<58.2		ug/kg
PCB-1221	<58.2		ug/kg
PCB-1232	<58.2		ug/kg
PCB-1242	<58.2		ug/kg
PCB-1248	<58.2		ug/kg
PCB-1254	92.7		ug/kg
PCB-1260	86.4		ug/kg
4,4'-DDD	<11.6		ug/kg
4,4-DDE	<11.6		ug/kg
4,4'-DDT	<11.6		ug/kg
Aldrin	<11.6		ug/kg
Dieldrin	<11.6		ug/kg
Endosulfan I	<11.6		ug/kg
Endosulfan II	<11.6		ug/kg
Endosulfan sulfate	<11.6		ug/kg
Endrin	<11.6		ug/kg
Endrin aldehyde	<11.6		ug/kg
Heptachlor	<11.6		ug/kg
Heptachlor epoxide	<11.6		ug/kg
Hexachlorobenzene	<11.6		ug/kg
Methoxychlor	<11.6		ug/kg
Mirex	<11.6		ug/kg
a-BHC	<11.6		ug/kg
b-BHC	<11.6		ug/kg
d-BHC	<11.6		ug/kg
y-BHC	<11.6		ug/kg
1,2,4,5-Tetrachlorobenzene	<1.17		mg/kg
1,2,4-Trichlorobenzene	<1.17		mg/kg
1,2-Dichlorobenzene	<1.17		mg/kg
1,3-Dichlorobenzene	<1.17		mg/kg
1,3-Dinitrobenzene	<1.17		mg/kg
1,4-Dichlorobenzene	<1.17		mg/kg
2,3,4,6-Tetrachlorophenol	<1.17		mg/kg
2,4,5-Trichlorophenol	<1.17		mg/kg
2,4,6-Trichlorophenol	<1.17		mg/kg
2,4-Dichlorophenol	<1.17		mg/kg
2,4-Dimethylphenol	<5.85		mg/kg
2,4-Dinitrophenol	<5.85		mg/kg
2,4-Dinitrotoluene	<1.17		mg/kg
2,6-Dichlorophenol	<1.17		mg/kg
2,6-Dinitrotoluene	<1.17		mg/kg
2-Acetylaminofluorene	<1.17		mg/kg
2-Chloronaphthalene	<1.17		mg/kg
2-Chlorophenol	<1.17		mg/kg
2-Methylphenol	<1.17		mg/kg
2-Nitroaniline	<1.17		mg/kg
2-Nitrophenol	<1.17		mg/kg
2-Picoline	<1.17		mg/kg
3-,4-methylphenol	<1.17		mg/kg
3,3'-Dichlorobenzidine	<1.17		mg/kg
4,6-Dinitro-2-methylphenol	<5.85		mg/kg
4-Bromophenyl-phenylether	<1.17		mg/kg
4-Chloro-3-methylphenol	<5.85		mg/kg
4-Chlorophenyl-phenylether	<1.17		mg/kg
4-Nitroaniline	<1.17		mg/kg
4-Nitrophenol	<5.85		mg/kg
7,12-Dimethylbenz[a]anthracene	<1.17		mg/kg
7,12-Dimethylbenz[a]anthracene	<1.17[a]		mg/kg
Acetophenone	<1.17		mg/kg
Aniline	<1.17		mg/kg
Aniline	<1.17[a]		mg/kg
Benzyl Alcohol	<1.17		mg/kg
Butylbenzylphthalate	<1.17		mg/kg
Di-n-butylphthalate	<1.17		mg/kg
Di-n-octylphthalate	<1.17		mg/kg
Diethylphthalate	<1.17		mg/kg
Dimethylphthalate	<1.17		mg/kg
Dinoseb	<1.17		mg/kg
Diphenylamine	<1.17		mg/kg
Ethyl methanesulfonate	<1.17		mg/kg
Hexachlorobenzene	<1.17		mg/kg
Hexachlorobutadiene	<1.17		mg/kg
Hexachlorocyclopentadiene	<5.85		mg/kg
Hexachlorocyclopentadiene	<5.85[a]		mg/kg
Hexachloroethane	<1.17		mg/kg
Hexachloropropene	<1.17		mg/kg
Isophorone	<1.17		mg/kg
Methyl methanesulfonate	<1.17		mg/kg
N-Nitroso-di-n-butylamine	<1.17		mg/kg
N-Nitroso-di-n-butylamine	<1.17[a]		mg/kg
N-Nitroso-di-n-propylamine	<1.17		mg/kg
N-Nitrosomorpholine	<1.17		mg/kg
N-Nitrosopiperidine	<1.17		mg/kg
N-Nitrosopyrrolidine	<1.17		mg/kg
Nitrobenzene	<1.17		mg/kg
Pentachlorobenzene	<1.17		mg/kg
Pentachlorophenol	<5.85		mg/kg
Phenacetin	<1.17		mg/kg
Phenol	<1.17		mg/kg
Pronamide	<1.17		mg/kg
Safrole	<1.17		mg/kg
bis(2-Chloroethoxy)methane	<1.17		mg/kg
bis(2-Chloroethyl)ether	<1.17		mg/kg
bis(2-Chloroisopropyl)ether	<1.17		mg/kg
bis(2-Ethylhexyl)phthalate	2.07		mg/kg
p-Dimethylaminoazobenzene	<1.17		mg/kg
PAH	**23-OCT-2018**		
1,4-Naphthoquinone	<1.17	6	mg/kg
1,4-Naphthoquinone	<1.17[a]	6	mg/kg
2-Methylnaphthalene	<1.17	6	mg/kg
2-Methylnaphthalene	<1.17[a]	6	mg/kg
3-Methylcholanthrene	<1.17	6	mg/kg
Acenaphthene	<1.17	6	mg/kg
Acenaphthylene	<1.17	6	mg/kg
Anthracene	<1.17	6	mg/kg
Benzo(a)anthracene	2.21	21	mg/kg
Benzo(a)pyrene	2.13	20	mg/kg
Benzo[b]fluoranthene	2.96	28	mg/kg
Benzo[g,h,i]perylene	1.89	18	mg/kg
Benzo[k]fluoranthene	2.61	25	mg/kg
Chrysene	4.11	40	mg/kg
Dibenz[a,h]anthracene	<1.17	6	mg/kg
Dibenzofuran	<1.17	6	mg/kg
Fluoranthene	9.76	94	mg/kg
Fluorene	<1.17	6	mg/kg
Indeno[1,2,3-cd]pyrene	1.95	19	mg/kg
Naphthalene	<1.17	6	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
302337 ADAMS RUN AT AKRON @ ESSEX ST.							
Phenanthrene	1.77	17	mg/kg				
Pyrene	6.72	65	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
303830 Cuyahoga R. @ Scranton Rd Habitat Restoration			
OTHER	**22-AUG-2017**		
PCB-1016	<35.6		ug/kg
PCB-1221	<35.6		ug/kg
PCB-1232	<35.6		ug/kg
PCB-1242	<35.6		ug/kg
PCB-1248	<35.6		ug/kg
PCB-1254	<35.6		ug/kg
PCB-1260	<35.6		ug/kg
4,4'-DDD	<7.12		ug/kg
4,4-DDE	13.6		ug/kg
4,4'-DDT	<7.12		ug/kg
Aldrin	<7.12		ug/kg
Dieldrin	<7.12		ug/kg
Endosulfan I	<7.12		ug/kg
Endosulfan II	<7.12		ug/kg
Endosulfan sulfate	<7.12		ug/kg
Endrin	<7.12		ug/kg
Endrin aldehyde	<7.12		ug/kg
Heptachlor	<7.12		ug/kg
Heptachlor epoxide	<7.12		ug/kg
Hexachlorobenzene	<7.12		ug/kg
Methoxychlor	<7.12		ug/kg
Mirex	<7.12		ug/kg
a-BHC	<7.12		ug/kg
b-BHC	<7.12		ug/kg
d-BHC	<7.12		ug/kg
y-BHC	<7.12		ug/kg
1,2,4,5-Tetrachlorobenzene	<.708		mg/kg
1,2,4-Trichlorobenzene	<.708		mg/kg
1,2-Dichlorobenzene	<.708[a]		mg/kg
1,2-Dichlorobenzene	<.708		mg/kg
1,3-Dichlorobenzene	<.708[a]		mg/kg
1,3-Dichlorobenzene	<.708		mg/kg
1,3-Dinitrobenzene	<.708		mg/kg
1,4-Dichlorobenzene	<.708		mg/kg
1,4-Dichlorobenzene	<.708[a]		mg/kg
2,3,4,6-Tetrachlorophenol	<.708[a]		mg/kg
2,3,4,6-Tetrachlorophenol	<.708		mg/kg
2,4,5-Trichlorophenol	<.708		mg/kg
2,4,6-Trichlorophenol	<.708		mg/kg
2,4,6-Trichlorophenol	<.708[a]		mg/kg
2,4-Dichlorophenol	<.708		mg/kg
2,4-Dimethylphenol	<.708		mg/kg
2,4-Dinitrophenol	<3.54[a]		mg/kg
2,4-Dinitrophenol	<3.54		mg/kg
2,4-Dinitrotoluene	<.708		mg/kg
2,6-Dichlorophenol	<.708		mg/kg
2,6-Dinitrotoluene	<.708		mg/kg
2-Acetylaminofluorene	<.708		mg/kg
2-Chloronaphthalene	<.708		mg/kg
2-Chlorophenol	<.708		mg/kg
2-Methylphenol	<.708		mg/kg
2-Nitroaniline	<.708		mg/kg
2-Nitrophenol	<.708		mg/kg
2-Nitrophenol	<.708[a]		mg/kg
2-Picoline	<.708		mg/kg
2-Picoline	<.708[a]		mg/kg
3-,4-methylphenol	<.708		mg/kg
3,3'-Dichlorobenzidine	<.708		mg/kg
4,6-Dinitro-2-methylphenol	<3.54		mg/kg
4,6-Dinitro-2-methylphenol	<3.54[a]		mg/kg
4-Bromophenyl-phenylether	<.708		mg/kg
4-Chloro-3-methylphenol	<3.54		mg/kg
4-Chlorophenyl-phenylether	<.708		mg/kg
4-Nitroaniline	<.708[a]		mg/kg
4-Nitroaniline	<.708		mg/kg
4-Nitrophenol	<3.54		mg/kg
7,12-Dimethylbenz[a]anthracene	<.708		mg/kg
Acetophenone	<.708		mg/kg
Aniline	<.708		mg/kg
Benzyl Alcohol	<.708		mg/kg
Butylbenzylphthalate	<.708		mg/kg
Di-n-butylphthalate	<.708		mg/kg
Di-n-octylphthalate	<.708		mg/kg
Diethylphthalate	<.708		mg/kg
Dimethylphthalate	<.708		mg/kg
Dinoseb	<.708		mg/kg
Diphenylamine	<.708		mg/kg
Ethyl methanesulfonate	<.708		mg/kg
Hexachlorobenzene	<.708		mg/kg
Hexachlorobutadiene	<.708		mg/kg
Hexachlorocyclopentadiene	<.708¿		mg/kg
Hexachlorocyclopentadiene	<.708		mg/kg
Hexachloroethane	<.708		mg/kg
Hexachloroethane	<.708[a]		mg/kg
Hexachloropropene	<.708		mg/kg
Hexachloropropene	<.708[a]		mg/kg
Isophorone	<.708		mg/kg
Isophorone	<.708[a]		mg/kg
Methyl methanesulfonate	<.708		mg/kg
Methyl methanesulfonate	<.708[a]		mg/kg
N-Nitroso-di-n-butylamine	<.708		mg/kg
N-Nitroso-di-n-propylamine	<.708		mg/kg
N-Nitrosomorpholine	<.708		mg/kg
N-Nitrosopiperidine	<.708		mg/kg
N-Nitrosopyrrolidine	<.708		mg/kg
Nitrobenzene	<.708		mg/kg
Pentachlorobenzene	<.708		mg/kg
Pentachlorophenol	<3.54		mg/kg
Pentachlorophenol	<3.54[a]		mg/kg
Phenacetin	<.708		mg/kg
Phenol	<.708		mg/kg
Pronamide	<.708		mg/kg
Safrole	<.708		mg/kg
bis(2-Chloroethoxy)methane	<.708		mg/kg
bis(2-Chloroethyl)ether	<.708[a]		mg/kg
bis(2-Chloroethyl)ether	<.708		mg/kg
bis(2-Chloroisopropyl)ether	<.708		mg/kg
bis(2-Ethylhexyl)phthalate	<.708		mg/kg
p-Dimethylaminoazobenzene	<.708		mg/kg
PAH	**22-AUG-2017**		
1,4-Naphthoquinone	<.708	23	mg/kg
1,4-Naphthoquinone	<.708[a]	23	mg/kg
2-Methylnaphthalene	<.708	23	mg/kg
2-Methylnaphthalene	<.708[a]	23	mg/kg
3-Methylcholanthrene	<.708	23	mg/kg
Acenaphthene	<.708	23	mg/kg
Acenaphthylene	<.708	23	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
303830 Cuyahoga R. @ Scranton Rd Habitat Restoration							
Acenaphthylene	<.708[a]	23	mg/kg				
Anthracene	<.708	23	mg/kg				
Benzo(a)anthracene	<.708	23	mg/kg				
Benzo(a)pyrene	.928	59	mg/kg				
Benzo[b]fluoranthene	1.07	69	mg/kg				
Benzo[g,h,i]perylene	.933	60	mg/kg				
Benzo[k]fluoranthene	.731	47	mg/kg				
Chrysene	1.23	79	mg/kg				
Dibenz[a,h]anthracene	<.708	23	mg/kg				
Dibenzofuran	<.708	23	mg/kg				
Fluoranthene	2.51	161	mg/kg				
Fluorene	<.708	23	mg/kg				
Indeno[1,2,3-cd]pyrene	.844	54	mg/kg				
Naphthalene	<.708	23	mg/kg				
Phenanthrene	1.16	74	mg/kg				
Pyrene	1.84	118	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502010 CUYAHOGA R. DST. AKRON WWTP @ BOLANZ RD.			
OTHER	**24-OCT-2017**		
PCB-1016	<32.1		ug/kg
PCB-1221	<32.1		ug/kg
PCB-1232	<32.1		ug/kg
PCB-1242	<32.1		ug/kg
PCB-1248	<32.1		ug/kg
PCB-1254	<32.1		ug/kg
PCB-1260	<32.1		ug/kg
4,4'-DDD	<6.42		ug/kg
4,4-DDE	<6.42		ug/kg
4,4'-DDT	<6.42		ug/kg
Aldrin	<6.42		ug/kg
Dieldrin	<6.42		ug/kg
Endosulfan I	<6.42		ug/kg
Endosulfan II	<6.42		ug/kg
Endosulfan sulfate	<6.42		ug/kg
Endrin	<6.42		ug/kg
Endrin aldehyde	<6.42		ug/kg
Heptachlor	<6.42		ug/kg
Heptachlor epoxide	<6.42		ug/kg
Hexachlorobenzene	<6.42		ug/kg
Methoxychlor	12.3[i]		ug/kg
Mirex	<6.42		ug/kg
a-BHC	<6.42		ug/kg
b-BHC	<6.42		ug/kg
d-BHC	<6.42		ug/kg
y-BHC	<6.42		ug/kg
1,2,4,5-Tetrachlorobenzene	<.644		mg/kg
1,2,4-Trichlorobenzene	<.644		mg/kg
1,2-Dichlorobenzene	<.644		mg/kg
1,3-Dichlorobenzene	<.644		mg/kg
1,3-Dinitrobenzene	<.644		mg/kg
1,4-Dichlorobenzene	<.644		mg/kg
2,3,4,6-Tetrachlorophenol	<.644		mg/kg
2,4,5-Trichlorophenol	<.644		mg/kg
2,4,6-Trichlorophenol	<.644		mg/kg
2,4-Dichlorophenol	<.644		mg/kg
2,4-Dimethylphenol	<.644		mg/kg
2,4-Dinitrophenol	<3.22		mg/kg
2,4-Dinitrotoluene	<.644		mg/kg
2,6-Dichlorophenol	<.644		mg/kg
2,6-Dinitrotoluene	<.644		mg/kg
2-Acetylaminofluorene	<.644		mg/kg
2-Chloronaphthalene	<.644		mg/kg
2-Chlorophenol	<.644		mg/kg
2-Methylphenol	<.644		mg/kg
2-Nitroaniline	<.644		mg/kg
2-Nitrophenol	<.644		mg/kg
2-Picoline	<.644		mg/kg
3-,4-methylphenol	<.644		mg/kg
3,3'-Dichlorobenzidine	<.644		mg/kg
4,6-Dinitro-2-methylphenol	<3.22		mg/kg
4-Bromophenyl-phenylether	<.644		mg/kg
4-Chloro-3-methylphenol	<3.22		mg/kg
4-Chlorophenyl-phenylether	<.644		mg/kg
4-Nitroaniline	<.644		mg/kg
4-Nitrophenol	<3.22		mg/kg
7,12-Dimethylbenz[a]anthracene	<.644		mg/kg
7,12-Dimethylbenz[a]anthracene	<.644[a]		mg/kg

PARAMETER	RESULT	normalized PAH	Units
Acetophenone	<.644		mg/kg
Aniline	<.644		mg/kg
Benzyl Alcohol	<.644		mg/kg
Butylbenzylphthalate	<.644		mg/kg
Di-n-butylphthalate	<.644		mg/kg
Di-n-octylphthalate	<.644		mg/kg
Diethylphthalate	<.644		mg/kg
Dimethylphthalate	<.644		mg/kg
Dinoseb	<.644		mg/kg
Diphenylamine	<.644		mg/kg
Ethyl methanesulfonate	<.644		mg/kg
Hexachlorobenzene	<.644		mg/kg
Hexachlorobutadiene	<.644		mg/kg
Hexachlorocyclopentadiene	<.644		mg/kg
Hexachlorocyclopentadiene	<.644[a]		mg/kg
Hexachloroethane	<.644		mg/kg
Hexachloropropene	<.644		mg/kg
Isophorone	<.644		mg/kg
Methyl methanesulfonate	<.644		mg/kg
N-Nitroso-di-n-butylamine	<.644		mg/kg
N-Nitroso-di-n-propylamine	<.644		mg/kg
N-Nitrosomorpholine	<.644		mg/kg
N-Nitrosopiperidine	<.644		mg/kg
N-Nitrosopyrrolidine	<.644		mg/kg
Nitrobenzene	<.644		mg/kg
Pentachlorobenzene	<.644		mg/kg
Pentachlorophenol	<3.22		mg/kg
Phenacetin	<.644		mg/kg
Phenol	<.644		mg/kg
Pronamide	<.644		mg/kg
Safrole	<.644		mg/kg
bis(2-Chloroethoxy)methane	<.644		mg/kg
bis(2-Chloroethyl)ether	<.644		mg/kg
bis(2-Chloroisopropyl)ether	<.644		mg/kg
bis(2-Ethylhexyl)phthalate	<.644		mg/kg
p-Dimethylaminoazobenzene	<.644		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.644	23	mg/kg
2-Methylnaphthalene	<.644	23	mg/kg
3-Methylcholanthrene	<.644	23	mg/kg
Acenaphthene	<.644	23	mg/kg
Acenaphthylene	<.644	23	mg/kg
Anthracene	<.644	23	mg/kg
Benzo(a)anthracene	<.644	23	mg/kg
Benzo(a)pyrene	<.644	23	mg/kg
Benzo[b]fluoranthene	<.644	23	mg/kg
Benzo[g,h,i]perylene	<.644	23	mg/kg
Benzo[k]fluoranthene	<.644	23	mg/kg
Chrysene	<.644	23	mg/kg
Dibenz[a,h]anthracene	<.644	23	mg/kg
Dibenzofuran	<.644	23	mg/kg
Fluoranthene	.785	55	mg/kg
Fluorene	<.644	23	mg/kg
Indeno[1,2,3-cd]pyrene	<.644	23	mg/kg
Naphthalene	<.644	23	mg/kg
Phenanthrene	<.644	23	mg/kg
Pyrene	<.644	23	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.			
OTHER	**18-SEP-2017**		
PCB-1016	<28.5		ug/kg
PCB-1221	<28.5		ug/kg
PCB-1232	<28.5		ug/kg
PCB-1242	<28.5		ug/kg
PCB-1248	<28.5		ug/kg
PCB-1254	<28.5		ug/kg
PCB-1260	<28.5		ug/kg
4,4'-DDD	<5.7		ug/kg
4,4-DDE	6.62		ug/kg
4,4'-DDT	7.23		ug/kg
Aldrin	<5.7		ug/kg
Dieldrin	<5.7		ug/kg
Endosulfan I	<5.7		ug/kg
Endosulfan II	<5.7		ug/kg
Endosulfan sulfate	<5.7		ug/kg
Endrin	<5.7		ug/kg
Endrin aldehyde	<5.7		ug/kg
Heptachlor	<5.7		ug/kg
Heptachlor epoxide	<5.7		ug/kg
Hexachlorobenzene	<5.7		ug/kg
Methoxychlor	<5.7		ug/kg
Mirex	<5.7		ug/kg
a-BHC	<5.7		ug/kg
b-BHC	<5.7		ug/kg
d-BHC	<5.7		ug/kg
y-BHC	<5.7		ug/kg
1,2,4,5-Tetrachlorobenzene	<.574		mg/kg
1,2,4-Trichlorobenzene	<.574		mg/kg
1,2-Dichlorobenzene	<.574		mg/kg
1,3-Dichlorobenzene	<.574		mg/kg
1,3-Dinitrobenzene	<.574		mg/kg
1,4-Dichlorobenzene	<.574		mg/kg
2,3,4,6-Tetrachlorophenol	<.574		mg/kg
2,4,5-Trichlorophenol	<.574		mg/kg
2,4,6-Trichlorophenol	<.574		mg/kg
2,4-Dichlorophenol	<.574		mg/kg
2,4-Dimethylphenol	<.574		mg/kg
2,4-Dinitrophenol	<2.87		mg/kg
2,4-Dinitrotoluene	<.574		mg/kg
2,6-Dichlorophenol	<.574		mg/kg
2,6-Dinitrotoluene	<.574		mg/kg
2-Acetylaminofluorene	<.574		mg/kg
2-Chloronaphthalene	<.574		mg/kg
2-Chlorophenol	<.574		mg/kg
2-Methylphenol	<.574		mg/kg
2-Nitroaniline	<.574		mg/kg
2-Nitrophenol	<.574		mg/kg
2-Picoline	<.574		mg/kg
3-,4-methylphenol	<.574		mg/kg
3,3'-Dichlorobenzidine	<.574		mg/kg
3,3'-Dichlorobenzidine	<.574[a]		mg/kg
4,6-Dinitro-2-methylphenol	<2.87		mg/kg
4-Bromophenyl-phenylether	<.574		mg/kg
4-Chloro-3-methylphenol	<2.87		mg/kg
4-Chlorophenyl-phenylether	<.574		mg/kg
4-Nitroaniline	<.574		mg/kg
4-Nitrophenol	<2.87		mg/kg
7,12-Dimethylbenz[a]anthracene	<.574[a]		mg/kg
7,12-Dimethylbenz[a]anthracene	<.574		mg/kg
Acetophenone	<.574		mg/kg
Aniline	<.574		mg/kg
Benzyl Alcohol	<.574		mg/kg
Butylbenzylphthalate	<.574		mg/kg
Di-n-butylphthalate	<.574		mg/kg
Di-n-octylphthalate	<.574		mg/kg
Diethylphthalate	<.574		mg/kg
Dimethylphthalate	<.574		mg/kg
Dinoseb	<.574		mg/kg
Diphenylamine	<.574		mg/kg
Ethyl methanesulfonate	<.574		mg/kg
Hexachlorobenzene	<.574		mg/kg
Hexachlorobutadiene	<.574		mg/kg
Hexachlorocyclopentadiene	<.574		mg/kg
Hexachlorocyclopentadiene	<.574[a]		mg/kg
Hexachloroethane	<.574		mg/kg
Hexachloropropene	<.574		mg/kg
Isophorone	<.574		mg/kg
Methyl methanesulfonate	<.574		mg/kg
Methyl methanesulfonate	<.574[a]		mg/kg
N-Nitroso-di-n-butylamine	<.574		mg/kg
N-Nitroso-di-n-propylamine	<.574		mg/kg
N-Nitrosomorpholine	<.574		mg/kg
N-Nitrosopiperidine	<.574		mg/kg
N-Nitrosopyrrolidine	<.574		mg/kg
Nitrobenzene	<.574		mg/kg
Pentachlorobenzene	<.574		mg/kg
Pentachlorophenol	<2.87		mg/kg
Phenacetin	<.574		mg/kg
Phenol	<.574		mg/kg
Pronamide	<.574		mg/kg
Safrole	<.574		mg/kg
bis(2-Chloroethoxy)methane	<.574		mg/kg
bis(2-Chloroethyl)ether	<.574		mg/kg
bis(2-Chloroisopropyl)ether	<.574		mg/kg
bis(2-Ethylhexyl)phthalate	<.574		mg/kg
p-Dimethylaminoazobenzene	<.574		mg/kg
PAH	**18-SEP-2017**		
1,4-Naphthoquinone	<.574[a]	34	mg/kg
1,4-Naphthoquinone	<.574	34	mg/kg
2-Methylnaphthalene	<.574	34	mg/kg
3-Methylcholanthrene	<.574	34	mg/kg
Acenaphthene	<.574	34	mg/kg
Acenaphthylene	<.574	34	mg/kg
Anthracene	<.574	34	mg/kg
Benzo(a)anthracene	<.574	34	mg/kg
Benzo(a)pyrene	<.574	34	mg/kg
Benzo[b]fluoranthene	<.574	34	mg/kg
Benzo[g,h,i]perylene	<.574	34	mg/kg
Benzo[k]fluoranthene	<.574	34	mg/kg
Chrysene	<.574	34	mg/kg
Dibenz[a,h]anthracene	<.574	34	mg/kg
Dibenzofuran	<.574	34	mg/kg
Fluoranthene	<.574	34	mg/kg
Fluorene	<.574	34	mg/kg
Indeno[1,2,3-cd]pyrene	<.574	34	mg/kg
Naphthalene	<.574	34	mg/kg
Phenanthrene	<.574	34	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
502020 CUYAHOGA R. AT INDEPENDENCE @ OLD ROCKSIDE RD.							
Pyrene	<.574	34	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.			
OTHER	**03-AUG-2017**		
PCB-1016	<72.1		ug/kg
PCB-1221	<72.1		ug/kg
PCB-1232	<72.1		ug/kg
PCB-1242	<72.1		ug/kg
PCB-1248	<72.1		ug/kg
PCB-1254	<72.1		ug/kg
PCB-1260	<72.1		ug/kg
4,4'-DDD	<14.4		ug/kg
4,4-DDE	<14.4		ug/kg
4,4'-DDT	<14.4		ug/kg
Aldrin	<14.4		ug/kg
Dieldrin	<14.4		ug/kg
Endosulfan I	<14.4		ug/kg
Endosulfan II	<14.4		ug/kg
Endosulfan sulfate	<14.4		ug/kg
Endrin	<14.4		ug/kg
Endrin aldehyde	<14.4		ug/kg
Heptachlor	<14.4		ug/kg
Heptachlor epoxide	<14.4		ug/kg
Hexachlorobenzene	<14.4		ug/kg
Methoxychlor	<14.4		ug/kg
Mirex	<14.4		ug/kg
a-BHC	<14.4		ug/kg
b-BHC	<14.4		ug/kg
d-BHC	<14.4		ug/kg
y-BHC	<14.4		ug/kg
1,2,4,5-Tetrachlorobenzene	<1.45		mg/kg
1,2,4-Trichlorobenzene	<1.45		mg/kg
1,2-Dichlorobenzene	<1.45		mg/kg
1,3-Dichlorobenzene	<1.45		mg/kg
1,3-Dinitrobenzene	<1.45		mg/kg
1,4-Dichlorobenzene	<1.45		mg/kg
2,3,4,6-Tetrachlorophenol	<1.45		mg/kg
2,4,5-Trichlorophenol	<1.45		mg/kg
2,4,6-Trichlorophenol	<1.45		mg/kg
2,4-Dichlorophenol	<1.45		mg/kg
2,4-Dimethylphenol	<1.45		mg/kg
2,4-Dinitrophenol	<7.23		mg/kg
2,4-Dinitrotoluene	<1.45		mg/kg
2,6-Dichlorophenol	<1.45		mg/kg
2,6-Dinitrotoluene	<1.45		mg/kg
2-Acetylaminofluorene	<1.45		mg/kg
2-Chloronaphthalene	<1.45		mg/kg
2-Chlorophenol	<1.45		mg/kg
2-Methylphenol	<1.45		mg/kg
2-Nitroaniline	<1.45		mg/kg
2-Nitrophenol	<1.45		mg/kg
2-Picoline	<1.45		mg/kg
2-Picoline	<1.45[a]		mg/kg
3-,4-methylphenol	<1.45		mg/kg
3,3'-Dichlorobenzidine	<1.45		mg/kg
3,3'-Dichlorobenzidine	<1.45[a]		mg/kg
4,6-Dinitro-2-methylphenol	<7.23		mg/kg
4-Bromophenyl-phenylether	<1.45		mg/kg
4-Chloro-3-methylphenol	<7.23		mg/kg
4-Chlorophenyl-phenylether	<1.45		mg/kg
4-Nitroaniline	<1.45		mg/kg
4-Nitrophenol	<7.23		mg/kg
7,12-Dimethylbenz[a]anthracene	<1.45		mg/kg
7,12-Dimethylbenz[a]anthracene	<1.45[a]		mg/kg
Acetophenone	<1.45		mg/kg
Aniline	<1.45		mg/kg
Benzyl Alcohol	<1.45		mg/kg
Butylbenzylphthalate	<1.45		mg/kg
Di-n-butylphthalate	<1.45		mg/kg
Di-n-octylphthalate	<1.45		mg/kg
Diethylphthalate	<1.45		mg/kg
Dimethylphthalate	<1.45		mg/kg
Dinoseb	<1.45		mg/kg
Diphenylamine	<1.45		mg/kg
Ethyl methanesulfonate	<1.45		mg/kg
Hexachlorobenzene	<1.45		mg/kg
Hexachlorobutadiene	<1.45		mg/kg
Hexachlorocyclopentadiene	<1.45		mg/kg
Hexachlorocyclopentadiene	<1.45[a]		mg/kg
Hexachloroethane	<1.45		mg/kg
Hexachloropropene	<1.45		mg/kg
Hexachloropropene	<1.45[a]		mg/kg
Isophorone	<1.45		mg/kg
Methyl methanesulfonate	<1.45		mg/kg
N-Nitroso-di-n-butylamine	<1.45		mg/kg
N-Nitroso-di-n-propylamine	<1.45		mg/kg
N-Nitrosomorpholine	<1.45		mg/kg
N-Nitrosopiperidine	<1.45		mg/kg
N-Nitrosopyrrolidine	<1.45		mg/kg
Nitrobenzene	<1.45		mg/kg
Pentachlorobenzene	<1.45		mg/kg
Pentachlorophenol	<7.23		mg/kg
Phenacetin	<1.45		mg/kg
Phenol	<1.45		mg/kg
Pronamide	<1.45		mg/kg
Safrole	<1.45		mg/kg
bis(2-Chloroethoxy)methane	<1.45		mg/kg
bis(2-Chloroethyl)ether	<1.45		mg/kg
bis(2-Chloroisopropyl)ether	<1.45		mg/kg
bis(2-Ethylhexyl)phthalate	<1.45		mg/kg
p-Dimethylaminoazobenzene	<1.45		mg/kg
PAH	**03-AUG-2017**		
1,4-Naphthoquinone	<1.45	16	mg/kg
1,4-Naphthoquinone	<1.45[a]	16	mg/kg
2-Methylnaphthalene	<1.45	16	mg/kg
3-Methylcholanthrene	<1.45	16	mg/kg
Acenaphthene	<1.45	16	mg/kg
Acenaphthylene	<1.45	16	mg/kg
Anthracene	<1.45	16	mg/kg
Benzo(a)anthracene	<1.45	16	mg/kg
Benzo(a)pyrene	<1.45	16	mg/kg
Benzo[b]fluoranthene	<1.45	16	mg/kg
Benzo[g,h,i]perylene	<1.45	16	mg/kg
Benzo[k]fluoranthene	<1.45	16	mg/kg
Chrysene	<1.45	16	mg/kg
Dibenz[a,h]anthracene	<1.45	16	mg/kg
Dibenzofuran	<1.45	16	mg/kg
Fluoranthene	<1.45	16	mg/kg
Fluorene	<1.45	16	mg/kg
Indeno[1,2,3-cd]pyrene	<1.45	16	mg/kg
Naphthalene	<1.45	16	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
502030 CUYAHOGA R. AT HIRAM RAPIDS @ WINCHELL RD.							
Phenanthrene	<1.45	16	mg/kg				
Pyrene	<1.45	16	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502110 MILL CREEK AT GARFIELD HEIGHTS @ CANAL RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<27.4		ug/kg
PCB-1221	<27.4		ug/kg
PCB-1232	<27.4		ug/kg
PCB-1242	225		ug/kg
PCB-1248	<27.4		ug/kg
PCB-1254	<27.4		ug/kg
PCB-1260	69.9		ug/kg
4,4'-DDD	<5.48		ug/kg
4,4-DDE	7.02		ug/kg
4,4'-DDT	<5.48		ug/kg
Aldrin	<5.48		ug/kg
Dieldrin	<5.48		ug/kg
Endosulfan I	<5.48		ug/kg
Endosulfan II	<5.48		ug/kg
Endosulfan sulfate	<5.48		ug/kg
Endrin	<5.48		ug/kg
Endrin aldehyde	<5.48		ug/kg
Heptachlor	<5.48		ug/kg
Heptachlor epoxide	<5.48		ug/kg
Hexachlorobenzene	<5.48		ug/kg
Methoxychlor	<5.48		ug/kg
Mirex	<5.48		ug/kg
a-BHC	<5.48		ug/kg
b-BHC	<5.48		ug/kg
d-BHC	<5.48		ug/kg
y-BHC	<5.48		ug/kg
1,2,4,5-Tetrachlorobenzene	<.553		mg/kg
1,2,4-Trichlorobenzene	<.553		mg/kg
1,2-Dichlorobenzene	<.553		mg/kg
1,3-Dichlorobenzene	<.553		mg/kg
1,3-Dinitrobenzene	<.553		mg/kg
1,4-Dichlorobenzene	<.553		mg/kg
2,3,4,6-Tetrachlorophenol	<.553		mg/kg
2,4,5-Trichlorophenol	<.553		mg/kg
2,4,6-Trichlorophenol	<.553		mg/kg
2,4-Dichlorophenol	<.553		mg/kg
2,4-Dimethylphenol	<2.77		mg/kg
2,4-Dinitrophenol	<2.77		mg/kg
2,4-Dinitrotoluene	<.553		mg/kg
2,6-Dichlorophenol	<.553		mg/kg
2,6-Dinitrotoluene	<.553		mg/kg
2-Acetylaminofluorene	<.553		mg/kg
2-Chloronaphthalene	<.553		mg/kg
2-Chlorophenol	<.553		mg/kg
2-Methylphenol	<.553		mg/kg
2-Nitroaniline	<.553		mg/kg
2-Nitrophenol	<.553		mg/kg
2-Picoline	<.553		mg/kg
3-,4-methylphenol	<.553		mg/kg
3,3'-Dichlorobenzidine	<.553		mg/kg
4,6-Dinitro-2-methylphenol	<2.77		mg/kg
4-Bromophenyl-phenylether	<.553		mg/kg
4-Chloro-3-methylphenol	<2.77		mg/kg
4-Chlorophenyl-phenylether	<.553		mg/kg
4-Nitroaniline	<.553		mg/kg
4-Nitrophenol	<2.77		mg/kg
7,12-Dimethylbenz[a]anthracene	<.553		mg/kg
Acetophenone	<.553		mg/kg
Aniline	<.553		mg/kg
Aniline	<.553[a]		mg/kg
Benzyl Alcohol	<.553		mg/kg
Butylbenzylphthalate	<.553		mg/kg
Di-n-butylphthalate	<.553		mg/kg
Di-n-octylphthalate	<.553		mg/kg
Diethylphthalate	<.553		mg/kg
Dimethylphthalate	<.553		mg/kg
Dinoseb	<.553		mg/kg
Diphenylamine	<.553		mg/kg
Ethyl methanesulfonate	<.553		mg/kg
Hexachlorobenzene	<.553		mg/kg
Hexachlorobutadiene	<.553		mg/kg
Hexachlorocyclopentadiene	<2.77		mg/kg
Hexachloroethane	<.553		mg/kg
Hexachloropropene	<.553		mg/kg
Isophorone	<.553		mg/kg
Methyl methanesulfonate	<.553		mg/kg
N-Nitroso-di-n-butylamine	<.553		mg/kg
N-Nitroso-di-n-propylamine	<.553		mg/kg
N-Nitrosomorpholine	<.553		mg/kg
N-Nitrosopiperidine	<.553		mg/kg
N-Nitrosopyrrolidine	<.553		mg/kg
Nitrobenzene	<.553		mg/kg
Pentachlorobenzene	<.553		mg/kg
Pentachlorophenol	<2.77		mg/kg
Phenacetin	<.553		mg/kg
Phenol	<.553		mg/kg
Pronamide	<.553		mg/kg
Safrole	<.553		mg/kg
bis(2-Chloroethoxy)methane	<.553		mg/kg
bis(2-Chloroethyl)ether	<.553		mg/kg
bis(2-Chloroisopropyl)ether	<.553		mg/kg
bis(2-Ethylhexyl)phthalate	<.553		mg/kg
p-Dimethylaminoazobenzene	<.553		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.553	9	mg/kg
2-Methylnaphthalene	<.553	9	mg/kg
3-Methylcholanthrene	<.553	9	mg/kg
Acenaphthene	<.553	9	mg/kg
Acenaphthylene	<.553	9	mg/kg
Anthracene	<.553	9	mg/kg
Benzo(a)anthracene	.828	26	mg/kg
Benzo(a)pyrene	.988	31	mg/kg
Benzo[b]fluoranthene	1.21	38	mg/kg
Benzo[g,h,i]perylene	.985	31	mg/kg
Benzo[k]fluoranthene	.809	25	mg/kg
Chrysene	1.28	40	mg/kg
Dibenz[a,h]anthracene	<.553	9	mg/kg
Dibenzofuran	<.553	9	mg/kg
Fluoranthene	2.56	80	mg/kg
Fluorene	<.553	9	mg/kg
Indeno[1,2,3-cd]pyrene	1.04	33	mg/kg
Naphthalene	<.553	9	mg/kg
Phenanthrene	1.09	34	mg/kg
Pyrene	2.03	64	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502120 BIG CREEK @ JENNINGS AVE.			
OTHER	**13-AUG-2018**		
PCB-1016	<25.1		ug/kg
PCB-1221	<25.1		ug/kg
PCB-1232	<25.1		ug/kg
PCB-1242	55.4		ug/kg
PCB-1248	<25.1		ug/kg
PCB-1254	<25.1		ug/kg
PCB-1260	127		ug/kg
4,4'-DDD	<5.02		ug/kg
4,4-DDE	<5.02		ug/kg
4,4'-DDT	5.69		ug/kg
Aldrin	<5.02		ug/kg
Dieldrin	6.15		ug/kg
Endosulfan I	<5.02		ug/kg
Endosulfan II	<5.02		ug/kg
Endosulfan sulfate	<5.02		ug/kg
Endrin	<5.02		ug/kg
Endrin aldehyde	<5.02		ug/kg
Heptachlor	<5.02		ug/kg
Heptachlor epoxide	<5.02		ug/kg
Hexachlorobenzene	<5.02		ug/kg
Methoxychlor	<5.02		ug/kg
Mirex	<5.02		ug/kg
a-BHC	<5.02		ug/kg
b-BHC	<5.02		ug/kg
d-BHC	<5.02		ug/kg
y-BHC	<5.02		ug/kg
1,2,4,5-Tetrachlorobenzene	<.494		mg/kg
1,2,4-Trichlorobenzene	<.494		mg/kg
1,2-Dichlorobenzene	<.494		mg/kg
1,3-Dichlorobenzene	<.494		mg/kg
1,3-Dinitrobenzene	<.494		mg/kg
1,4-Dichlorobenzene	<.494		mg/kg
2,3,4,6-Tetrachlorophenol	<.494		mg/kg
2,4,5-Trichlorophenol	<.494		mg/kg
2,4,6-Trichlorophenol	<.494		mg/kg
2,4-Dichlorophenol	<.494		mg/kg
2,4-Dimethylphenol	<2.47		mg/kg
2,4-Dinitrophenol	<2.47		mg/kg
2,4-Dinitrotoluene	<.494		mg/kg
2,6-Dichlorophenol	<.494		mg/kg
2,6-Dinitrotoluene	<.494		mg/kg
2-Acetylaminofluorene	<.494		mg/kg
2-Chloronaphthalene	<.494		mg/kg
2-Chlorophenol	<.494		mg/kg
2-Methylphenol	<.494		mg/kg
2-Nitroaniline	<.494		mg/kg
2-Nitrophenol	<.494		mg/kg
2-Picoline	<.494		mg/kg
3-,4-methylphenol	<.494		mg/kg
3,3'-Dichlorobenzidine	<.494		mg/kg
4,6-Dinitro-2-methylphenol	<2.47		mg/kg
4-Bromophenyl-phenylether	<.494		mg/kg
4-Chloro-3-methylphenol	<2.47		mg/kg
4-Chlorophenyl-phenylether	<.494		mg/kg
4-Nitroaniline	<.494		mg/kg
4-Nitrophenol	<2.47		mg/kg
7,12-Dimethylbenz[a]anthracene	<.494		mg/kg
Acetophenone	<.494		mg/kg
Aniline	<.494		mg/kg
Aniline	<.494[a]		mg/kg
Benzyl Alcohol	<.494		mg/kg
Butylbenzylphthalate	<.494		mg/kg
Di-n-butylphthalate	<.494		mg/kg
Di-n-octylphthalate	<.494		mg/kg
Diethylphthalate	<.494		mg/kg
Dimethylphthalate	<.494		mg/kg
Dinoseb	<.494		mg/kg
Diphenylamine	<.494		mg/kg
Ethyl methanesulfonate	<.494		mg/kg
Hexachlorobenzene	<.494		mg/kg
Hexachlorobutadiene	<.494		mg/kg
Hexachlorocyclopentadiene	<2.47		mg/kg
Hexachloroethane	<.494		mg/kg
Hexachloropropene	<.494		mg/kg
Isophorone	<.494		mg/kg
Methyl methanesulfonate	<.494		mg/kg
N-Nitroso-di-n-butylamine	<.494		mg/kg
N-Nitroso-di-n-propylamine	<.494		mg/kg
N-Nitrosomorpholine	<.494		mg/kg
N-Nitrosopiperidine	<.494		mg/kg
N-Nitrosopyrrolidine	<.494		mg/kg
Nitrobenzene	<.494		mg/kg
Pentachlorobenzene	<.494		mg/kg
Pentachlorophenol	<2.47		mg/kg
Phenacetin	<.494		mg/kg
Phenol	<.494		mg/kg
Pronamide	<.494		mg/kg
Safrole	<.494		mg/kg
bis(2-Chloroethoxy)methane	<.494		mg/kg
bis(2-Chloroethyl)ether	<.494		mg/kg
bis(2-Chloroisopropyl)ether	<.494		mg/kg
bis(2-Ethylhexyl)phthalate	<.494		mg/kg
p-Dimethylaminoazobenzene	<.494		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.494	17	mg/kg
2-Methylnaphthalene	<.494	17	mg/kg
3-Methylcholanthrene	<.494	17	mg/kg
Acenaphthene	<.494	17	mg/kg
Acenaphthylene	<.494	17	mg/kg
Anthracene	<.494	17	mg/kg
Benzo(a)anthracene	.852	58	mg/kg
Benzo(a)pyrene	.775	53	mg/kg
Benzo[b]fluoranthene	.909	62	mg/kg
Benzo[g,h,i]perylene	.701	48	mg/kg
Benzo[k]fluoranthene	.622	42	mg/kg
Chrysene	1.14	78	mg/kg
Dibenz[a,h]anthracene	<.494	17	mg/kg
Dibenzofuran	<.494	17	mg/kg
Fluoranthene	2.87	195	mg/kg
Fluorene	<.494	17	mg/kg
Indeno[1,2,3-cd]pyrene	.753	51	mg/kg
Naphthalene	<.494	17	mg/kg
Phenanthrene	1.29	88	mg/kg
Pyrene	2.23	152	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.			
OTHER	**18-SEP-2017**		
PCB-1016	<33.4		ug/kg
PCB-1221	<33.4		ug/kg
PCB-1232	<33.4		ug/kg
PCB-1242	50.2		ug/kg
PCB-1248	<33.4		ug/kg
PCB-1254	<33.4		ug/kg
PCB-1260	48.5		ug/kg
4,4'-DDD	<6.68		ug/kg
4,4-DDE	9.85		ug/kg
4,4'-DDT	6.97		ug/kg
Aldrin	<6.68		ug/kg
Dieldrin	<6.68		ug/kg
Endosulfan I	<6.68		ug/kg
Endosulfan II	<6.68		ug/kg
Endosulfan sulfate	<6.68		ug/kg
Endrin	<6.68		ug/kg
Endrin aldehyde	<6.68		ug/kg
Heptachlor	<6.68		ug/kg
Heptachlor epoxide	<6.68		ug/kg
Hexachlorobenzene	<6.68		ug/kg
Methoxychlor	<6.68		ug/kg
Mirex	<6.68		ug/kg
a-BHC	<6.68		ug/kg
b-BHC	<6.68		ug/kg
d-BHC	<6.68		ug/kg
y-BHC	<6.68		ug/kg
1,2,4,5-Tetrachlorobenzene	<.672		mg/kg
1,2,4-Trichlorobenzene	<.672		mg/kg
1,2-Dichlorobenzene	<.672		mg/kg
1,3-Dichlorobenzene	<.672		mg/kg
1,3-Dinitrobenzene	<.672		mg/kg
1,4-Dichlorobenzene	<.672		mg/kg
2,3,4,6-Tetrachlorophenol	<.672		mg/kg
2,4,5-Trichlorophenol	<.672		mg/kg
2,4,6-Trichlorophenol	<.672		mg/kg
2,4-Dichlorophenol	<.672		mg/kg
2,4-Dimethylphenol	<.672		mg/kg
2,4-Dinitrophenol	<3.36		mg/kg
2,4-Dinitrotoluene	<.672		mg/kg
2,6-Dichlorophenol	<.672		mg/kg
2,6-Dinitrotoluene	<.672		mg/kg
2-Acetylaminofluorene	<.672		mg/kg
2-Chloronaphthalene	<.672		mg/kg
2-Chlorophenol	<.672		mg/kg
2-Methylphenol	<.672		mg/kg
2-Nitroaniline	<.672		mg/kg
2-Nitrophenol	<.672		mg/kg
2-Picoline	<.672		mg/kg
3-,4-methylphenol	<.672		mg/kg
3,3'-Dichlorobenzidine	<.672		mg/kg
3,3'-Dichlorobenzidine	<.672[a]		mg/kg
4,6-Dinitro-2-methylphenol	<3.36		mg/kg
4-Bromophenyl-phenylether	<.672		mg/kg
4-Chloro-3-methylphenol	<3.36		mg/kg
4-Chlorophenyl-phenylether	<.672		mg/kg
4-Nitroaniline	<.672		mg/kg
4-Nitrophenol	<3.36		mg/kg
7,12-Dimethylbenz[a]anthracene	<.672		mg/kg
7,12-Dimethylbenz[a]anthracene	<.672[a]		mg/kg
Acetophenone	<.672		mg/kg
Aniline	<.672		mg/kg
Benzyl Alcohol	<.672		mg/kg
Butylbenzylphthalate	<.672		mg/kg
Di-n-butylphthalate	<.672		mg/kg
Di-n-octylphthalate	<.672		mg/kg
Diethylphthalate	<.672		mg/kg
Dimethylphthalate	<.672		mg/kg
Dinoseb	<.672		mg/kg
Diphenylamine	<.672		mg/kg
Ethyl methanesulfonate	<.672		mg/kg
Hexachlorobenzene	<.672		mg/kg
Hexachlorobutadiene	<.672		mg/kg
Hexachlorocyclopentadiene	<.672		mg/kg
Hexachlorocyclopentadiene	<.672[a]		mg/kg
Hexachloroethane	<.672		mg/kg
Hexachloropropene	<.672		mg/kg
Isophorone	<.672		mg/kg
Methyl methanesulfonate	<.672		mg/kg
Methyl methanesulfonate	<.672[a]		mg/kg
N-Nitroso-di-n-butylamine	<.672		mg/kg
N-Nitroso-di-n-propylamine	<.672		mg/kg
N-Nitrosomorpholine	<.672		mg/kg
N-Nitrosopiperidine	<.672		mg/kg
N-Nitrosopyrrolidine	<.672		mg/kg
Nitrobenzene	<.672		mg/kg
Pentachlorobenzene	<.672		mg/kg
Pentachlorophenol	<3.36		mg/kg
Phenacetin	<.672		mg/kg
Phenol	<.672		mg/kg
Pronamide	<.672		mg/kg
Safrole	<.672		mg/kg
bis(2-Chloroethoxy)methane	<.672		mg/kg
bis(2-Chloroethyl)ether	<.672		mg/kg
bis(2-Chloroisopropyl)ether	<.672		mg/kg
bis(2-Ethylhexyl)phthalate	<.672		mg/kg
p-Dimethylaminoazobenzene	<.672		mg/kg
PAH	**18-SEP-2017**		
1,4-Naphthoquinone	<.672	26	mg/kg
1,4-Naphthoquinone	<.672[a]	26	mg/kg
2-Methylnaphthalene	<.672	26	mg/kg
3-Methylcholanthrene	<.672	26	mg/kg
Acenaphthene	<.672	26	mg/kg
Acenaphthylene	<.672	26	mg/kg
Anthracene	<.672	26	mg/kg
Benzo(a)anthracene	.773	61	mg/kg
Benzo(a)pyrene	.964	76	mg/kg
Benzo[b]fluoranthene	1.09	86	mg/kg
Benzo[g,h,i]perylene	.77	61	mg/kg
Benzo[k]fluoranthene	.833	66	mg/kg
Chrysene	.944	74	mg/kg
Dibenz[a,h]anthracene	<.672	26	mg/kg
Dibenzofuran	<.672	26	mg/kg
Fluoranthene	2.08	164	mg/kg
Fluorene	<.672	26	mg/kg
Indeno[1,2,3-cd]pyrene	.856	67	mg/kg
Naphthalene	<.672	26	mg/kg
Phenanthrene	.784	62	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
502130 CUYAHOGA R. AT CLEVELAND @ LOWER HARVARD AVE.							
Pyrene	1.58	124	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502150 CUYAHOGA R. AT AKRON @ CUYAHOGA ST.			
OTHER	**24-OCT-2017**		
PCB-1016	<31.7		ug/kg
PCB-1221	<31.7		ug/kg
PCB-1232	<31.7		ug/kg
PCB-1242	<31.7		ug/kg
PCB-1248	<31.7		ug/kg
PCB-1254	<31.7		ug/kg
PCB-1254	<31.7[i]		ug/kg
PCB-1260	<31.7		ug/kg
4,4'-DDD	<6.33		ug/kg
4,4-DDE	<6.33		ug/kg
4,4'-DDT	<6.33		ug/kg
Aldrin	<6.33		ug/kg
Dieldrin	<6.33		ug/kg
Endosulfan I	<6.33		ug/kg
Endosulfan II	<6.33		ug/kg
Endosulfan sulfate	<6.33		ug/kg
Endrin	<6.33		ug/kg
Endrin aldehyde	<6.33		ug/kg
Heptachlor	<6.33		ug/kg
Heptachlor epoxide	<6.33		ug/kg
Hexachlorobenzene	<6.33		ug/kg
Methoxychlor	<6.33		ug/kg
Mirex	<6.33		ug/kg
a-BHC	<6.33		ug/kg
b-BHC	<6.33		ug/kg
d-BHC	<6.33		ug/kg
y-BHC	<6.33		ug/kg
1,2,4,5-Tetrachlorobenzene	<.633		mg/kg
1,2,4-Trichlorobenzene	<.633		mg/kg
1,2-Dichlorobenzene	<.633		mg/kg
1,3-Dichlorobenzene	<.633		mg/kg
1,3-Dinitrobenzene	<.633		mg/kg
1,4-Dichlorobenzene	<.633		mg/kg
2,3,4,6-Tetrachlorophenol	<.633		mg/kg
2,4,5-Trichlorophenol	<.633		mg/kg
2,4,6-Trichlorophenol	<.633		mg/kg
2,4-Dichlorophenol	<.633		mg/kg
2,4-Dimethylphenol	<.633		mg/kg
2,4-Dinitrophenol	<3.17		mg/kg
2,4-Dinitrotoluene	<.633		mg/kg
2,6-Dichlorophenol	<.633		mg/kg
2,6-Dinitrotoluene	<.633		mg/kg
2-Acetylaminofluorene	<.633		mg/kg
2-Chloronaphthalene	<.633		mg/kg
2-Chlorophenol	<.633		mg/kg
2-Methylphenol	<.633		mg/kg
2-Nitroaniline	<.633		mg/kg
2-Nitrophenol	<.633		mg/kg
2-Picoline	<.633		mg/kg
3-,4-methylphenol	<.633		mg/kg
3,3'-Dichlorobenzidine	<.633		mg/kg
4,6-Dinitro-2-methylphenol	<3.17		mg/kg
4-Bromophenyl-phenylether	<.633		mg/kg
4-Chloro-3-methylphenol	<3.17		mg/kg
4-Chlorophenyl-phenylether	<.633		mg/kg
4-Nitroaniline	<.633		mg/kg
4-Nitrophenol	<3.17		mg/kg
7,12-Dimethylbenz[a]anthracene	<.633[a]		mg/kg
7,12-Dimethylbenz[a]anthracene	<.633		mg/kg
Acetophenone	<.633		mg/kg
Aniline	<.633		mg/kg
Benzyl Alcohol	<.633		mg/kg
Butylbenzylphthalate	<.633		mg/kg
Di-n-butylphthalate	<.633		mg/kg
Di-n-octylphthalate	<.633		mg/kg
Diethylphthalate	<.633		mg/kg
Dimethylphthalate	<.633		mg/kg
Dinoseb	<.633		mg/kg
Diphenylamine	<.633		mg/kg
Ethyl methanesulfonate	<.633		mg/kg
Hexachlorobenzene	<.633		mg/kg
Hexachlorobutadiene	<.633		mg/kg
Hexachlorocyclopentadiene	<.633[a]		mg/kg
Hexachlorocyclopentadiene	<.633		mg/kg
Hexachloroethane	<.633		mg/kg
Hexachloropropene	<.633		mg/kg
Isophorone	<.633		mg/kg
Methyl methanesulfonate	<.633		mg/kg
N-Nitroso-di-n-butylamine	<.633		mg/kg
N-Nitroso-di-n-propylamine	<.633		mg/kg
N-Nitrosomorpholine	<.633		mg/kg
N-Nitrosopiperidine	<.633		mg/kg
N-Nitrosopyrrolidine	<.633		mg/kg
Nitrobenzene	<.633		mg/kg
Pentachlorobenzene	<.633		mg/kg
Pentachlorophenol	<3.17		mg/kg
Phenacetin	<.633		mg/kg
Phenol	<.633		mg/kg
Pronamide	<.633		mg/kg
Safrole	<.633		mg/kg
bis(2-Chloroethoxy)methane	<.633		mg/kg
bis(2-Chloroethyl)ether	<.633		mg/kg
bis(2-Chloroisopropyl)ether	<.633		mg/kg
bis(2-Ethylhexyl)phthalate	<.633		mg/kg
p-Dimethylaminoazobenzene	<.633		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.633	10	mg/kg
2-Methylnaphthalene	<.633	10	mg/kg
3-Methylcholanthrene	<.633	10	mg/kg
Acenaphthene	<.633	10	mg/kg
Acenaphthylene	<.633	10	mg/kg
Anthracene	<.633	10	mg/kg
Benzo(a)anthracene	.655	21	mg/kg
Benzo(a)pyrene	.738	24	mg/kg
Benzo[b]fluoranthene	.91	29	mg/kg
Benzo[g,h,i]perylene	<.633	10	mg/kg
Benzo[k]fluoranthene	<.633	10	mg/kg
Chrysene	.992	32	mg/kg
Dibenz[a,h]anthracene	<.633	10	mg/kg
Dibenzofuran	<.633	10	mg/kg
Fluoranthene	1.93	62	mg/kg
Fluorene	<.633	10	mg/kg
Indeno[1,2,3-cd]pyrene	<.633	10	mg/kg
Naphthalene	<.633	10	mg/kg
Phenanthrene	.795	26	mg/kg
Pyrene	1.44	47	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502170 CUYAHOGA R. @ STATION RD. (IMPOUNDED)			
OTHER	**24-OCT-2017**		
PCB-1016	<38.9		ug/kg
PCB-1221	<38.9		ug/kg
PCB-1232	<38.9		ug/kg
PCB-1242	<38.9		ug/kg
PCB-1248	<38.9		ug/kg
PCB-1254	<38.9		ug/kg
PCB-1260	<38.9		ug/kg
4,4'-DDD	<7.78		ug/kg
4,4-DDE	15.1		ug/kg
4,4'-DDT	12		ug/kg
Aldrin	<7.78		ug/kg
Dieldrin	<7.78		ug/kg
Endosulfan I	<7.78		ug/kg
Endosulfan II	<7.78		ug/kg
Endosulfan sulfate	<7.78		ug/kg
Endrin	<7.78		ug/kg
Endrin aldehyde	<7.78		ug/kg
Heptachlor	<7.78		ug/kg
Heptachlor epoxide	<7.78		ug/kg
Hexachlorobenzene	<7.78		ug/kg
Methoxychlor	15.9[i]		ug/kg
Mirex	<7.78		ug/kg
a-BHC	<7.78		ug/kg
b-BHC	<7.78		ug/kg
d-BHC	<7.78		ug/kg
y-BHC	<7.78		ug/kg
1,2,4,5-Tetrachlorobenzene	<.778		mg/kg
1,2,4-Trichlorobenzene	<.778		mg/kg
1,2-Dichlorobenzene	<.778		mg/kg
1,3-Dichlorobenzene	<.778		mg/kg
1,3-Dinitrobenzene	<.778		mg/kg
1,4-Dichlorobenzene	<.778		mg/kg
2,3,4,6-Tetrachlorophenol	<.778		mg/kg
2,4,5-Trichlorophenol	<.778		mg/kg
2,4,6-Trichlorophenol	<.778		mg/kg
2,4-Dichlorophenol	<.778		mg/kg
2,4-Dimethylphenol	<.778		mg/kg
2,4-Dinitrophenol	<3.89		mg/kg
2,4-Dinitrotoluene	<.778		mg/kg
2,6-Dichlorophenol	<.778		mg/kg
2,6-Dinitrotoluene	<.778		mg/kg
2-Acetylaminofluorene	<.778		mg/kg
2-Chloronaphthalene	<.778		mg/kg
2-Chlorophenol	<.778		mg/kg
2-Methylphenol	<.778		mg/kg
2-Nitroaniline	<.778		mg/kg
2-Nitrophenol	<.778		mg/kg
2-Picoline	<.778		mg/kg
2-Picoline	<.778[a]		mg/kg
3-,4-methylphenol	.968		mg/kg
3,3'-Dichlorobenzidine	<.778		mg/kg
4,6-Dinitro-2-methylphenol	<3.89		mg/kg
4-Bromophenyl-phenylether	<.778		mg/kg
4-Chloro-3-methylphenol	<3.89		mg/kg
4-Chlorophenyl-phenylether	<.778		mg/kg
4-Nitroaniline	<.778		mg/kg
4-Nitrophenol	<3.89		mg/kg
7,12-Dimethylbenz[a]anthracene	<.778		mg/kg
Acetophenone	<.778		mg/kg
Aniline	<.778		mg/kg
Benzyl Alcohol	<.778		mg/kg
Butylbenzylphthalate	<.778		mg/kg
Di-n-butylphthalate	<.778		mg/kg
Di-n-octylphthalate	<.778		mg/kg
Diethylphthalate	<.778		mg/kg
Dimethylphthalate	<.778		mg/kg
Dinoseb	<.778		mg/kg
Diphenylamine	<.778		mg/kg
Ethyl methanesulfonate	<.778		mg/kg
Hexachlorobenzene	<.778		mg/kg
Hexachlorobutadiene	<.778		mg/kg
Hexachlorocyclopentadiene	<.778		mg/kg
Hexachlorocyclopentadiene	<.778[a]		mg/kg
Hexachloroethane	<.778		mg/kg
Hexachloropropene	<.778		mg/kg
Isophorone	<.778		mg/kg
Methyl methanesulfonate	<.778		mg/kg
Methyl methanesulfonate	<.778[a]		mg/kg
N-Nitroso-di-n-butylamine	<.778		mg/kg
N-Nitroso-di-n-propylamine	<.778		mg/kg
N-Nitrosomorpholine	<.778		mg/kg
N-Nitrosopiperidine	<.778		mg/kg
N-Nitrosopyrrolidine	<.778		mg/kg
Nitrobenzene	<.778		mg/kg
Pentachlorobenzene	<.778		mg/kg
Pentachlorophenol	<3.89		mg/kg
Phenacetin	<.778		mg/kg
Phenol	<.778		mg/kg
Pronamide	<.778		mg/kg
Safrole	<.778		mg/kg
bis(2-Chloroethoxy)methane	<.778		mg/kg
bis(2-Chloroethyl)ether	<.778		mg/kg
bis(2-Chloroisopropyl)ether	<.778		mg/kg
bis(2-Ethylhexyl)phthalate	<.778		mg/kg
p-Dimethylaminoazobenzene	<.778		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.778	19	mg/kg
2-Methylnaphthalene	<.778	19	mg/kg
3-Methylcholanthrene	<.778	19	mg/kg
Acenaphthene	<.778	19	mg/kg
Acenaphthylene	<.778	19	mg/kg
Anthracene	<.778	19	mg/kg
Benzo(a)anthracene	<.778	19	mg/kg
Benzo(a)pyrene	<.778	19	mg/kg
Benzo[b]fluoranthene	<.778	19	mg/kg
Benzo[g,h,i]perylene	<.778	19	mg/kg
Benzo[k]fluoranthene	<.778	19	mg/kg
Chrysene	<.778	19	mg/kg
Dibenz[a,h]anthracene	<.778	19	mg/kg
Dibenzofuran	<.778	19	mg/kg
Fluoranthene	<.778	19	mg/kg
Fluorene	<.778	19	mg/kg
Indeno[1,2,3-cd]pyrene	<.778	19	mg/kg
Naphthalene	<.778	19	mg/kg
Phenanthrene	<.778	19	mg/kg
Pyrene	<.778	19	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH			
OTHER	**23-OCT-2018**		
PCB-1016	<28		ug/kg
PCB-1221	<28		ug/kg
PCB-1232	<28		ug/kg
PCB-1242	40		ug/kg
PCB-1248	<28		ug/kg
PCB-1254	127		ug/kg
PCB-1260	58.7		ug/kg
4,4'-DDD	<5.6		ug/kg
4,4-DDE	<5.6		ug/kg
4,4'-DDT	<5.6		ug/kg
Aldrin	<5.6		ug/kg
Dieldrin	<5.6		ug/kg
Endosulfan I	<5.6		ug/kg
Endosulfan II	<5.6		ug/kg
Endosulfan sulfate	<5.6		ug/kg
Endrin	<5.6		ug/kg
Endrin aldehyde	<5.6		ug/kg
Heptachlor	<5.6		ug/kg
Heptachlor epoxide	<5.6		ug/kg
Hexachlorobenzene	<5.6		ug/kg
Methoxychlor	<5.6		ug/kg
Mirex	<5.6		ug/kg
a-BHC	<5.6		ug/kg
b-BHC	<5.6		ug/kg
d-BHC	<5.6		ug/kg
y-BHC	<5.6		ug/kg
1,2,4,5-Tetrachlorobenzene	<.559		mg/kg
1,2,4-Trichlorobenzene	<.559		mg/kg
1,2-Dichlorobenzene	<.559		mg/kg
1,3-Dichlorobenzene	<.559		mg/kg
1,3-Dinitrobenzene	<.559		mg/kg
1,4-Dichlorobenzene	<.559		mg/kg
2,3,4,6-Tetrachlorophenol	<.559		mg/kg
2,4,5-Trichlorophenol	<.559		mg/kg
2,4,6-Trichlorophenol	<.559		mg/kg
2,4-Dichlorophenol	<.559		mg/kg
2,4-Dimethylphenol	<2.79		mg/kg
2,4-Dinitrophenol	<2.79		mg/kg
2,4-Dinitrotoluene	<.559		mg/kg
2,6-Dichlorophenol	<.559		mg/kg
2,6-Dinitrotoluene	<.559		mg/kg
2-Acetylaminofluorene	<.559		mg/kg
2-Chloronaphthalene	<.559		mg/kg
2-Chlorophenol	<.559		mg/kg
2-Methylphenol	<.559		mg/kg
2-Nitroaniline	<.559		mg/kg
2-Nitrophenol	<.559		mg/kg
2-Picoline	<.559		mg/kg
3-,4-methylphenol	.708		mg/kg
3,3'-Dichlorobenzidine	<.559		mg/kg
4,6-Dinitro-2-methylphenol	<2.79		mg/kg
4-Bromophenyl-phenylether	<.559		mg/kg
4-Chloro-3-methylphenol	<2.79		mg/kg
4-Chlorophenyl-phenylether	<.559		mg/kg
4-Nitroaniline	<.559		mg/kg
4-Nitrophenol	<2.79		mg/kg
7,12-Dimethylbenz[a]anthracene	<.559		mg/kg
7,12-Dimethylbenz[a]anthracene	<.559[a]		mg/kg
Acetophenone	<.559		mg/kg
Aniline	<.559		mg/kg
Aniline	<.559[a]		mg/kg
Benzyl Alcohol	<.559		mg/kg
Butylbenzylphthalate	<.559		mg/kg
Di-n-butylphthalate	<.559		mg/kg
Di-n-octylphthalate	<.559		mg/kg
Diethylphthalate	<.559		mg/kg
Dimethylphthalate	<.559		mg/kg
Dinoseb	<.559		mg/kg
Diphenylamine	<.559		mg/kg
Ethyl methanesulfonate	<.559		mg/kg
Hexachlorobenzene	<.559		mg/kg
Hexachlorobutadiene	<.559		mg/kg
Hexachlorocyclopentadiene	<2.79[a]		mg/kg
Hexachlorocyclopentadiene	<2.79		mg/kg
Hexachloroethane	<.559		mg/kg
Hexachloropropene	<.559		mg/kg
Isophorone	<.559		mg/kg
Methyl methanesulfonate	<.559		mg/kg
N-Nitroso-di-n-butylamine	<.559		mg/kg
N-Nitroso-di-n-butylamine	<.559[a]		mg/kg
N-Nitroso-di-n-propylamine	<.559		mg/kg
N-Nitrosomorpholine	<.559		mg/kg
N-Nitrosopiperidine	<.559		mg/kg
N-Nitrosopyrrolidine	<.559		mg/kg
Nitrobenzene	<.559		mg/kg
Pentachlorobenzene	<.559		mg/kg
Pentachlorophenol	<2.79		mg/kg
Phenacetin	<.559		mg/kg
Phenol	<.559		mg/kg
Pronamide	<.559		mg/kg
Safrole	<.559		mg/kg
bis(2-Chloroethoxy)methane	<.559		mg/kg
bis(2-Chloroethyl)ether	<.559		mg/kg
bis(2-Chloroisopropyl)ether	<.559		mg/kg
bis(2-Ethylhexyl)phthalate	<.559		mg/kg
p-Dimethylaminoazobenzene	<.559		mg/kg
PAH	**23-OCT-2018**		
1,4-Naphthoquinone	<.559	11	mg/kg
1,4-Naphthoquinone	<.559[a]	11	mg/kg
2-Methylnaphthalene	<.559	11	mg/kg
2-Methylnaphthalene	<.559[a]	11	mg/kg
3-Methylcholanthrene	<.559	11	mg/kg
Acenaphthene	<.559	11	mg/kg
Acenaphthylene	<.559	11	mg/kg
Anthracene	<.559	11	mg/kg
Benzo(a)anthracene	1.26	50	mg/kg
Benzo(a)pyrene	1.22	49	mg/kg
Benzo[b]fluoranthene	1.63	65	mg/kg
Benzo[g,h,i]perylene	1.14	46	mg/kg
Benzo[k]fluoranthene	1.29	52	mg/kg
Chrysene	1.92	77	mg/kg
Dibenz[a,h]anthracene	<.559	11	mg/kg
Dibenzofuran	<.559	11	mg/kg
Fluoranthene	4.01	160	mg/kg
Fluorene	<.559	11	mg/kg
Indeno[1,2,3-cd]pyrene	1.21	48	mg/kg
Naphthalene	<.559	11	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
502180 L. CUYAHOGA R. AT AKRON, NEAR MOUTH							
Phenanthrene	1.79	72	mg/kg				
Pyrene	3.19	128	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01A25 CUYAHOGA R. UPST. NEORSD SOUTHERLY WWTP			
OTHER	**18-SEP-2017**		
PCB-1016	<32.4		ug/kg
PCB-1221	<32.4		ug/kg
PCB-1232	<32.4		ug/kg
PCB-1242	36.8		ug/kg
PCB-1248	<32.4		ug/kg
PCB-1254	<32.4		ug/kg
PCB-1260	<32.4		ug/kg
4,4'-DDD	<6.48		ug/kg
4,4-DDE	8.15		ug/kg
4,4'-DDT	6.82		ug/kg
Aldrin	<6.48		ug/kg
Dieldrin	<6.48		ug/kg
Endosulfan I	<6.48		ug/kg
Endosulfan II	<6.48		ug/kg
Endosulfan sulfate	<6.48		ug/kg
Endrin	<6.48		ug/kg
Endrin aldehyde	<6.48		ug/kg
Heptachlor	<6.48		ug/kg
Heptachlor epoxide	<6.48		ug/kg
Hexachlorobenzene	<6.48		ug/kg
Methoxychlor	<6.48		ug/kg
Mirex	<6.48		ug/kg
a-BHC	<6.48		ug/kg
b-BHC	<6.48		ug/kg
d-BHC	<6.48		ug/kg
y-BHC	<6.48		ug/kg
1,2,4,5-Tetrachlorobenzene	<.649		mg/kg
1,2,4-Trichlorobenzene	<.649		mg/kg
1,2-Dichlorobenzene	<.649		mg/kg
1,3-Dichlorobenzene	<.649		mg/kg
1,3-Dinitrobenzene	<.649		mg/kg
1,4-Dichlorobenzene	<.649		mg/kg
2,3,4,6-Tetrachlorophenol	<.649		mg/kg
2,4,5-Trichlorophenol	<.649		mg/kg
2,4,6-Trichlorophenol	<.649		mg/kg
2,4-Dichlorophenol	<.649		mg/kg
2,4-Dimethylphenol	<.649		mg/kg
2,4-Dinitrophenol	<3.25		mg/kg
2,4-Dinitrotoluene	<.649		mg/kg
2,6-Dichlorophenol	<.649		mg/kg
2,6-Dinitrotoluene	<.649		mg/kg
2-Acetylaminofluorene	<.649		mg/kg
2-Chloronaphthalene	<.649		mg/kg
2-Chlorophenol	<.649		mg/kg
2-Methylphenol	<.649		mg/kg
2-Nitroaniline	<.649		mg/kg
2-Nitrophenol	<.649		mg/kg
2-Picoline	<.649		mg/kg
3-,4-methylphenol	<.649		mg/kg
3,3'-Dichlorobenzidine	<.649		mg/kg
3,3'-Dichlorobenzidine	<.649[a]		mg/kg
4,6-Dinitro-2-methylphenol	<3.25		mg/kg
4-Bromophenyl-phenylether	<.649		mg/kg
4-Chloro-3-methylphenol	<3.25		mg/kg
4-Chlorophenyl-phenylether	<.649		mg/kg
4-Nitroaniline	<.649		mg/kg
4-Nitrophenol	<3.25		mg/kg
7,12-Dimethylbenz[a]anthracene	<.649		mg/kg
7,12-Dimethylbenz[a]anthracene	<.649[a]		mg/kg
Acetophenone	<.649		mg/kg
Aniline	<.649		mg/kg
Benzyl Alcohol	<.649		mg/kg
Butylbenzylphthalate	<.649		mg/kg
Di-n-butylphthalate	<.649		mg/kg
Di-n-octylphthalate	<.649		mg/kg
Diethylphthalate	<.649		mg/kg
Dimethylphthalate	<.649		mg/kg
Dinoseb	<.649		mg/kg
Diphenylamine	<.649		mg/kg
Ethyl methanesulfonate	<.649		mg/kg
Hexachlorobenzene	<.649		mg/kg
Hexachlorobutadiene	<.649		mg/kg
Hexachlorocyclopentadiene	<.649		mg/kg
Hexachlorocyclopentadiene	<.649[a]		mg/kg
Hexachloroethane	<.649		mg/kg
Hexachloropropene	<.649		mg/kg
Isophorone	<.649		mg/kg
Methyl methanesulfonate	<.649		mg/kg
Methyl methanesulfonate	<.649[a]		mg/kg
N-Nitroso-di-n-butylamine	<.649		mg/kg
N-Nitroso-di-n-propylamine	<.649		mg/kg
N-Nitrosomorpholine	<.649		mg/kg
N-Nitrosopiperidine	<.649		mg/kg
N-Nitrosopyrrolidine	<.649		mg/kg
Nitrobenzene	<.649		mg/kg
Pentachlorobenzene	<.649		mg/kg
Pentachlorophenol	<3.25		mg/kg
Phenacetin	<.649		mg/kg
Phenol	<.649		mg/kg
Pronamide	<.649		mg/kg
Safrole	<.649		mg/kg
bis(2-Chloroethoxy)methane	<.649		mg/kg
bis(2-Chloroethyl)ether	<.649		mg/kg
bis(2-Chloroisopropyl)ether	<.649		mg/kg
bis(2-Ethylhexyl)phthalate	<.649		mg/kg
p-Dimethylaminoazobenzene	<.649		mg/kg
PAH	**18-SEP-2017**		
1,4-Naphthoquinone	<.649[a]	28	mg/kg
1,4-Naphthoquinone	<.649	28	mg/kg
2-Methylnaphthalene	<.649	28	mg/kg
3-Methylcholanthrene	<.649	28	mg/kg
Acenaphthene	<.649	28	mg/kg
Acenaphthylene	<.649	28	mg/kg
Anthracene	<.649	28	mg/kg
Benzo(a)anthracene	<.649	28	mg/kg
Benzo(a)pyrene	<.649	28	mg/kg
Benzo[b]fluoranthene	<.649	28	mg/kg
Benzo[g,h,i]perylene	<.649	28	mg/kg
Benzo[k]fluoranthene	<.649	28	mg/kg
Chrysene	<.649	28	mg/kg
Dibenz[a,h]anthracene	<.649	28	mg/kg
Dibenzofuran	<.649	28	mg/kg
Fluoranthene	.739	64	mg/kg
Fluorene	<.649	28	mg/kg
Indeno[1,2,3-cd]pyrene	<.649	28	mg/kg
Naphthalene	<.649	28	mg/kg
Phenanthrene	<.649	28	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01A25 CUYAHOGA R. UPST. NEORSD SOUTHERLY WWTP							
Pyrene	<.649	28	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL			
OTHER	**23-OCT-2018**		
PCB-1016	<45.5		ug/kg
PCB-1221	<45.5		ug/kg
PCB-1232	<45.5		ug/kg
PCB-1242	<45.5		ug/kg
PCB-1248	<45.5		ug/kg
PCB-1254	<45.5		ug/kg
PCB-1260	<45.5		ug/kg
4,4'-DDD	<9.11		ug/kg
4,4-DDE	<9.11		ug/kg
4,4'-DDT	<9.11		ug/kg
Aldrin	<9.11		ug/kg
Dieldrin	<9.11		ug/kg
Endosulfan I	<9.11		ug/kg
Endosulfan II	<9.11		ug/kg
Endosulfan sulfate	<9.11		ug/kg
Endrin	<9.11		ug/kg
Endrin aldehyde	<9.11		ug/kg
Heptachlor	<9.11		ug/kg
Heptachlor epoxide	<9.11		ug/kg
Hexachlorobenzene	<9.11		ug/kg
Methoxychlor	<9.11		ug/kg
Mirex	<9.11		ug/kg
a-BHC	<9.11		ug/kg
b-BHC	<9.11		ug/kg
d-BHC	<9.11		ug/kg
y-BHC	<9.11		ug/kg
1,2,4,5-Tetrachlorobenzene	<.91		mg/kg
1,2,4-Trichlorobenzene	<.91		mg/kg
1,2-Dichlorobenzene	<.91		mg/kg
1,3-Dichlorobenzene	<.91		mg/kg
1,3-Dinitrobenzene	<.91		mg/kg
1,4-Dichlorobenzene	<.91		mg/kg
2,3,4,6-Tetrachlorophenol	<.91		mg/kg
2,4,5-Trichlorophenol	<.91		mg/kg
2,4,6-Trichlorophenol	<.91		mg/kg
2,4-Dichlorophenol	<.91		mg/kg
2,4-Dimethylphenol	<4.55		mg/kg
2,4-Dinitrophenol	<4.55		mg/kg
2,4-Dinitrotoluene	<.91		mg/kg
2,6-Dichlorophenol	<.91		mg/kg
2,6-Dinitrotoluene	<.91		mg/kg
2-Acetylaminofluorene	<.91		mg/kg
2-Chloronaphthalene	<.91		mg/kg
2-Chlorophenol	<.91		mg/kg
2-Methylphenol	<.91		mg/kg
2-Nitroaniline	<.91		mg/kg
2-Nitrophenol	<.91		mg/kg
2-Picoline	<.91		mg/kg
3-,4-methylphenol	<.91		mg/kg
3,3'-Dichlorobenzidine	<.91		mg/kg
4,6-Dinitro-2-methylphenol	<4.55		mg/kg
4-Bromophenyl-phenylether	<.91		mg/kg
4-Chloro-3-methylphenol	<4.55		mg/kg
4-Chlorophenyl-phenylether	<.91		mg/kg
4-Nitroaniline	<.91		mg/kg
4-Nitrophenol	<4.55		mg/kg
7,12-Dimethylbenz[a]anthracene	<.91		mg/kg
7,12-Dimethylbenz[a]anthracene	<.91[a]		mg/kg
Acetophenone	<.91		mg/kg
Aniline	<.91[a]		mg/kg
Aniline	<.91		mg/kg
Benzyl Alcohol	<.91		mg/kg
Butylbenzylphthalate	<.91		mg/kg
Di-n-butylphthalate	<.91		mg/kg
Di-n-octylphthalate	<.91		mg/kg
Diethylphthalate	<.91		mg/kg
Dimethylphthalate	<.91		mg/kg
Dinoseb	<.91		mg/kg
Diphenylamine	<.91		mg/kg
Ethyl methanesulfonate	<.91		mg/kg
Hexachlorobenzene	<.91		mg/kg
Hexachlorobutadiene	<.91		mg/kg
Hexachlorocyclopentadiene	<4.55		mg/kg
Hexachlorocyclopentadiene	<4.55[a]		mg/kg
Hexachloroethane	<.91		mg/kg
Hexachloropropene	<.91		mg/kg
Isophorone	<.91		mg/kg
Methyl methanesulfonate	<.91		mg/kg
N-Nitroso-di-n-butylamine	<.91		mg/kg
N-Nitroso-di-n-butylamine	<.91[a]		mg/kg
N-Nitroso-di-n-propylamine	<.91		mg/kg
N-Nitrosomorpholine	<.91		mg/kg
N-Nitrosopiperidine	<.91		mg/kg
N-Nitrosopyrrolidine	<.91		mg/kg
Nitrobenzene	<.91		mg/kg
Pentachlorobenzene	<.91		mg/kg
Pentachlorophenol	<4.55		mg/kg
Phenacetin	<.91		mg/kg
Phenol	<.91		mg/kg
Pronamide	<.91		mg/kg
Safrole	<.91		mg/kg
bis(2-Chloroethoxy)methane	<.91		mg/kg
bis(2-Chloroethyl)ether	<.91		mg/kg
bis(2-Chloroisopropyl)ether	<.91		mg/kg
bis(2-Ethylhexyl)phthalate	<.91		mg/kg
p-Dimethylaminoazobenzene	<.91		mg/kg
PAH	**23-OCT-2018**		
1,4-Naphthoquinone	<.91	9	mg/kg
1,4-Naphthoquinone	<.91[a]	9	mg/kg
2-Methylnaphthalene	<.91	9	mg/kg
2-Methylnaphthalene	<.91[a]	9	mg/kg
3-Methylcholanthrene	<.91	9	mg/kg
Acenaphthene	<.91	9	mg/kg
Acenaphthylene	<.91	9	mg/kg
Anthracene	<.91	9	mg/kg
Benzo(a)anthracene	<.91	9	mg/kg
Benzo(a)pyrene	<.91	9	mg/kg
Benzo[b]fluoranthene	<.91	9	mg/kg
Benzo[g,h,i]perylene	<.91	9	mg/kg
Benzo[k]fluoranthene	<.91	9	mg/kg
Chrysene	<.91	9	mg/kg
Dibenz[a,h]anthracene	<.91	9	mg/kg
Dibenzofuran	<.91	9	mg/kg
Fluoranthene	<.91	9	mg/kg
Fluorene	<.91	9	mg/kg
Indeno[1,2,3-cd]pyrene	<.91	9	mg/kg
Naphthalene	<.91	9	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01A31 BREAKNECK CREEK UPST. PORTAGE LANDFILL							
Phenanthrene	<.91	9	mg/kg				
Pyrene	<.91	9	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01A53 CUYAHOGA R. AT BURTON @ ST. RT. 87			
OTHER	**03-AUG-2017**		
PCB-1016	<31.1		ug/kg
PCB-1221	<31.1		ug/kg
PCB-1232	<31.1		ug/kg
PCB-1242	<31.1		ug/kg
PCB-1248	<31.1		ug/kg
PCB-1254	<31.1		ug/kg
PCB-1260	<31.1		ug/kg
4,4'-DDD	<6.22		ug/kg
4,4-DDE	<6.22		ug/kg
4,4'-DDT	<6.22		ug/kg
Aldrin	<6.22		ug/kg
Dieldrin	<6.22		ug/kg
Endosulfan I	<6.22		ug/kg
Endosulfan II	<6.22		ug/kg
Endosulfan sulfate	<6.22		ug/kg
Endrin	<6.22		ug/kg
Endrin aldehyde	<6.22		ug/kg
Heptachlor	<6.22		ug/kg
Heptachlor epoxide	<6.22		ug/kg
Hexachlorobenzene	<6.22		ug/kg
Methoxychlor	<6.22		ug/kg
Mirex	<6.22		ug/kg
a-BHC	<6.22		ug/kg
b-BHC	<6.22		ug/kg
d-BHC	<6.22		ug/kg
y-BHC	<6.22		ug/kg
1,2,4,5-Tetrachlorobenzene	<.618		mg/kg
1,2,4-Trichlorobenzene	<.618		mg/kg
1,2-Dichlorobenzene	<.618		mg/kg
1,3-Dichlorobenzene	<.618		mg/kg
1,3-Dinitrobenzene	<.618		mg/kg
1,4-Dichlorobenzene	<.618		mg/kg
2,3,4,6-Tetrachlorophenol	<.618		mg/kg
2,4,5-Trichlorophenol	<.618		mg/kg
2,4,6-Trichlorophenol	<.618		mg/kg
2,4-Dichlorophenol	<.618		mg/kg
2,4-Dimethylphenol	<.618		mg/kg
2,4-Dinitrophenol	<3.09		mg/kg
2,4-Dinitrotoluene	<.618		mg/kg
2,6-Dichlorophenol	<.618		mg/kg
2,6-Dinitrotoluene	<.618		mg/kg
2-Acetylaminofluorene	<.618		mg/kg
2-Chloronaphthalene	<.618		mg/kg
2-Chlorophenol	<.618		mg/kg
2-Methylphenol	<.618		mg/kg
2-Nitroaniline	<.618		mg/kg
2-Nitrophenol	<.618		mg/kg
2-Picoline	<.618		mg/kg
2-Picoline	<.618[a]		mg/kg
3-,4-methylphenol	<.618		mg/kg
3,3'-Dichlorobenzidine	<.618		mg/kg
3,3'-Dichlorobenzidine	<.618[a]		mg/kg
4,6-Dinitro-2-methylphenol	<3.09		mg/kg
4-Bromophenyl-phenylether	<.618		mg/kg
4-Chloro-3-methylphenol	<3.09		mg/kg
4-Chlorophenyl-phenylether	<.618		mg/kg
4-Nitroaniline	<.618		mg/kg
4-Nitrophenol	<3.09		mg/kg
7,12-Dimethylbenz[a]anthracene	<.618		mg/kg
7,12-Dimethylbenz[a]anthracene	<.618[a]		mg/kg
Acetophenone	<.618		mg/kg
Aniline	<.618		mg/kg
Benzyl Alcohol	<.618		mg/kg
Butylbenzylphthalate	<.618		mg/kg
Di-n-butylphthalate	<.618		mg/kg
Di-n-octylphthalate	<.618		mg/kg
Diethylphthalate	<.618		mg/kg
Dimethylphthalate	<.618		mg/kg
Dinoseb	<.618		mg/kg
Diphenylamine	<.618		mg/kg
Ethyl methanesulfonate	<.618		mg/kg
Hexachlorobenzene	<.618		mg/kg
Hexachlorobutadiene	<.618		mg/kg
Hexachlorocyclopentadiene	<.618		mg/kg
Hexachlorocyclopentadiene	<.618[a]		mg/kg
Hexachloroethane	<.618		mg/kg
Hexachloropropene	<.618		mg/kg
Hexachloropropene	<.618[a]		mg/kg
Isophorone	<.618		mg/kg
Methyl methanesulfonate	<.618		mg/kg
N-Nitroso-di-n-butylamine	<.618		mg/kg
N-Nitroso-di-n-propylamine	<.618		mg/kg
N-Nitrosomorpholine	<.618		mg/kg
N-Nitrosopiperidine	<.618		mg/kg
N-Nitrosopyrrolidine	<.618		mg/kg
Nitrobenzene	<.618		mg/kg
Pentachlorobenzene	<.618		mg/kg
Pentachlorophenol	<3.09		mg/kg
Phenacetin	<.618		mg/kg
Phenol	<.618		mg/kg
Pronamide	<.618		mg/kg
Safrole	<.618		mg/kg
bis(2-Chloroethoxy)methane	<.618		mg/kg
bis(2-Chloroethyl)ether	<.618		mg/kg
bis(2-Chloroisopropyl)ether	<.618		mg/kg
bis(2-Ethylhexyl)phthalate	<.618		mg/kg
p-Dimethylaminoazobenzene	<.618		mg/kg
PAH	**03-AUG-2017**		
1,4-Naphthoquinone	<.618	13	mg/kg
1,4-Naphthoquinone	<.618[a]	13	mg/kg
2-Methylnaphthalene	<.618	13	mg/kg
3-Methylcholanthrene	<.618	13	mg/kg
Acenaphthene	<.618	13	mg/kg
Acenaphthylene	<.618	13	mg/kg
Anthracene	<.618	13	mg/kg
Benzo(a)anthracene	<.618	13	mg/kg
Benzo(a)pyrene	<.618	13	mg/kg
Benzo[b]fluoranthene	<.618	13	mg/kg
Benzo[g,h,i]perylene	<.618	13	mg/kg
Benzo[k]fluoranthene	<.618	13	mg/kg
Chrysene	<.618	13	mg/kg
Dibenz[a,h]anthracene	<.618	13	mg/kg
Dibenzofuran	<.618	13	mg/kg
Fluoranthene	<.618	13	mg/kg
Fluorene	<.618	13	mg/kg
Indeno[1,2,3-cd]pyrene	<.618	13	mg/kg
Naphthalene	<.618	13	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01A53 CUYAHOGA R. AT BURTON @ ST. RT. 87							
Phenanthrene	<.618	13	mg/kg				
Pyrene	<.618	13	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01A58 CUYAHOGA R. @ BOSTON MILLS RD.			
OTHER	**24-OCT-2017**		
PCB-1016	<33.9		ug/kg
PCB-1221	<33.9		ug/kg
PCB-1232	<33.9		ug/kg
PCB-1242	<33.9		ug/kg
PCB-1248	<33.9		ug/kg
PCB-1254	85.8		ug/kg
PCB-1260	<33.9		ug/kg
4,4'-DDD	<6.79		ug/kg
4,4-DDE	26.8		ug/kg
4,4'-DDT	26		ug/kg
Aldrin	<6.79		ug/kg
Dieldrin	<6.79		ug/kg
Endosulfan I	<6.79		ug/kg
Endosulfan II	<6.79		ug/kg
Endosulfan sulfate	<6.79		ug/kg
Endrin	<6.79		ug/kg
Endrin aldehyde	<6.79		ug/kg
Heptachlor	<6.79		ug/kg
Heptachlor epoxide	<6.79		ug/kg
Hexachlorobenzene	<6.79		ug/kg
Methoxychlor	15.8[i]		ug/kg
Mirex	<6.79		ug/kg
a-BHC	<6.79		ug/kg
b-BHC	<6.79		ug/kg
d-BHC	<6.79		ug/kg
y-BHC	<6.79		ug/kg
1,2,4,5-Tetrachlorobenzene	<.68		mg/kg
1,2,4-Trichlorobenzene	<.68		mg/kg
1,2-Dichlorobenzene	<.68		mg/kg
1,3-Dichlorobenzene	<.68		mg/kg
1,3-Dinitrobenzene	<.68		mg/kg
1,4-Dichlorobenzene	<.68		mg/kg
2,3,4,6-Tetrachlorophenol	<.68		mg/kg
2,4,5-Trichlorophenol	<.68		mg/kg
2,4,6-Trichlorophenol	<.68		mg/kg
2,4-Dichlorophenol	<.68		mg/kg
2,4-Dimethylphenol	<.68		mg/kg
2,4-Dinitrophenol	<3.4		mg/kg
2,4-Dinitrotoluene	<.68		mg/kg
2,6-Dichlorophenol	<.68		mg/kg
2,6-Dinitrotoluene	<.68		mg/kg
2-Acetylaminofluorene	<.68		mg/kg
2-Chloronaphthalene	<.68		mg/kg
2-Chlorophenol	<.68		mg/kg
2-Methylphenol	<.68		mg/kg
2-Nitroaniline	<.68		mg/kg
2-Nitrophenol	<.68		mg/kg
2-Picoline	<.68		mg/kg
3-,4-methylphenol	<.68		mg/kg
3,3'-Dichlorobenzidine	<.68		mg/kg
4,6-Dinitro-2-methylphenol	<3.4		mg/kg
4-Bromophenyl-phenylether	<.68		mg/kg
4-Chloro-3-methylphenol	<3.4		mg/kg
4-Chlorophenyl-phenylether	<.68		mg/kg
4-Nitroaniline	<.68		mg/kg
4-Nitrophenol	<3.4		mg/kg
7,12-Dimethylbenz[a]anthracene	<.68		mg/kg
7,12-Dimethylbenz[a]anthracene	<.68[a]		mg/kg
Acetophenone	<.68		mg/kg
Aniline	<.68		mg/kg
Benzyl Alcohol	<.68		mg/kg
Butylbenzylphthalate	<.68		mg/kg
Di-n-butylphthalate	<.68		mg/kg
Di-n-octylphthalate	<.68		mg/kg
Diethylphthalate	<.68		mg/kg
Dimethylphthalate	<.68		mg/kg
Dinoseb	<.68		mg/kg
Diphenylamine	<.68		mg/kg
Ethyl methanesulfonate	<.68		mg/kg
Hexachlorobenzene	<.68		mg/kg
Hexachlorobutadiene	<.68		mg/kg
Hexachlorocyclopentadiene	<.68[a]		mg/kg
Hexachlorocyclopentadiene	<.68		mg/kg
Hexachloroethane	<.68		mg/kg
Hexachloropropene	<.68		mg/kg
Isophorone	<.68		mg/kg
Methyl methanesulfonate	<.68		mg/kg
N-Nitroso-di-n-butylamine	<.68		mg/kg
N-Nitroso-di-n-propylamine	<.68		mg/kg
N-Nitrosomorpholine	<.68		mg/kg
N-Nitrosopiperidine	<.68		mg/kg
N-Nitrosopyrrolidine	<.68		mg/kg
Nitrobenzene	<.68		mg/kg
Pentachlorobenzene	<.68		mg/kg
Pentachlorophenol	<3.4		mg/kg
Phenacetin	<.68		mg/kg
Phenol	<.68		mg/kg
Pronamide	<.68		mg/kg
Safrole	<.68		mg/kg
bis(2-Chloroethoxy)methane	<.68		mg/kg
bis(2-Chloroethyl)ether	<.68		mg/kg
bis(2-Chloroisopropyl)ether	<.68		mg/kg
bis(2-Ethylhexyl)phthalate	<.68		mg/kg
p-Dimethylaminoazobenzene	<.68		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.68	21	mg/kg
2-Methylnaphthalene	<.68	21	mg/kg
3-Methylcholanthrene	<.68	21	mg/kg
Acenaphthene	<.68	21	mg/kg
Acenaphthylene	<.68	21	mg/kg
Anthracene	<.68	21	mg/kg
Benzo(a)anthracene	<.68	21	mg/kg
Benzo(a)pyrene	<.68	21	mg/kg
Benzo[b]fluoranthene	<.68	21	mg/kg
Benzo[g,h,i]perylene	<.68	21	mg/kg
Benzo[k]fluoranthene	<.68	21	mg/kg
Chrysene	<.68	21	mg/kg
Dibenz[a,h]anthracene	<.68	21	mg/kg
Dibenzofuran	<.68	21	mg/kg
Fluoranthene	.871	55	mg/kg
Fluorene	<.68	21	mg/kg
Indeno[1,2,3-cd]pyrene	<.68	21	mg/kg
Naphthalene	<.68	21	mg/kg
Phenanthrene	<.68	21	mg/kg
Pyrene	.701	44	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01G02 CUYAHOGA R. @ CHARDON-WINDSOR RD.			
OTHER	**03-AUG-2017**		
PCB-1016	<48.1		ug/kg
PCB-1221	<48.1		ug/kg
PCB-1232	<48.1		ug/kg
PCB-1242	<48.1		ug/kg
PCB-1248	<48.1		ug/kg
PCB-1254	<48.1		ug/kg
PCB-1260	<48.1		ug/kg
4,4'-DDD	<9.62		ug/kg
4,4-DDE	<9.62		ug/kg
4,4'-DDT	<9.62		ug/kg
Aldrin	<9.62		ug/kg
Dieldrin	<9.62		ug/kg
Endosulfan I	<9.62		ug/kg
Endosulfan II	<9.62		ug/kg
Endosulfan sulfate	<9.62		ug/kg
Endrin	<9.62		ug/kg
Endrin aldehyde	<9.62		ug/kg
Heptachlor	<9.62		ug/kg
Heptachlor epoxide	<9.62		ug/kg
Hexachlorobenzene	<9.62		ug/kg
Methoxychlor	<9.62		ug/kg
Mirex	<9.62		ug/kg
a-BHC	<9.62		ug/kg
b-BHC	<9.62		ug/kg
d-BHC	<9.62		ug/kg
y-BHC	<9.62		ug/kg
1,2,4,5-Tetrachlorobenzene	<.958		mg/kg
1,2,4-Trichlorobenzene	<.958		mg/kg
1,2-Dichlorobenzene	<.958		mg/kg
1,3-Dichlorobenzene	<.958		mg/kg
1,3-Dinitrobenzene	<.958		mg/kg
1,4-Dichlorobenzene	<.958		mg/kg
2,3,4,6-Tetrachlorophenol	<.958		mg/kg
2,4,5-Trichlorophenol	<.958		mg/kg
2,4,6-Trichlorophenol	<.958		mg/kg
2,4-Dichlorophenol	<.958		mg/kg
2,4-Dimethylphenol	<.958		mg/kg
2,4-Dinitrophenol	<4.79		mg/kg
2,4-Dinitrotoluene	<.958		mg/kg
2,6-Dichlorophenol	<.958		mg/kg
2,6-Dinitrotoluene	<.958		mg/kg
2-Acetylaminofluorene	<.958		mg/kg
2-Chloronaphthalene	<.958		mg/kg
2-Chlorophenol	<.958		mg/kg
2-Methylphenol	<.958		mg/kg
2-Nitroaniline	<.958		mg/kg
2-Nitrophenol	<.958		mg/kg
2-Picoline	<.958		mg/kg
2-Picoline	<.958[a]		mg/kg
3-,4-methylphenol	<.958		mg/kg
3,3'-Dichlorobenzidine	<.958[a]		mg/kg
3,3'-Dichlorobenzidine	<.958		mg/kg
4,6-Dinitro-2-methylphenol	<4.79		mg/kg
4-Bromophenyl-phenylether	<.958		mg/kg
4-Chloro-3-methylphenol	<4.79		mg/kg
4-Chlorophenyl-phenylether	<.958		mg/kg
4-Nitroaniline	<.958		mg/kg
4-Nitrophenol	<4.79		mg/kg
7,12-Dimethylbenz[a]anthracene	<.958		mg/kg
7,12-Dimethylbenz[a]anthracene	<.958[a]		mg/kg
Acetophenone	<.958		mg/kg
Aniline	<.958		mg/kg
Benzyl Alcohol	<.958		mg/kg
Butylbenzylphthalate	<.958		mg/kg
Di-n-butylphthalate	<.958		mg/kg
Di-n-octylphthalate	<.958		mg/kg
Diethylphthalate	<.958		mg/kg
Dimethylphthalate	<.958		mg/kg
Dinoseb	<.958		mg/kg
Diphenylamine	<.958		mg/kg
Ethyl methanesulfonate	<.958		mg/kg
Hexachlorobenzene	<.958		mg/kg
Hexachlorobutadiene	<.958		mg/kg
Hexachlorocyclopentadiene	<.958		mg/kg
Hexachlorocyclopentadiene	<.958[a]		mg/kg
Hexachloroethane	<.958		mg/kg
Hexachloropropene	<.958		mg/kg
Hexachloropropene	<.958[a]		mg/kg
Isophorone	<.958		mg/kg
Methyl methanesulfonate	<.958		mg/kg
N-Nitroso-di-n-butylamine	<.958		mg/kg
N-Nitroso-di-n-propylamine	<.958		mg/kg
N-Nitrosomorpholine	<.958		mg/kg
N-Nitrosopiperidine	<.958		mg/kg
N-Nitrosopyrrolidine	<.958		mg/kg
Nitrobenzene	<.958		mg/kg
Pentachlorobenzene	<.958		mg/kg
Pentachlorophenol	<4.79		mg/kg
Phenacetin	<.958		mg/kg
Phenol	<.958		mg/kg
Pronamide	<.958		mg/kg
Safrole	<.958		mg/kg
bis(2-Chloroethoxy)methane	<.958		mg/kg
bis(2-Chloroethyl)ether	<.958		mg/kg
bis(2-Chloroisopropyl)ether	<.958		mg/kg
bis(2-Ethylhexyl)phthalate	<.958		mg/kg
p-Dimethylaminoazobenzene	<.958		mg/kg
PAH	**03-AUG-2017**		
1,4-Naphthoquinone	<.958[a]	15	mg/kg
1,4-Naphthoquinone	<.958	15	mg/kg
2-Methylnaphthalene	<.958	15	mg/kg
3-Methylcholanthrene	<.958	15	mg/kg
Acenaphthene	<.958	15	mg/kg
Acenaphthylene	<.958	15	mg/kg
Anthracene	<.958	15	mg/kg
Benzo(a)anthracene	<.958	15	mg/kg
Benzo(a)pyrene	<.958	15	mg/kg
Benzo[b]fluoranthene	<.958	15	mg/kg
Benzo[g,h,i]perylene	<.958	15	mg/kg
Benzo[k]fluoranthene	<.958	15	mg/kg
Chrysene	<.958	15	mg/kg
Dibenz[a,h]anthracene	<.958	15	mg/kg
Dibenzofuran	<.958	15	mg/kg
Fluoranthene	<.958	15	mg/kg
Fluorene	<.958	15	mg/kg
Indeno[1,2,3-cd]pyrene	<.958	15	mg/kg
Naphthalene	<.958	15	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01G02 CUYAHOGA R. @ CHARDON-WINDSOR RD.							
Phenanthrene	<.958	15	mg/kg				
Pyrene	<.958	15	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01G04 TARE CREEK @ BURTON-WINDSOR RD.				2-Acetylaminofluorene	<.523		mg/kg
OTHER	**09-OCT-2018**			2-Acetylaminofluorene	<.523[a]		mg/kg
PCB-1016	<26.1		ug/kg	2-Chloronaphthalene	<.523		mg/kg
PCB-1221	<26.1		ug/kg	2-Chloronaphthalene	<.523[a]		mg/kg
PCB-1232	<26.1		ug/kg	2-Chlorophenol	<.523		mg/kg
PCB-1242	<26.1		ug/kg	2-Chlorophenol	<.523[a]		mg/kg
PCB-1248	<26.1		ug/kg	2-Methylphenol	<.523		mg/kg
PCB-1254	<26.1		ug/kg	2-Methylphenol	<.523[a]		mg/kg
PCB-1260	<26.1		ug/kg	2-Nitroaniline	<.523		mg/kg
4,4'-DDD	<5.22		ug/kg	2-Nitroaniline	<.523[a]		mg/kg
4,4-DDE	<5.22		ug/kg	2-Nitrophenol	<.523		mg/kg
4,4'-DDT	<5.22		ug/kg	2-Nitrophenol	<.523[a]		mg/kg
Aldrin	<5.22		ug/kg	2-Picoline	<.523		mg/kg
Dieldrin	<5.22		ug/kg	2-Picoline	<.523[a]		mg/kg
Endosulfan I	<5.22		ug/kg	3-,4-methylphenol	<.523		mg/kg
Endosulfan II	<5.22		ug/kg	3-,4-methylphenol	<.523[a]		mg/kg
Endosulfan sulfate	<5.22		ug/kg	3,3'-Dichlorobenzidine	<.523		mg/kg
Endrin	<5.22		ug/kg	3,3'-Dichlorobenzidine	<.523[a]		mg/kg
Endrin aldehyde	<5.22		ug/kg	4,6-Dinitro-2-methylphenol	<2.62		mg/kg
Endrin aldehyde	<5.22[a]		ug/kg	4,6-Dinitro-2-methylphenol	<2.62[a]		mg/kg
Heptachlor	<5.22		ug/kg	4-Bromophenyl-phenylether	<.523		mg/kg
Heptachlor epoxide	<5.22		ug/kg	4-Bromophenyl-phenylether	<.523[a]		mg/kg
Hexachlorobenzene	<5.22		ug/kg	4-Chloro-3-methylphenol	<2.62		mg/kg
Hexachlorobenzene	<5.22[a]		ug/kg	4-Chloro-3-methylphenol	<2.62[a]		mg/kg
Methoxychlor	<5.22		ug/kg	4-Chlorophenyl-phenylether	<.523		mg/kg
Mirex	<5.22		ug/kg	4-Chlorophenyl-phenylether	<.523[a]		mg/kg
a-BHC	<5.22		ug/kg	4-Nitroaniline	<.523		mg/kg
b-BHC	<5.22		ug/kg	4-Nitroaniline	<.523[a]		mg/kg
d-BHC	<5.22		ug/kg	4-Nitrophenol	<2.62		mg/kg
y-BHC	<5.22		ug/kg	4-Nitrophenol	<2.62[a]		mg/kg
1,2,4,5-Tetrachlorobenzene	<.523		mg/kg	7,12-Dimethylbenz[a]anthracene	<.523		mg/kg
1,2,4,5-Tetrachlorobenzene	<.523[a]		mg/kg	7,12-Dimethylbenz[a]anthracene	<.523[a]		mg/kg
1,2,4-Trichlorobenzene	<.523		mg/kg	Acetophenone	<.523		mg/kg
1,2,4-Trichlorobenzene	<.523[a]		mg/kg	Acetophenone	<.523[a]		mg/kg
1,2-Dichlorobenzene	<.523		mg/kg	Aniline	<.523		mg/kg
1,2-Dichlorobenzene	<.523[a]		mg/kg	Aniline	<.523[a]		mg/kg
1,3-Dichlorobenzene	<.523		mg/kg	Benzyl Alcohol	<.523		mg/kg
1,3-Dichlorobenzene	<.523[a]		mg/kg	Benzyl Alcohol	<.523[a]		mg/kg
1,3-Dinitrobenzene	<.523		mg/kg	Butylbenzylphthalate	<.523		mg/kg
1,3-Dinitrobenzene	<.523[a]		mg/kg	Butylbenzylphthalate	<.523[a]		mg/kg
1,4-Dichlorobenzene	<.523		mg/kg	Di-n-butylphthalate	<.523		mg/kg
1,4-Dichlorobenzene	<.523[a]		mg/kg	Di-n-butylphthalate	<.523[a]		mg/kg
2,3,4,6-Tetrachlorophenol	<.523		mg/kg	Di-n-octylphthalate	<.523		mg/kg
2,3,4,6-Tetrachlorophenol	<.523[a]		mg/kg	Di-n-octylphthalate	<.523[a]		mg/kg
2,4,5-Trichlorophenol	<.523		mg/kg	Diethylphthalate	<.523		mg/kg
2,4,5-Trichlorophenol	<.523[a]		mg/kg	Diethylphthalate	<.523[a]		mg/kg
2,4,6-Trichlorophenol	<.523		mg/kg	Dimethylphthalate	<.523		mg/kg
2,4,6-Trichlorophenol	<.523[a]		mg/kg	Dimethylphthalate	<.523[a]		mg/kg
2,4-Dichlorophenol	<.523		mg/kg	Dinoseb	<.523		mg/kg
2,4-Dichlorophenol	<.523[a]		mg/kg	Dinoseb	<.523[a]		mg/kg
2,4-Dimethylphenol	<2.62		mg/kg	Diphenylamine	<.523		mg/kg
2,4-Dimethylphenol	<2.62[a]		mg/kg	Diphenylamine	<.523[a]		mg/kg
2,4-Dinitrophenol	<2.62		mg/kg	Ethyl methanesulfonate	<.523		mg/kg
2,4-Dinitrophenol	<2.62[a]		mg/kg	Ethyl methanesulfonate	<.523[a]		mg/kg
2,4-Dinitrotoluene	<.523		mg/kg	Hexachlorobenzene	<.523		mg/kg
2,4-Dinitrotoluene	<.523[a]		mg/kg	Hexachlorobenzene	<.523[a]		mg/kg
2,6-Dichlorophenol	<.523		mg/kg	Hexachlorobutadiene	<.523		mg/kg
2,6-Dichlorophenol	<.523[a]		mg/kg	Hexachlorobutadiene	<.523[a]		mg/kg
2,6-Dinitrotoluene	<.523		mg/kg	Hexachlorocyclopentadiene	<2.62		mg/kg
2,6-Dinitrotoluene	<.523[a]		mg/kg	Hexachlorocyclopentadiene	<2.62[a]		mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01G04 TARE CREEK @ BURTON-WINDSOR RD.			
Hexachloroethane	<.523		mg/kg
Hexachloroethane	<.523[a]		mg/kg
Hexachloropropene	<.523		mg/kg
Hexachloropropene	<.523[a]		mg/kg
Isophorone	<.523		mg/kg
Isophorone	<.523[a]		mg/kg
Methyl methanesulfonate	<.523		mg/kg
Methyl methanesulfonate	<.523[a]		mg/kg
N-Nitroso-di-n-butylamine	<.523		mg/kg
N-Nitroso-di-n-butylamine	<.523[a]		mg/kg
N-Nitroso-di-n-propylamine	<.523		mg/kg
N-Nitroso-di-n-propylamine	<.523[a]		mg/kg
N-Nitrosomorpholine	<.523		mg/kg
N-Nitrosomorpholine	<.523[a]		mg/kg
N-Nitrosopiperidine	<.523		mg/kg
N-Nitrosopiperidine	<.523[a]		mg/kg
N-Nitrosopyrrolidine	<.523		mg/kg
N-Nitrosopyrrolidine	<.523[a]		mg/kg
Nitrobenzene	<.523		mg/kg
Nitrobenzene	<.523[a]		mg/kg
Pentachlorobenzene	<.523		mg/kg
Pentachlorobenzene	<.523[a]		mg/kg
Pentachlorophenol	<2.62		mg/kg
Pentachlorophenol	<2.62[a]		mg/kg
Phenacetin	<.523		mg/kg
Phenacetin	<.523[a]		mg/kg
Phenol	<.523		mg/kg
Phenol	<.523[a]		mg/kg
Pronamide	<.523		mg/kg
Pronamide	<.523[a]		mg/kg
Safrole	<.523		mg/kg
Safrole	<.523[a]		mg/kg
bis(2-Chloroethoxy)methane	<.523		mg/kg
bis(2-Chloroethoxy)methane	<.523[a]		mg/kg
bis(2-Chloroethyl)ether	<.523		mg/kg
bis(2-Chloroethyl)ether	<.523[a]		mg/kg
bis(2-Chloroisopropyl)ether	<.523		mg/kg
bis(2-Chloroisopropyl)ether	<.523[a]		mg/kg
bis(2-Ethylhexyl)phthalate	<.523		mg/kg
bis(2-Ethylhexyl)phthalate	<.523[a]		mg/kg
p-Dimethylaminoazobenzene	<.523		mg/kg
p-Dimethylaminoazobenzene	<.523[a]		mg/kg
PAH	**09-OCT-2018**		
1,4-Naphthoquinone	<.523	38	mg/kg
1,4-Naphthoquinone	<.523[a]	38	mg/kg
2-Methylnaphthalene	<.523	38	mg/kg
2-Methylnaphthalene	<.523[a]	38	mg/kg
3-Methylcholanthrene	<.523	38	mg/kg
3-Methylcholanthrene	<.523[a]	38	mg/kg
Acenaphthene	<.523	38	mg/kg
Acenaphthene	<.523[a]	38	mg/kg
Acenaphthylene	<.523	38	mg/kg
Acenaphthylene	<.523[a]	38	mg/kg
Anthracene	<.523	38	mg/kg
Anthracene	<.523[a]	38	mg/kg
Benzo(a)anthracene	<.523	38	mg/kg
Benzo(a)anthracene	<.523[a]	38	mg/kg
Benzo(a)pyrene	<.523	38	mg/kg
Benzo(a)pyrene	<.523[a]	38	mg/kg
Benzo[b]fluoranthene	<.523	38	mg/kg
Benzo[b]fluoranthene	<.523[a]	38	mg/kg
Benzo[g,h,i]perylene	<.523	38	mg/kg
Benzo[g,h,i]perylene	<.523[a]	38	mg/kg
Benzo[k]fluoranthene	<.523	38	mg/kg
Benzo[k]fluoranthene	<.523[a]	38	mg/kg
Chrysene	<.523	38	mg/kg
Chrysene	<.523[a]	38	mg/kg
Dibenz[a,h]anthracene	<.523	38	mg/kg
Dibenz[a,h]anthracene	<.523[a]	38	mg/kg
Dibenzofuran	<.523	38	mg/kg
Dibenzofuran	<.523[a]	38	mg/kg
Fluoranthene	<.523	38	mg/kg
Fluoranthene	<.523[a]	38	mg/kg
Fluorene	<.523	38	mg/kg
Fluorene	<.523[a]	38	mg/kg
Indeno[1,2,3-cd]pyrene	<.523	38	mg/kg
Indeno[1,2,3-cd]pyrene	<.523[a]	38	mg/kg
Naphthalene	<.523	38	mg/kg
Naphthalene	<.523[a]	38	mg/kg
Phenanthrene	<.523	38	mg/kg
Phenanthrene	<.523[a]	38	mg/kg
Pyrene	<.523	38	mg/kg
Pyrene	<.523[a]	38	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.			
OTHER	**11-OCT-2018**		
PCB-1016	<27		ug/kg
PCB-1221	<27		ug/kg
PCB-1232	<27		ug/kg
PCB-1242	<27		ug/kg
PCB-1248	<27		ug/kg
PCB-1254	<27		ug/kg
PCB-1260	<27		ug/kg
4,4'-DDD	<5.4		ug/kg
4,4-DDE	<5.4		ug/kg
4,4'-DDT	<5.4		ug/kg
Aldrin	<5.4		ug/kg
Dieldrin	<5.4		ug/kg
Endosulfan I	<5.4		ug/kg
Endosulfan II	<5.4		ug/kg
Endosulfan sulfate	<5.4		ug/kg
Endrin	<5.4		ug/kg
Endrin aldehyde	<5.4		ug/kg
Endrin aldehyde	<5.4[a]		ug/kg
Heptachlor	<5.4		ug/kg
Heptachlor epoxide	<5.4		ug/kg
Hexachlorobenzene	<5.4[a]		ug/kg
Hexachlorobenzene	<5.4		ug/kg
Methoxychlor	<5.4		ug/kg
Mirex	<5.4		ug/kg
a-BHC	<5.4		ug/kg
b-BHC	<5.4		ug/kg
d-BHC	<5.4		ug/kg
y-BHC	<5.4		ug/kg
1,2,4,5-Tetrachlorobenzene	<.537		mg/kg
1,2,4-Trichlorobenzene	<.537		mg/kg
1,2-Dichlorobenzene	<.537		mg/kg
1,3-Dichlorobenzene	<.537		mg/kg
1,3-Dinitrobenzene	<.537		mg/kg
1,4-Dichlorobenzene	<.537		mg/kg
2,3,4,6-Tetrachlorophenol	<.537		mg/kg
2,4,5-Trichlorophenol	<.537		mg/kg
2,4,6-Trichlorophenol	<.537		mg/kg
2,4-Dichlorophenol	<.537		mg/kg
2,4-Dimethylphenol	<2.68		mg/kg
2,4-Dinitrophenol	<2.68		mg/kg
2,4-Dinitrotoluene	<.537		mg/kg
2,6-Dichlorophenol	<.537		mg/kg
2,6-Dinitrotoluene	<.537		mg/kg
2-Acetylaminofluorene	<.537		mg/kg
2-Chloronaphthalene	<.537		mg/kg
2-Chlorophenol	<.537		mg/kg
2-Methylphenol	<.537		mg/kg
2-Nitroaniline	<.537		mg/kg
2-Nitrophenol	<.537		mg/kg
2-Picoline	<.537		mg/kg
3-,4-methylphenol	<.537		mg/kg
3,3'-Dichlorobenzidine	<.537		mg/kg
4,6-Dinitro-2-methylphenol	<2.68		mg/kg
4-Bromophenyl-phenylether	<.537		mg/kg
4-Chloro-3-methylphenol	<2.68		mg/kg
4-Chlorophenyl-phenylether	<.537		mg/kg
4-Nitroaniline	<.537		mg/kg
4-Nitrophenol	<2.68		mg/kg
7,12-Dimethylbenz[a]anthracene	<.537		mg/kg
7,12-Dimethylbenz[a]anthracene	<.537[a]		mg/kg
Acetophenone	<.537		mg/kg
Aniline	<.537		mg/kg
Benzyl Alcohol	<.537		mg/kg
Butylbenzylphthalate	<.537		mg/kg
Di-n-butylphthalate	<.537		mg/kg
Di-n-octylphthalate	<.537		mg/kg
Diethylphthalate	<.537		mg/kg
Dimethylphthalate	<.537		mg/kg
Dinoseb	<.537		mg/kg
Diphenylamine	<.537		mg/kg
Ethyl methanesulfonate	<.537		mg/kg
Hexachlorobenzene	<.537		mg/kg
Hexachlorobutadiene	<.537		mg/kg
Hexachlorocyclopentadiene	<2.68		mg/kg
Hexachlorocyclopentadiene	<2.68[a]		mg/kg
Hexachloroethane	<.537		mg/kg
Hexachloropropene	<.537		mg/kg
Isophorone	<.537		mg/kg
Methyl methanesulfonate	<.537		mg/kg
N-Nitroso-di-n-butylamine	<.537		mg/kg
N-Nitroso-di-n-propylamine	<.537		mg/kg
N-Nitrosomorpholine	<.537		mg/kg
N-Nitrosopiperidine	<.537		mg/kg
N-Nitrosopyrrolidine	<.537		mg/kg
Nitrobenzene	<.537		mg/kg
Pentachlorobenzene	<.537		mg/kg
Pentachlorophenol	<2.68		mg/kg
Phenacetin	<.537		mg/kg
Phenol	<.537		mg/kg
Pronamide	<.537		mg/kg
Safrole	<.537		mg/kg
bis(2-Chloroethoxy)methane	<.537		mg/kg
bis(2-Chloroethyl)ether	<.537		mg/kg
bis(2-Chloroisopropyl)ether	<.537		mg/kg
bis(2-Ethylhexyl)phthalate	<.537		mg/kg
p-Dimethylaminoazobenzene	<.537		mg/kg
PAH	**11-OCT-2018**		
1,4-Naphthoquinone	<.537		mg/kg
2-Methylnaphthalene	<.537		mg/kg
3-Methylcholanthrene	<.537		mg/kg
Acenaphthene	<.537		mg/kg
Acenaphthylene	<.537		mg/kg
Anthracene	<.537		mg/kg
Benzo(a)anthracene	<.537		mg/kg
Benzo(a)pyrene	<.537		mg/kg
Benzo[b]fluoranthene	<.537		mg/kg
Benzo[g,h,i]perylene	<.537		mg/kg
Benzo[k]fluoranthene	<.537		mg/kg
Chrysene	<.537		mg/kg
Dibenz[a,h]anthracene	<.537		mg/kg
Dibenzofuran	<.537		mg/kg
Fluoranthene	<.537		mg/kg
Fluorene	<.537		mg/kg
Indeno[1,2,3-cd]pyrene	<.537		mg/kg
Naphthalene	<.537		mg/kg
Phenanthrene	<.537		mg/kg
Pyrene	<.537		mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01G26 WOODWARD CREEK @ AKRON-PENINSULA RD.							

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01G38 SAGAMORE CREEK @ CANAL RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<29.1		ug/kg
PCB-1221	<29.1		ug/kg
PCB-1232	<29.1		ug/kg
PCB-1242	<29.1		ug/kg
PCB-1248	<29.1		ug/kg
PCB-1254	<29.1		ug/kg
PCB-1260	<29.1		ug/kg
4,4'-DDD	<5.82		ug/kg
4,4-DDE	<5.82		ug/kg
4,4'-DDT	<5.82		ug/kg
Aldrin	<5.82		ug/kg
Dieldrin	<5.82		ug/kg
Endosulfan I	<5.82		ug/kg
Endosulfan II	<5.82		ug/kg
Endosulfan sulfate	<5.82		ug/kg
Endrin	<5.82		ug/kg
Endrin aldehyde	<5.82		ug/kg
Heptachlor	<5.82		ug/kg
Heptachlor epoxide	<5.82		ug/kg
Hexachlorobenzene	<5.82		ug/kg
Methoxychlor	<5.82		ug/kg
Mirex	<5.82		ug/kg
a-BHC	<5.82		ug/kg
b-BHC	<5.82		ug/kg
d-BHC	<5.82		ug/kg
y-BHC	<5.82		ug/kg
1,2,4,5-Tetrachlorobenzene	<.582		mg/kg
1,2,4-Trichlorobenzene	<.582		mg/kg
1,2-Dichlorobenzene	<.582		mg/kg
1,3-Dichlorobenzene	<.582		mg/kg
1,3-Dinitrobenzene	<.582		mg/kg
1,4-Dichlorobenzene	<.582		mg/kg
2,3,4,6-Tetrachlorophenol	<.582		mg/kg
2,4,5-Trichlorophenol	<.582		mg/kg
2,4,6-Trichlorophenol	<.582		mg/kg
2,4-Dichlorophenol	<.582		mg/kg
2,4-Dimethylphenol	<2.91		mg/kg
2,4-Dinitrophenol	<2.91		mg/kg
2,4-Dinitrotoluene	<.582		mg/kg
2,6-Dichlorophenol	<.582		mg/kg
2,6-Dinitrotoluene	<.582		mg/kg
2-Acetylaminofluorene	<.582		mg/kg
2-Chloronaphthalene	<.582		mg/kg
2-Chlorophenol	<.582		mg/kg
2-Methylphenol	<.582		mg/kg
2-Nitroaniline	<.582		mg/kg
2-Nitrophenol	<.582		mg/kg
2-Picoline	<.582		mg/kg
3-,4-methylphenol	<.582		mg/kg
3,3'-Dichlorobenzidine	<.582		mg/kg
4,6-Dinitro-2-methylphenol	<2.91		mg/kg
4-Bromophenyl-phenylether	<.582		mg/kg
4-Chloro-3-methylphenol	<2.91		mg/kg
4-Chlorophenyl-phenylether	<.582		mg/kg
4-Nitroaniline	<.582		mg/kg
4-Nitrophenol	<2.91		mg/kg
7,12-Dimethylbenz[a]anthracene	<.582		mg/kg
Acetophenone	<.582		mg/kg
Aniline	<.582		mg/kg
Aniline	<.582[a]		mg/kg
Benzyl Alcohol	<.582		mg/kg
Butylbenzylphthalate	<.582		mg/kg
Di-n-butylphthalate	<.582		mg/kg
Di-n-octylphthalate	<.582		mg/kg
Diethylphthalate	<.582		mg/kg
Dimethylphthalate	<.582		mg/kg
Dinoseb	<.582		mg/kg
Diphenylamine	<.582		mg/kg
Ethyl methanesulfonate	<.582		mg/kg
Hexachlorobenzene	<.582		mg/kg
Hexachlorobutadiene	<.582		mg/kg
Hexachlorocyclopentadiene	<2.91		mg/kg
Hexachloroethane	<.582		mg/kg
Hexachloropropene	<.582		mg/kg
Isophorone	<.582		mg/kg
Methyl methanesulfonate	<.582		mg/kg
N-Nitroso-di-n-butylamine	<.582		mg/kg
N-Nitroso-di-n-propylamine	<.582		mg/kg
N-Nitrosomorpholine	<.582		mg/kg
N-Nitrosopiperidine	<.582		mg/kg
N-Nitrosopyrrolidine	<.582		mg/kg
Nitrobenzene	<.582		mg/kg
Pentachlorobenzene	<.582		mg/kg
Pentachlorophenol	<2.91		mg/kg
Phenacetin	<.582		mg/kg
Phenol	<.582		mg/kg
Pronamide	<.582		mg/kg
Safrole	<.582		mg/kg
bis(2-Chloroethoxy)methane	<.582		mg/kg
bis(2-Chloroethyl)ether	<.582		mg/kg
bis(2-Chloroisopropyl)ether	<.582		mg/kg
bis(2-Ethylhexyl)phthalate	<.582		mg/kg
p-Dimethylaminoazobenzene	<.582		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.582	17	mg/kg
2-Methylnaphthalene	<.582	17	mg/kg
3-Methylcholanthrene	<.582	17	mg/kg
Acenaphthene	<.582	17	mg/kg
Acenaphthylene	<.582	17	mg/kg
Anthracene	<.582	17	mg/kg
Benzo(a)anthracene	<.582	17	mg/kg
Benzo(a)pyrene	<.582	17	mg/kg
Benzo[b]fluoranthene	<.582	17	mg/kg
Benzo[g,h,i]perylene	<.582	17	mg/kg
Benzo[k]fluoranthene	<.582	17	mg/kg
Chrysene	<.582	17	mg/kg
Dibenz[a,h]anthracene	<.582	17	mg/kg
Dibenzofuran	<.582	17	mg/kg
Fluoranthene	<.582	17	mg/kg
Fluorene	<.582	17	mg/kg
Indeno[1,2,3-cd]pyrene	<.582	17	mg/kg
Naphthalene	<.582	17	mg/kg
Phenanthrene	<.582	17	mg/kg
Pyrene	<.582	17	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01G43 WEST CREEK AT PARMA @ BROADVIEW RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<26.9		ug/kg
PCB-1221	<26.9		ug/kg
PCB-1232	<26.9		ug/kg
PCB-1242	<26.9		ug/kg
PCB-1248	<26.9		ug/kg
PCB-1254	<26.9		ug/kg
PCB-1260	<26.9		ug/kg
4,4'-DDD	<5.39		ug/kg
4,4-DDE	<5.39		ug/kg
4,4'-DDT	<5.39		ug/kg
Aldrin	<5.39		ug/kg
Dieldrin	<5.39		ug/kg
Endosulfan I	<5.39		ug/kg
Endosulfan II	<5.39		ug/kg
Endosulfan sulfate	<5.39		ug/kg
Endrin	<5.39		ug/kg
Endrin aldehyde	<5.39		ug/kg
Heptachlor	<5.39		ug/kg
Heptachlor epoxide	<5.39		ug/kg
Hexachlorobenzene	<5.39		ug/kg
Methoxychlor	<5.39		ug/kg
Mirex	<5.39		ug/kg
a-BHC	<5.39		ug/kg
b-BHC	<5.39		ug/kg
d-BHC	<5.39		ug/kg
y-BHC	<5.39		ug/kg
1,2,4,5-Tetrachlorobenzene	<.533		mg/kg
1,2,4-Trichlorobenzene	<.533		mg/kg
1,2-Dichlorobenzene	<.533		mg/kg
1,3-Dichlorobenzene	<.533		mg/kg
1,3-Dinitrobenzene	<.533		mg/kg
1,4-Dichlorobenzene	<.533		mg/kg
2,3,4,6-Tetrachlorophenol	<.533		mg/kg
2,4,5-Trichlorophenol	<.533		mg/kg
2,4,6-Trichlorophenol	<.533		mg/kg
2,4-Dichlorophenol	<.533		mg/kg
2,4-Dimethylphenol	<2.66		mg/kg
2,4-Dinitrophenol	<2.66		mg/kg
2,4-Dinitrotoluene	<.533		mg/kg
2,6-Dichlorophenol	<.533		mg/kg
2,6-Dinitrotoluene	<.533		mg/kg
2-Acetylaminofluorene	<.533		mg/kg
2-Chloronaphthalene	<.533		mg/kg
2-Chlorophenol	<.533		mg/kg
2-Methylphenol	<.533		mg/kg
2-Nitroaniline	<.533		mg/kg
2-Nitrophenol	<.533		mg/kg
2-Picoline	<.533		mg/kg
3-,4-methylphenol	<.533		mg/kg
3,3'-Dichlorobenzidine	<.533		mg/kg
4,6-Dinitro-2-methylphenol	<2.66		mg/kg
4-Bromophenyl-phenylether	<.533		mg/kg
4-Chloro-3-methylphenol	<2.66		mg/kg
4-Chlorophenyl-phenylether	<.533		mg/kg
4-Nitroaniline	<.533		mg/kg
4-Nitrophenol	<2.66		mg/kg
7,12-Dimethylbenz[a]anthracene	<.533		mg/kg
Acetophenone	<.533		mg/kg
Aniline	<.533		mg/kg
Aniline	<.533[a]		mg/kg
Benzyl Alcohol	<.533		mg/kg
Butylbenzylphthalate	<.533		mg/kg
Di-n-butylphthalate	<.533		mg/kg
Di-n-octylphthalate	<.533		mg/kg
Diethylphthalate	<.533		mg/kg
Dimethylphthalate	<.533		mg/kg
Dinoseb	<.533		mg/kg
Diphenylamine	<.533		mg/kg
Ethyl methanesulfonate	<.533		mg/kg
Hexachlorobenzene	<.533		mg/kg
Hexachlorobutadiene	<.533		mg/kg
Hexachlorocyclopentadiene	<2.66		mg/kg
Hexachloroethane	<.533		mg/kg
Hexachloropropene	<.533		mg/kg
Isophorone	<.533		mg/kg
Methyl methanesulfonate	<.533		mg/kg
N-Nitroso-di-n-butylamine	<.533		mg/kg
N-Nitroso-di-n-propylamine	<.533		mg/kg
N-Nitrosomorpholine	<.533		mg/kg
N-Nitrosopiperidine	<.533		mg/kg
N-Nitrosopyrrolidine	<.533		mg/kg
Nitrobenzene	<.533		mg/kg
Pentachlorobenzene	<.533		mg/kg
Pentachlorophenol	<2.66		mg/kg
Phenacetin	<.533		mg/kg
Phenol	<.533		mg/kg
Pronamide	<.533		mg/kg
Safrole	<.533		mg/kg
bis(2-Chloroethoxy)methane	<.533		mg/kg
bis(2-Chloroethyl)ether	<.533		mg/kg
bis(2-Chloroisopropyl)ether	<.533		mg/kg
bis(2-Ethylhexyl)phthalate	<.533		mg/kg
p-Dimethylaminoazobenzene	<.533		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.533	32	mg/kg
2-Methylnaphthalene	<.533	32	mg/kg
3-Methylcholanthrene	<.533	32	mg/kg
Acenaphthene	<.533	32	mg/kg
Acenaphthylene	<.533	32	mg/kg
Anthracene	<.533	32	mg/kg
Benzo(a)anthracene	<.533	32	mg/kg
Benzo(a)pyrene	<.533	32	mg/kg
Benzo[b]fluoranthene	.559	68	mg/kg
Benzo[g,h,i]perylene	<.533	32	mg/kg
Benzo[k]fluoranthene	<.533	32	mg/kg
Chrysene	.665	80	mg/kg
Dibenz[a,h]anthracene	<.533	32	mg/kg
Dibenzofuran	<.533	32	mg/kg
Fluoranthene	1.42	171	mg/kg
Fluorene	<.533	32	mg/kg
Indeno[1,2,3-cd]pyrene	.545	66	mg/kg
Naphthalene	<.533	32	mg/kg
Phenanthrene	<.533	32	mg/kg
Pyrene	1.15	139	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P09 MILL CREEK @ BROADWAY RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<26.5		ug/kg
PCB-1221	<26.5		ug/kg
PCB-1232	<26.5		ug/kg
PCB-1242	146		ug/kg
PCB-1248	<26.5		ug/kg
PCB-1254	<26.5		ug/kg
PCB-1260	<26.5		ug/kg
4,4'-DDD	<5.29		ug/kg
4,4-DDE	<5.29		ug/kg
4,4'-DDT	<5.29		ug/kg
Aldrin	<5.29		ug/kg
Dieldrin	<5.29		ug/kg
Endosulfan I	<5.29		ug/kg
Endosulfan II	<5.29		ug/kg
Endosulfan sulfate	<5.29		ug/kg
Endrin	<5.29		ug/kg
Endrin aldehyde	<5.29		ug/kg
Heptachlor	<5.29		ug/kg
Heptachlor epoxide	<5.29		ug/kg
Hexachlorobenzene	<5.29		ug/kg
Methoxychlor	<5.29		ug/kg
Mirex	<5.29		ug/kg
a-BHC	<5.29		ug/kg
b-BHC	<5.29		ug/kg
d-BHC	<5.29		ug/kg
y-BHC	<5.29		ug/kg
1,2,4,5-Tetrachlorobenzene	<.524		mg/kg
1,2,4-Trichlorobenzene	<.524		mg/kg
1,2-Dichlorobenzene	<.524		mg/kg
1,3-Dichlorobenzene	<.524		mg/kg
1,3-Dinitrobenzene	<.524		mg/kg
1,4-Dichlorobenzene	<.524		mg/kg
2,3,4,6-Tetrachlorophenol	<.524		mg/kg
2,4,5-Trichlorophenol	<.524		mg/kg
2,4,6-Trichlorophenol	<.524		mg/kg
2,4-Dichlorophenol	<.524		mg/kg
2,4-Dimethylphenol	<2.62		mg/kg
2,4-Dinitrophenol	<2.62		mg/kg
2,4-Dinitrotoluene	<.524		mg/kg
2,6-Dichlorophenol	<.524		mg/kg
2,6-Dinitrotoluene	<.524		mg/kg
2-Acetylaminofluorene	<.524		mg/kg
2-Chloronaphthalene	<.524		mg/kg
2-Chlorophenol	<.524		mg/kg
2-Methylphenol	<.524		mg/kg
2-Nitroaniline	<.524		mg/kg
2-Nitrophenol	<.524		mg/kg
2-Picoline	<.524		mg/kg
3-,4-methylphenol	<.524		mg/kg
3,3'-Dichlorobenzidine	<.524		mg/kg
4,6-Dinitro-2-methylphenol	<2.62		mg/kg
4-Bromophenyl-phenylether	<.524		mg/kg
4-Chloro-3-methylphenol	<2.62		mg/kg
4-Chlorophenyl-phenylether	<.524		mg/kg
4-Nitroaniline	<.524		mg/kg
4-Nitrophenol	<2.62		mg/kg
7,12-Dimethylbenz[a]anthracene	<.524		mg/kg
Acetophenone	<.524		mg/kg
Aniline	<.524		mg/kg
Aniline	<.524[a]		mg/kg
Benzyl Alcohol	<.524		mg/kg
Butylbenzylphthalate	<.524		mg/kg
Di-n-butylphthalate	<.524		mg/kg
Di-n-octylphthalate	<.524		mg/kg
Diethylphthalate	<.524		mg/kg
Dimethylphthalate	<.524		mg/kg
Dinoseb	<.524		mg/kg
Diphenylamine	<.524		mg/kg
Ethyl methanesulfonate	<.524		mg/kg
Hexachlorobenzene	<.524		mg/kg
Hexachlorobutadiene	<.524		mg/kg
Hexachlorocyclopentadiene	<2.62		mg/kg
Hexachloroethane	<.524		mg/kg
Hexachloropropene	<.524		mg/kg
Isophorone	<.524		mg/kg
Methyl methanesulfonate	<.524		mg/kg
N-Nitroso-di-n-butylamine	<.524		mg/kg
N-Nitroso-di-n-propylamine	<.524		mg/kg
N-Nitrosomorpholine	<.524		mg/kg
N-Nitrosopiperidine	<.524		mg/kg
N-Nitrosopyrrolidine	<.524		mg/kg
Nitrobenzene	<.524		mg/kg
Pentachlorobenzene	<.524		mg/kg
Pentachlorophenol	<2.62		mg/kg
Phenacetin	<.524		mg/kg
Phenol	<.524		mg/kg
Pronamide	<.524		mg/kg
Safrole	<.524		mg/kg
bis(2-Chloroethoxy)methane	<.524		mg/kg
bis(2-Chloroethyl)ether	<.524		mg/kg
bis(2-Chloroisopropyl)ether	<.524		mg/kg
bis(2-Ethylhexyl)phthalate	<.524		mg/kg
p-Dimethylaminoazobenzene	<.524		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.524	20	mg/kg
2-Methylnaphthalene	<.524	20	mg/kg
3-Methylcholanthrene	<.524	20	mg/kg
Acenaphthene	<.524	20	mg/kg
Acenaphthylene	<.524	20	mg/kg
Anthracene	<.524	20	mg/kg
Benzo(a)anthracene	<.524	20	mg/kg
Benzo(a)pyrene	<.524	20	mg/kg
Benzo[b]fluoranthene	.638	49	mg/kg
Benzo[g,h,i]perylene	.573	44	mg/kg
Benzo[k]fluoranthene	<.524	20	mg/kg
Chrysene	.74	57	mg/kg
Dibenz[a,h]anthracene	<.524	20	mg/kg
Dibenzofuran	<.524	20	mg/kg
Fluoranthene	1.55	120	mg/kg
Fluorene	<.524	20	mg/kg
Indeno[1,2,3-cd]pyrene	.67	52	mg/kg
Naphthalene	<.524	20	mg/kg
Phenanthrene	.59	46	mg/kg
Pyrene	1.23	95	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P10 WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17 (GRANGE			
OTHER	**13-AUG-2018**		
PCB-1016	<26.4		ug/kg
PCB-1221	<26.4		ug/kg
PCB-1232	<26.4		ug/kg
PCB-1242	<26.4		ug/kg
PCB-1248	<26.4		ug/kg
PCB-1254	<26.4		ug/kg
PCB-1260	<26.4		ug/kg
4,4'-DDD	<5.28		ug/kg
4,4-DDE	<5.28		ug/kg
4,4'-DDT	<5.28		ug/kg
Aldrin	<5.28		ug/kg
Dieldrin	<5.28		ug/kg
Endosulfan I	<5.28		ug/kg
Endosulfan II	<5.28		ug/kg
Endosulfan sulfate	<5.28		ug/kg
Endrin	<5.28		ug/kg
Endrin aldehyde	<5.28		ug/kg
Heptachlor	<5.28		ug/kg
Heptachlor epoxide	<5.28		ug/kg
Hexachlorobenzene	<5.28		ug/kg
Methoxychlor	<5.28		ug/kg
Mirex	<5.28		ug/kg
a-BHC	<5.28		ug/kg
b-BHC	<5.28		ug/kg
d-BHC	<5.28		ug/kg
y-BHC	<5.28		ug/kg
1,2,4,5-Tetrachlorobenzene	<.525		mg/kg
1,2,4-Trichlorobenzene	<.525		mg/kg
1,2-Dichlorobenzene	<.525		mg/kg
1,3-Dichlorobenzene	<.525		mg/kg
1,3-Dinitrobenzene	<.525		mg/kg
1,4-Dichlorobenzene	<.525		mg/kg
2,3,4,6-Tetrachlorophenol	<.525		mg/kg
2,4,5-Trichlorophenol	<.525		mg/kg
2,4,6-Trichlorophenol	<.525		mg/kg
2,4-Dichlorophenol	<.525		mg/kg
2,4-Dimethylphenol	<2.63		mg/kg
2,4-Dinitrophenol	<2.63		mg/kg
2,4-Dinitrotoluene	<.525		mg/kg
2,6-Dichlorophenol	<.525		mg/kg
2,6-Dinitrotoluene	<.525		mg/kg
2-Acetylaminofluorene	<.525		mg/kg
2-Chloronaphthalene	<.525		mg/kg
2-Chlorophenol	<.525		mg/kg
2-Methylphenol	<.525		mg/kg
2-Nitroaniline	<.525		mg/kg
2-Nitrophenol	<.525		mg/kg
2-Picoline	<.525		mg/kg
3-,4-methylphenol	<.525		mg/kg
3,3'-Dichlorobenzidine	<.525		mg/kg
4,6-Dinitro-2-methylphenol	<2.63		mg/kg
4-Bromophenyl-phenylether	<.525		mg/kg
4-Chloro-3-methylphenol	<2.63		mg/kg
4-Chlorophenyl-phenylether	<.525		mg/kg
4-Nitroaniline	<.525		mg/kg
4-Nitrophenol	<2.63		mg/kg
7,12-Dimethylbenz[a]anthracene	<.525		mg/kg
Acetophenone	<.525		mg/kg
Aniline	<.525		mg/kg
Aniline	<.525[a]		mg/kg
Benzyl Alcohol	<.525		mg/kg
Butylbenzylphthalate	<.525		mg/kg
Di-n-butylphthalate	<.525		mg/kg
Di-n-octylphthalate	<.525		mg/kg
Diethylphthalate	<.525		mg/kg
Dimethylphthalate	<.525		mg/kg
Dinoseb	<.525		mg/kg
Diphenylamine	<.525		mg/kg
Ethyl methanesulfonate	<.525		mg/kg
Hexachlorobenzene	<.525		mg/kg
Hexachlorobutadiene	<.525		mg/kg
Hexachlorocyclopentadiene	<2.63		mg/kg
Hexachloroethane	<.525		mg/kg
Hexachloropropene	<.525		mg/kg
Isophorone	<.525		mg/kg
Methyl methanesulfonate	<.525		mg/kg
N-Nitroso-di-n-butylamine	<.525		mg/kg
N-Nitroso-di-n-propylamine	<.525		mg/kg
N-Nitrosomorpholine	<.525		mg/kg
N-Nitrosopiperidine	<.525		mg/kg
N-Nitrosopyrrolidine	<.525		mg/kg
Nitrobenzene	<.525		mg/kg
Pentachlorobenzene	<.525		mg/kg
Pentachlorophenol	<2.63		mg/kg
Phenacetin	<.525		mg/kg
Phenol	<.525		mg/kg
Pronamide	<.525		mg/kg
Safrole	<.525		mg/kg
bis(2-Chloroethoxy)methane	<.525		mg/kg
bis(2-Chloroethyl)ether	<.525		mg/kg
bis(2-Chloroisopropyl)ether	<.525		mg/kg
bis(2-Ethylhexyl)phthalate	<.525		mg/kg
p-Dimethylaminoazobenzene	<.525		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.525	21	mg/kg
2-Methylnaphthalene	<.525	21	mg/kg
3-Methylcholanthrene	<.525	21	mg/kg
Acenaphthene	<.525	21	mg/kg
Acenaphthylene	<.525	21	mg/kg
Anthracene	<.525	21	mg/kg
Benzo(a)anthracene	<.525	21	mg/kg
Benzo(a)pyrene	<.525	21	mg/kg
Benzo[b]fluoranthene	<.525	21	mg/kg
Benzo[g,h,i]perylene	<.525	21	mg/kg
Benzo[k]fluoranthene	<.525	21	mg/kg
Chrysene	.528	42	mg/kg
Dibenz[a,h]anthracene	<.525	21	mg/kg
Dibenzofuran	<.525	21	mg/kg
Fluoranthene	1.04	83	mg/kg
Fluorene	<.525	21	mg/kg
Indeno[1,2,3-cd]pyrene	<.525	21	mg/kg
Naphthalene	<.525	21	mg/kg
Phenanthrene	<.525	21	mg/kg
Pyrene	.837	67	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P13 CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<32.2		ug/kg
PCB-1221	<32.2		ug/kg
PCB-1232	<32.2		ug/kg
PCB-1242	<32.2		ug/kg
PCB-1248	<32.2		ug/kg
PCB-1254	<32.2		ug/kg
PCB-1260	<32.2		ug/kg
4,4'-DDD	<6.45		ug/kg
4,4-DDE	<6.45		ug/kg
4,4'-DDT	<6.45		ug/kg
Aldrin	<6.45		ug/kg
Dieldrin	<6.45		ug/kg
Endosulfan I	<6.45		ug/kg
Endosulfan II	<6.45		ug/kg
Endosulfan sulfate	<6.45		ug/kg
Endrin	<6.45		ug/kg
Endrin aldehyde	<6.45		ug/kg
Heptachlor	<6.45		ug/kg
Heptachlor epoxide	<6.45		ug/kg
Hexachlorobenzene	<6.45		ug/kg
Methoxychlor	<6.45		ug/kg
Mirex	<6.45		ug/kg
a-BHC	<6.45		ug/kg
b-BHC	<6.45		ug/kg
d-BHC	<6.45		ug/kg
y-BHC	<6.45		ug/kg
1,2,4,5-Tetrachlorobenzene	<.649		mg/kg
1,2,4-Trichlorobenzene	<.649		mg/kg
1,2-Dichlorobenzene	<.649		mg/kg
1,3-Dichlorobenzene	<.649		mg/kg
1,3-Dinitrobenzene	<.649		mg/kg
1,4-Dichlorobenzene	<.649		mg/kg
2,3,4,6-Tetrachlorophenol	<.649		mg/kg
2,4,5-Trichlorophenol	<.649		mg/kg
2,4,6-Trichlorophenol	<.649		mg/kg
2,4-Dichlorophenol	<.649		mg/kg
2,4-Dimethylphenol	<3.24		mg/kg
2,4-Dinitrophenol	<3.24		mg/kg
2,4-Dinitrotoluene	<.649		mg/kg
2,6-Dichlorophenol	<.649		mg/kg
2,6-Dinitrotoluene	<.649		mg/kg
2-Acetylaminofluorene	<.649		mg/kg
2-Chloronaphthalene	<.649		mg/kg
2-Chlorophenol	<.649		mg/kg
2-Methylphenol	<.649		mg/kg
2-Nitroaniline	<.649		mg/kg
2-Nitrophenol	<.649		mg/kg
2-Picoline	<.649		mg/kg
3-,4-methylphenol	<.649		mg/kg
3,3'-Dichlorobenzidine	<.649		mg/kg
4,6-Dinitro-2-methylphenol	<3.24		mg/kg
4-Bromophenyl-phenylether	<.649		mg/kg
4-Chloro-3-methylphenol	<3.24		mg/kg
4-Chlorophenyl-phenylether	<.649		mg/kg
4-Nitroaniline	<.649		mg/kg
4-Nitrophenol	<3.24		mg/kg
7,12-Dimethylbenz[a]anthracene	<.649		mg/kg
Acetophenone	<.649		mg/kg
Aniline	<.649		mg/kg
Aniline	<.649[a]		mg/kg
Benzyl Alcohol	<.649		mg/kg
Butylbenzylphthalate	<.649		mg/kg
Di-n-butylphthalate	<.649		mg/kg
Di-n-octylphthalate	<.649		mg/kg
Diethylphthalate	<.649		mg/kg
Dimethylphthalate	<.649		mg/kg
Dinoseb	<.649		mg/kg
Diphenylamine	<.649		mg/kg
Ethyl methanesulfonate	<.649		mg/kg
Hexachlorobenzene	<.649		mg/kg
Hexachlorobutadiene	<.649		mg/kg
Hexachlorocyclopentadiene	<3.24		mg/kg
Hexachloroethane	<.649		mg/kg
Hexachloropropene	<.649		mg/kg
Isophorone	<.649		mg/kg
Methyl methanesulfonate	<.649		mg/kg
N-Nitroso-di-n-butylamine	<.649		mg/kg
N-Nitroso-di-n-propylamine	<.649		mg/kg
N-Nitrosomorpholine	<.649		mg/kg
N-Nitrosopiperidine	<.649		mg/kg
N-Nitrosopyrrolidine	<.649		mg/kg
Nitrobenzene	<.649		mg/kg
Pentachlorobenzene	<.649		mg/kg
Pentachlorophenol	<3.24		mg/kg
Phenacetin	<.649		mg/kg
Phenol	<.649		mg/kg
Pronamide	<.649		mg/kg
Safrole	<.649		mg/kg
bis(2-Chloroethoxy)methane	<.649		mg/kg
bis(2-Chloroethyl)ether	<.649		mg/kg
bis(2-Chloroisopropyl)ether	<.649		mg/kg
bis(2-Ethylhexyl)phthalate	<.649		mg/kg
p-Dimethylaminoazobenzene	<.649		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.649	26	mg/kg
2-Methylnaphthalene	<.649	26	mg/kg
3-Methylcholanthrene	<.649	26	mg/kg
Acenaphthene	<.649	26	mg/kg
Acenaphthylene	<.649	26	mg/kg
Anthracene	<.649	26	mg/kg
Benzo(a)anthracene	<.649	26	mg/kg
Benzo(a)pyrene	<.649	26	mg/kg
Benzo[b]fluoranthene	<.649	26	mg/kg
Benzo[g,h,i]perylene	<.649	26	mg/kg
Benzo[k]fluoranthene	<.649	26	mg/kg
Chrysene	<.649	26	mg/kg
Dibenz[a,h]anthracene	<.649	26	mg/kg
Dibenzofuran	<.649	26	mg/kg
Fluoranthene	1.01	80	mg/kg
Fluorene	<.649	26	mg/kg
Indeno[1,2,3-cd]pyrene	<.649	26	mg/kg
Naphthalene	<.649	26	mg/kg
Phenanthrene	<.649	26	mg/kg
Pyrene	.806	63	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.			
OTHER	**18-OCT-2018**		
PCB-1016	<26.8		ug/kg
PCB-1221	<26.8		ug/kg
PCB-1232	<26.8		ug/kg
PCB-1242	<26.8		ug/kg
PCB-1248	<26.8		ug/kg
PCB-1254	<26.8		ug/kg
PCB-1260	<26.8		ug/kg
4,4'-DDD	<5.36		ug/kg
4,4-DDE	19.7		ug/kg
4,4'-DDT	20.1		ug/kg
Aldrin	<5.36		ug/kg
Dieldrin	<5.36		ug/kg
Dieldrin	<5.36[a]		ug/kg
Endosulfan I	<5.36[a]		ug/kg
Endosulfan I	<5.36		ug/kg
Endosulfan II	<5.36		ug/kg
Endosulfan II	<5.36[a]		ug/kg
Endosulfan sulfate	<5.36[a]		ug/kg
Endosulfan sulfate	<5.36		ug/kg
Endrin	<5.36		ug/kg
Endrin	<5.36[a]		ug/kg
Endrin aldehyde	<5.36		ug/kg
Endrin aldehyde	<5.36[a]		ug/kg
Heptachlor	<5.36		ug/kg
Heptachlor epoxide	<5.36[a]		ug/kg
Heptachlor epoxide	<5.36		ug/kg
Hexachlorobenzene	<5.36		ug/kg
Methoxychlor	<5.36		ug/kg
Methoxychlor	<5.36[a]		ug/kg
Mirex	<5.36		ug/kg
a-BHC	<5.36		ug/kg
b-BHC	<5.36		ug/kg
d-BHC	<5.36		ug/kg
d-BHC	<5.36[a]		ug/kg
y-BHC	<5.36		ug/kg
1,2,4,5-Tetrachlorobenzene	<.533		mg/kg
1,2,4-Trichlorobenzene	<.533		mg/kg
1,2-Dichlorobenzene	<.533		mg/kg
1,3-Dichlorobenzene	<.533		mg/kg
1,3-Dinitrobenzene	<.533		mg/kg
1,4-Dichlorobenzene	<.533		mg/kg
2,3,4,6-Tetrachlorophenol	<.533		mg/kg
2,4,5-Trichlorophenol	<.533		mg/kg
2,4,6-Trichlorophenol	<.533		mg/kg
2,4-Dichlorophenol	<.533		mg/kg
2,4-Dimethylphenol	<2.66		mg/kg
2,4-Dinitrophenol	<2.66		mg/kg
2,4-Dinitrotoluene	<.533		mg/kg
2,6-Dichlorophenol	<.533		mg/kg
2,6-Dinitrotoluene	<.533		mg/kg
2-Acetylaminofluorene	<.533		mg/kg
2-Chloronaphthalene	<.533		mg/kg
2-Chlorophenol	<.533		mg/kg
2-Methylphenol	<.533		mg/kg
2-Nitroaniline	<.533		mg/kg
2-Nitrophenol	<.533		mg/kg
2-Picoline	<.533		mg/kg
3-,4-methylphenol	<.533		mg/kg
3,3'-Dichlorobenzidine	<.533		mg/kg
4,6-Dinitro-2-methylphenol	<2.66		mg/kg
4-Bromophenyl-phenylether	<.533		mg/kg
4-Chloro-3-methylphenol	<2.66		mg/kg
4-Chlorophenyl-phenylether	<.533		mg/kg
4-Nitroaniline	<.533		mg/kg
4-Nitrophenol	<2.66		mg/kg
7,12-Dimethylbenz[a]anthracene	<.533		mg/kg
Acetophenone	<.533		mg/kg
Aniline	<.533		mg/kg
Aniline	<.533[a]		mg/kg
Benzyl Alcohol	<.533		mg/kg
Butylbenzylphthalate	<.533		mg/kg
Di-n-butylphthalate	<.533		mg/kg
Di-n-octylphthalate	<.533		mg/kg
Diethylphthalate	<.533		mg/kg
Dimethylphthalate	<.533		mg/kg
Dinoseb	<.533		mg/kg
Diphenylamine	<.533		mg/kg
Ethyl methanesulfonate	<.533		mg/kg
Hexachlorobenzene	<.533		mg/kg
Hexachlorobutadiene	<.533		mg/kg
Hexachlorocyclopentadiene	<2.66		mg/kg
Hexachloroethane	<.533		mg/kg
Hexachloropropene	<.533		mg/kg
Isophorone	<.533		mg/kg
Methyl methanesulfonate	<.533		mg/kg
Methyl methanesulfonate	<.533[a]		mg/kg
N-Nitroso-di-n-butylamine	<.533		mg/kg
N-Nitroso-di-n-propylamine	<.533		mg/kg
N-Nitrosomorpholine	<.533		mg/kg
N-Nitrosopiperidine	<.533		mg/kg
N-Nitrosopyrrolidine	<.533		mg/kg
Nitrobenzene	<.533		mg/kg
Pentachlorobenzene	<.533		mg/kg
Pentachlorophenol	<2.66		mg/kg
Phenacetin	<.533		mg/kg
Phenol	<.533		mg/kg
Pronamide	<.533		mg/kg
Safrole	<.533		mg/kg
bis(2-Chloroethoxy)methane	<.533		mg/kg
bis(2-Chloroethyl)ether	<.533		mg/kg
bis(2-Chloroisopropyl)ether	<.533		mg/kg
bis(2-Ethylhexyl)phthalate	<.533		mg/kg
p-Dimethylaminoazobenzene	<.533		mg/kg
PAH	**18-OCT-2018**		
1,4-Naphthoquinone	<.533	30	mg/kg
2-Methylnaphthalene	<.533	30	mg/kg
3-Methylcholanthrene	<.533	30	mg/kg
Acenaphthene	<.533	30	mg/kg
Acenaphthylene	<.533	30	mg/kg
Anthracene	<.533	30	mg/kg
Benzo(a)anthracene	<.533	30	mg/kg
Benzo(a)pyrene	<.533	30	mg/kg
Benzo[b]fluoranthene	<.533	30	mg/kg
Benzo[g,h,i]perylene	<.533	30	mg/kg
Benzo[k]fluoranthene	<.533	30	mg/kg
Chrysene	<.533	30	mg/kg
Dibenz[a,h]anthracene	<.533	30	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01P14 FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.							
Dibenzofuran	<.533	30	mg/kg				
Fluoranthene	<.533	30	mg/kg				
Fluorene	<.533	30	mg/kg				
Indeno[1,2,3-cd]pyrene	<.533	30	mg/kg				
Naphthalene	<.533	30	mg/kg				
Phenanthrene	<.533	30	mg/kg				
Pyrene	<.533	30	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P15 YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.			
OTHER	**18-OCT-2018**		
PCB-1016	<30.9		ug/kg
PCB-1221	<30.9		ug/kg
PCB-1232	<30.9		ug/kg
PCB-1242	<30.9		ug/kg
PCB-1248	<30.9		ug/kg
PCB-1254	<30.9		ug/kg
PCB-1260	<30.9		ug/kg
4,4'-DDD	<6.17		ug/kg
4,4-DDE	<6.17		ug/kg
4,4'-DDT	<6.17		ug/kg
Aldrin	<6.17		ug/kg
Dieldrin	<6.17		ug/kg
Endosulfan I	<6.17		ug/kg
Endosulfan II	<6.17		ug/kg
Endosulfan sulfate	<6.17		ug/kg
Endrin	<6.17		ug/kg
Endrin aldehyde	<6.17		ug/kg
Heptachlor	<6.17		ug/kg
Heptachlor epoxide	<6.17		ug/kg
Hexachlorobenzene	<6.17		ug/kg
Methoxychlor	<6.17		ug/kg
Mirex	<6.17		ug/kg
a-BHC	<6.17		ug/kg
b-BHC	<6.17		ug/kg
d-BHC	<6.17		ug/kg
y-BHC	<6.17		ug/kg
1,2,4,5-Tetrachlorobenzene	<.612		mg/kg
1,2,4-Trichlorobenzene	<.612		mg/kg
1,2-Dichlorobenzene	<.612		mg/kg
1,3-Dichlorobenzene	<.612		mg/kg
1,3-Dinitrobenzene	<.612		mg/kg
1,4-Dichlorobenzene	<.612		mg/kg
2,3,4,6-Tetrachlorophenol	<.612		mg/kg
2,4,5-Trichlorophenol	<.612		mg/kg
2,4,6-Trichlorophenol	<.612		mg/kg
2,4-Dichlorophenol	<.612		mg/kg
2,4-Dimethylphenol	<3.06		mg/kg
2,4-Dinitrophenol	<3.06		mg/kg
2,4-Dinitrotoluene	<.612		mg/kg
2,6-Dichlorophenol	<.612		mg/kg
2,6-Dinitrotoluene	<.612		mg/kg
2-Acetylaminofluorene	<.612		mg/kg
2-Chloronaphthalene	<.612		mg/kg
2-Chlorophenol	<.612		mg/kg
2-Methylphenol	<.612		mg/kg
2-Nitroaniline	<.612		mg/kg
2-Nitrophenol	<.612		mg/kg
2-Picoline	<.612		mg/kg
3-,4-methylphenol	<.612		mg/kg
3,3'-Dichlorobenzidine	<.612		mg/kg
4,6-Dinitro-2-methylphenol	<3.06		mg/kg
4-Bromophenyl-phenylether	<.612		mg/kg
4-Chloro-3-methylphenol	<3.06		mg/kg
4-Chlorophenyl-phenylether	<.612		mg/kg
4-Nitroaniline	<.612		mg/kg
4-Nitrophenol	<3.06		mg/kg
7,12-Dimethylbenz[a]anthracene	<.612		mg/kg
Acetophenone	<.612		mg/kg
Aniline	<.612		mg/kg
Aniline	<.612[a]		mg/kg
Benzyl Alcohol	<.612		mg/kg
Butylbenzylphthalate	<.612		mg/kg
Di-n-butylphthalate	<.612		mg/kg
Di-n-octylphthalate	<.612		mg/kg
Diethylphthalate	<.612		mg/kg
Dimethylphthalate	<.612		mg/kg
Dinoseb	<.612		mg/kg
Diphenylamine	<.612		mg/kg
Ethyl methanesulfonate	<.612		mg/kg
Hexachlorobenzene	<.612		mg/kg
Hexachlorobutadiene	<.612		mg/kg
Hexachlorocyclopentadiene	<3.06		mg/kg
Hexachloroethane	<.612		mg/kg
Hexachloropropene	<.612		mg/kg
Isophorone	<.612		mg/kg
Methyl methanesulfonate	<.612[a]		mg/kg
Methyl methanesulfonate	<.612		mg/kg
N-Nitroso-di-n-butylamine	<.612		mg/kg
N-Nitroso-di-n-propylamine	<.612		mg/kg
N-Nitrosomorpholine	<.612		mg/kg
N-Nitrosopiperidine	<.612		mg/kg
N-Nitrosopyrrolidine	<.612		mg/kg
Nitrobenzene	<.612		mg/kg
Pentachlorobenzene	<.612		mg/kg
Pentachlorophenol	<3.06		mg/kg
Phenacetin	<.612		mg/kg
Phenol	<.612		mg/kg
Pronamide	<.612		mg/kg
Safrole	<.612		mg/kg
bis(2-Chloroethoxy)methane	<.612		mg/kg
bis(2-Chloroethyl)ether	<.612		mg/kg
bis(2-Chloroisopropyl)ether	<.612		mg/kg
bis(2-Ethylhexyl)phthalate	<.612		mg/kg
p-Dimethylaminoazobenzene	<.612		mg/kg
PAH	**18-OCT-2018**		
1,4-Naphthoquinone	<.612	26	mg/kg
2-Methylnaphthalene	<.612	26	mg/kg
3-Methylcholanthrene	<.612	26	mg/kg
Acenaphthene	<.612	26	mg/kg
Acenaphthylene	<.612	26	mg/kg
Anthracene	<.612	26	mg/kg
Benzo(a)anthracene	<.612	26	mg/kg
Benzo(a)pyrene	<.612	26	mg/kg
Benzo[b]fluoranthene	<.612	26	mg/kg
Benzo[g,h,i]perylene	<.612	26	mg/kg
Benzo[k]fluoranthene	<.612	26	mg/kg
Chrysene	<.612	26	mg/kg
Dibenz[a,h]anthracene	<.612	26	mg/kg
Dibenzofuran	<.612	26	mg/kg
Fluoranthene	.64	54	mg/kg
Fluorene	<.612	26	mg/kg
Indeno[1,2,3-cd]pyrene	<.612	26	mg/kg
Naphthalene	<.612	26	mg/kg
Phenanthrene	<.612	26	mg/kg
Pyrene	<.612	26	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P24 MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.			
OTHER	**18-OCT-2018**		
PCB-1016	<27.3		ug/kg
PCB-1221	<27.3		ug/kg
PCB-1232	<27.3		ug/kg
PCB-1242	<27.3		ug/kg
PCB-1248	<27.3		ug/kg
PCB-1254	<27.3		ug/kg
PCB-1260	<27.3		ug/kg
4,4'-DDD	<5.47		ug/kg
4,4-DDE	<5.47		ug/kg
4,4'-DDT	<5.47		ug/kg
Aldrin	<5.47		ug/kg
Dieldrin	<5.47		ug/kg
Endosulfan I	<5.47		ug/kg
Endosulfan II	<5.47		ug/kg
Endosulfan sulfate	<5.47		ug/kg
Endrin	<5.47		ug/kg
Endrin aldehyde	<5.47		ug/kg
Heptachlor	<5.47		ug/kg
Heptachlor epoxide	<5.47		ug/kg
Hexachlorobenzene	<5.47		ug/kg
Methoxychlor	<5.47		ug/kg
Mirex	<5.47		ug/kg
a-BHC	<5.47		ug/kg
b-BHC	<5.47		ug/kg
d-BHC	<5.47		ug/kg
y-BHC	<5.47		ug/kg
1,2,4,5-Tetrachlorobenzene	<.547		mg/kg
1,2,4-Trichlorobenzene	<.547		mg/kg
1,2-Dichlorobenzene	<.547		mg/kg
1,3-Dichlorobenzene	<.547		mg/kg
1,3-Dinitrobenzene	<.547		mg/kg
1,4-Dichlorobenzene	<.547		mg/kg
2,3,4,6-Tetrachlorophenol	<.547		mg/kg
2,4,5-Trichlorophenol	<.547		mg/kg
2,4,6-Trichlorophenol	<.547		mg/kg
2,4-Dichlorophenol	<.547		mg/kg
2,4-Dimethylphenol	<2.73		mg/kg
2,4-Dinitrophenol	<2.73		mg/kg
2,4-Dinitrotoluene	<.547		mg/kg
2,6-Dichlorophenol	<.547		mg/kg
2,6-Dinitrotoluene	<.547		mg/kg
2-Acetylaminofluorene	<.547		mg/kg
2-Chloronaphthalene	<.547		mg/kg
2-Chlorophenol	<.547		mg/kg
2-Methylphenol	<.547		mg/kg
2-Nitroaniline	<.547		mg/kg
2-Nitrophenol	<.547		mg/kg
2-Picoline	<.547		mg/kg
3-,4-methylphenol	<.547		mg/kg
3,3'-Dichlorobenzidine	<.547		mg/kg
4,6-Dinitro-2-methylphenol	<2.73		mg/kg
4-Bromophenyl-phenylether	<.547		mg/kg
4-Chloro-3-methylphenol	<2.73		mg/kg
4-Chlorophenyl-phenylether	<.547		mg/kg
4-Nitroaniline	<.547		mg/kg
4-Nitrophenol	<2.73		mg/kg
7,12-Dimethylbenz[a]anthracene	<.547		mg/kg
Acetophenone	<.547		mg/kg
Aniline	<.547		mg/kg
Aniline	<.547[a]		mg/kg
Benzyl Alcohol	<.547		mg/kg
Butylbenzylphthalate	<.547		mg/kg
Di-n-butylphthalate	<.547		mg/kg
Di-n-octylphthalate	<.547		mg/kg
Diethylphthalate	<.547		mg/kg
Dimethylphthalate	<.547		mg/kg
Dinoseb	<.547		mg/kg
Diphenylamine	<.547		mg/kg
Ethyl methanesulfonate	<.547		mg/kg
Hexachlorobenzene	<.547		mg/kg
Hexachlorobutadiene	<.547		mg/kg
Hexachlorocyclopentadiene	<2.73		mg/kg
Hexachloroethane	<.547		mg/kg
Hexachloropropene	<.547		mg/kg
Isophorone	<.547		mg/kg
Methyl methanesulfonate	<.547[a]		mg/kg
Methyl methanesulfonate	<.547		mg/kg
N-Nitroso-di-n-butylamine	<.547		mg/kg
N-Nitroso-di-n-propylamine	<.547		mg/kg
N-Nitrosomorpholine	<.547		mg/kg
N-Nitrosopiperidine	<.547		mg/kg
N-Nitrosopyrrolidine	<.547		mg/kg
Nitrobenzene	<.547		mg/kg
Pentachlorobenzene	<.547		mg/kg
Pentachlorophenol	<2.73		mg/kg
Phenacetin	<.547		mg/kg
Phenol	<.547		mg/kg
Pronamide	<.547		mg/kg
Safrole	<.547		mg/kg
bis(2-Chloroethoxy)methane	<.547		mg/kg
bis(2-Chloroethyl)ether	<.547		mg/kg
bis(2-Chloroisopropyl)ether	<.547		mg/kg
bis(2-Ethylhexyl)phthalate	2.21		mg/kg
p-Dimethylaminoazobenzene	<.547		mg/kg
PAH	**18-OCT-2018**		
1,4-Naphthoquinone	<.547	36	mg/kg
2-Methylnaphthalene	<.547	36	mg/kg
3-Methylcholanthrene	<.547	36	mg/kg
Acenaphthene	<.547	36	mg/kg
Acenaphthylene	<.547	36	mg/kg
Anthracene	<.547	36	mg/kg
Benzo(a)anthracene	1.45	192	mg/kg
Benzo(a)pyrene	1.46	194	mg/kg
Benzo[b]fluoranthene	1.35	179	mg/kg
Benzo[g,h,i]perylene	1.09	145	mg/kg
Benzo[k]fluoranthene	1.51	200	mg/kg
Chrysene	1.7	225	mg/kg
Dibenz[a,h]anthracene	<.547	36	mg/kg
Dibenzofuran	<.547	36	mg/kg
Fluoranthene	3.28	435	mg/kg
Fluorene	<.547	36	mg/kg
Indeno[1,2,3-cd]pyrene	1.25	166	mg/kg
Naphthalene	<.547	36	mg/kg
Phenanthrene	1.08	143	mg/kg
Pyrene	2.69	357	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P32 WAHOO DITCH NEAR RAVENNA @ LAKEWOOD RD.			
OTHER	**22-OCT-2018**		
PCB-1016	<36.4		ug/kg
PCB-1221	<36.4		ug/kg
PCB-1232	<36.4		ug/kg
PCB-1242	<36.4		ug/kg
PCB-1248	<36.4		ug/kg
PCB-1254	133		ug/kg
PCB-1260	124		ug/kg
4,4'-DDD	<7.28		ug/kg
4,4-DDE	<7.28		ug/kg
4,4'-DDT	<7.28		ug/kg
Aldrin	<7.28		ug/kg
Dieldrin	<7.28		ug/kg
Endosulfan I	<7.28		ug/kg
Endosulfan II	<7.28		ug/kg
Endosulfan sulfate	<7.28		ug/kg
Endrin	<7.28		ug/kg
Endrin aldehyde	<7.28		ug/kg
Heptachlor	<7.28		ug/kg
Heptachlor epoxide	<7.28		ug/kg
Hexachlorobenzene	<7.28		ug/kg
Methoxychlor	<7.28		ug/kg
Mirex	<7.28		ug/kg
a-BHC	<7.28		ug/kg
b-BHC	<7.28		ug/kg
d-BHC	<7.28		ug/kg
y-BHC	<7.28		ug/kg
1,2,4,5-Tetrachlorobenzene	<.731		mg/kg
1,2,4-Trichlorobenzene	<.731		mg/kg
1,2-Dichlorobenzene	<.731		mg/kg
1,3-Dichlorobenzene	<.731		mg/kg
1,3-Dinitrobenzene	<.731		mg/kg
1,4-Dichlorobenzene	<.731		mg/kg
2,3,4,6-Tetrachlorophenol	<.731		mg/kg
2,4,5-Trichlorophenol	<.731		mg/kg
2,4,6-Trichlorophenol	<.731		mg/kg
2,4-Dichlorophenol	<.731		mg/kg
2,4-Dimethylphenol	<3.65		mg/kg
2,4-Dinitrophenol	<3.65		mg/kg
2,4-Dinitrotoluene	<.731		mg/kg
2,6-Dichlorophenol	<.731		mg/kg
2,6-Dinitrotoluene	<.731		mg/kg
2-Acetylaminofluorene	<.731		mg/kg
2-Chloronaphthalene	<.731		mg/kg
2-Chlorophenol	<.731		mg/kg
2-Methylphenol	<.731		mg/kg
2-Nitroaniline	<.731		mg/kg
2-Nitrophenol	<.731		mg/kg
2-Picoline	<.731		mg/kg
3-,4-methylphenol	<.731		mg/kg
3,3'-Dichlorobenzidine	<.731		mg/kg
4,6-Dinitro-2-methylphenol	<3.65		mg/kg
4-Bromophenyl-phenylether	<.731		mg/kg
4-Chloro-3-methylphenol	<3.65		mg/kg
4-Chlorophenyl-phenylether	<.731		mg/kg
4-Nitroaniline	<.731		mg/kg
4-Nitrophenol	<3.65		mg/kg
7,12-Dimethylbenz[a]anthracene	<.731		mg/kg
Acetophenone	<.731		mg/kg
Aniline	<.731		mg/kg
Aniline	<.731[a]		mg/kg
Benzyl Alcohol	<.731		mg/kg
Butylbenzylphthalate	<.731		mg/kg
Di-n-butylphthalate	<.731		mg/kg
Di-n-octylphthalate	<.731		mg/kg
Diethylphthalate	<.731		mg/kg
Dimethylphthalate	<.731		mg/kg
Dinoseb	<.731		mg/kg
Diphenylamine	<.731		mg/kg
Ethyl methanesulfonate	<.731		mg/kg
Hexachlorobenzene	<.731		mg/kg
Hexachlorobutadiene	<.731		mg/kg
Hexachlorocyclopentadiene	<3.65		mg/kg
Hexachloroethane	<.731		mg/kg
Hexachloropropene	<.731		mg/kg
Isophorone	<.731		mg/kg
Methyl methanesulfonate	<.731		mg/kg
Methyl methanesulfonate	<.731[a]		mg/kg
N-Nitroso-di-n-butylamine	<.731		mg/kg
N-Nitroso-di-n-propylamine	<.731		mg/kg
N-Nitrosomorpholine	<.731		mg/kg
N-Nitrosopiperidine	<.731		mg/kg
N-Nitrosopyrrolidine	<.731		mg/kg
Nitrobenzene	<.731		mg/kg
Pentachlorobenzene	<.731		mg/kg
Pentachlorophenol	<3.65		mg/kg
Phenacetin	<.731		mg/kg
Phenol	<.731		mg/kg
Pronamide	<.731		mg/kg
Safrole	<.731		mg/kg
bis(2-Chloroethoxy)methane	<.731		mg/kg
bis(2-Chloroethyl)ether	<.731		mg/kg
bis(2-Chloroisopropyl)ether	<.731		mg/kg
bis(2-Ethylhexyl)phthalate	<.731		mg/kg
p-Dimethylaminoazobenzene	<.731		mg/kg
PAH	**22-OCT-2018**		
1,4-Naphthoquinone	<.731	6	mg/kg
2-Methylnaphthalene	<.731	6	mg/kg
3-Methylcholanthrene	<.731	6	mg/kg
Acenaphthene	<.731	6	mg/kg
Acenaphthylene	<.731	6	mg/kg
Anthracene	<.731	6	mg/kg
Benzo(a)anthracene	<.731	6	mg/kg
Benzo(a)pyrene	<.731	6	mg/kg
Benzo[b]fluoranthene	<.731	6	mg/kg
Benzo[g,h,i]perylene	<.731	6	mg/kg
Benzo[k]fluoranthene	<.731	6	mg/kg
Chrysene	<.731	6	mg/kg
Dibenz[a,h]anthracene	<.731	6	mg/kg
Dibenzofuran	<.731	6	mg/kg
Fluoranthene	<.731	6	mg/kg
Fluorene	<.731	6	mg/kg
Indeno[1,2,3-cd]pyrene	<.731	6	mg/kg
Naphthalene	<.731	6	mg/kg
Phenanthrene	<.731	6	mg/kg
Pyrene	<.731	6	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.			
OTHER	**23-OCT-2018**		
PCB-1016	<31.9		ug/kg
PCB-1221	<31.9		ug/kg
PCB-1232	<31.9		ug/kg
PCB-1242	<31.9		ug/kg
PCB-1248	<31.9		ug/kg
PCB-1254	<31.9		ug/kg
PCB-1260	<31.9		ug/kg
4,4'-DDD	<6.38		ug/kg
4,4-DDE	<6.38		ug/kg
4,4'-DDT	<6.38		ug/kg
Aldrin	<6.38		ug/kg
Dieldrin	<6.38		ug/kg
Endosulfan I	<6.38		ug/kg
Endosulfan II	<6.38		ug/kg
Endosulfan sulfate	<6.38		ug/kg
Endrin	<6.38		ug/kg
Endrin aldehyde	<6.38		ug/kg
Heptachlor	<6.38		ug/kg
Heptachlor epoxide	<6.38		ug/kg
Hexachlorobenzene	<6.38		ug/kg
Methoxychlor	<6.38		ug/kg
Mirex	<6.38		ug/kg
a-BHC	<6.38		ug/kg
b-BHC	<6.38		ug/kg
d-BHC	<6.38		ug/kg
y-BHC	<6.38		ug/kg
1,2,4,5-Tetrachlorobenzene	<.64		mg/kg
1,2,4-Trichlorobenzene	<.64		mg/kg
1,2-Dichlorobenzene	<.64		mg/kg
1,3-Dichlorobenzene	<.64		mg/kg
1,3-Dinitrobenzene	<.64		mg/kg
1,4-Dichlorobenzene	<.64		mg/kg
2,3,4,6-Tetrachlorophenol	<.64		mg/kg
2,4,5-Trichlorophenol	<.64		mg/kg
2,4,6-Trichlorophenol	<.64		mg/kg
2,4-Dichlorophenol	<.64		mg/kg
2,4-Dimethylphenol	<3.2		mg/kg
2,4-Dinitrophenol	<3.2		mg/kg
2,4-Dinitrotoluene	<.64		mg/kg
2,6-Dichlorophenol	<.64		mg/kg
2,6-Dinitrotoluene	<.64		mg/kg
2-Acetylaminofluorene	<.64		mg/kg
2-Chloronaphthalene	<.64		mg/kg
2-Chlorophenol	<.64		mg/kg
2-Methylphenol	<.64		mg/kg
2-Nitroaniline	<.64		mg/kg
2-Nitrophenol	<.64		mg/kg
2-Picoline	<.64		mg/kg
3-,4-methylphenol	<.64		mg/kg
3,3'-Dichlorobenzidine	<.64		mg/kg
4,6-Dinitro-2-methylphenol	<3.2		mg/kg
4-Bromophenyl-phenylether	<.64		mg/kg
4-Chloro-3-methylphenol	<3.2		mg/kg
4-Chlorophenyl-phenylether	<.64		mg/kg
4-Nitroaniline	<.64		mg/kg
4-Nitrophenol	<3.2		mg/kg
7,12-Dimethylbenz[a]anthracene	<.64		mg/kg
7,12-Dimethylbenz[a]anthracene	<.64[a]		mg/kg
Acetophenone	<.64		mg/kg
Aniline	<.64		mg/kg
Aniline	<.64[a]		mg/kg
Benzyl Alcohol	<.64		mg/kg
Butylbenzylphthalate	<.64		mg/kg
Di-n-butylphthalate	<.64		mg/kg
Di-n-octylphthalate	<.64		mg/kg
Diethylphthalate	<.64		mg/kg
Dimethylphthalate	<.64		mg/kg
Dinoseb	<.64		mg/kg
Diphenylamine	<.64		mg/kg
Ethyl methanesulfonate	<.64		mg/kg
Hexachlorobenzene	<.64		mg/kg
Hexachlorobutadiene	<.64		mg/kg
Hexachlorocyclopentadiene	<3.2		mg/kg
Hexachlorocyclopentadiene	<3.2[a]		mg/kg
Hexachloroethane	<.64		mg/kg
Hexachloropropene	<.64		mg/kg
Isophorone	<.64		mg/kg
Methyl methanesulfonate	<.64		mg/kg
N-Nitroso-di-n-butylamine	<.64[a]		mg/kg
N-Nitroso-di-n-butylamine	<.64		mg/kg
N-Nitroso-di-n-propylamine	<.64		mg/kg
N-Nitrosomorpholine	<.64		mg/kg
N-Nitrosopiperidine	<.64		mg/kg
N-Nitrosopyrrolidine	<.64		mg/kg
Nitrobenzene	<.64		mg/kg
Pentachlorobenzene	<.64		mg/kg
Pentachlorophenol	<3.2		mg/kg
Phenacetin	<.64		mg/kg
Phenol	<.64		mg/kg
Pronamide	<.64		mg/kg
Safrole	<.64		mg/kg
bis(2-Chloroethoxy)methane	<.64		mg/kg
bis(2-Chloroethyl)ether	<.64		mg/kg
bis(2-Chloroisopropyl)ether	<.64		mg/kg
bis(2-Ethylhexyl)phthalate	<.64		mg/kg
p-Dimethylaminoazobenzene	<.64		mg/kg
PAH	**23-OCT-2018**		
1,4-Naphthoquinone	<.64	11	mg/kg
1,4-Naphthoquinone	<.64[a]	11	mg/kg
2-Methylnaphthalene	<.64	11	mg/kg
2-Methylnaphthalene	<.64[a]	11	mg/kg
3-Methylcholanthrene	<.64	11	mg/kg
Acenaphthene	<.64	11	mg/kg
Acenaphthylene	<.64	11	mg/kg
Anthracene	<.64	11	mg/kg
Benzo(a)anthracene	<.64	11	mg/kg
Benzo(a)pyrene	<.64	11	mg/kg
Benzo[b]fluoranthene	.83	27	mg/kg
Benzo[g,h,i]perylene	<.64	11	mg/kg
Benzo[k]fluoranthene	<.64	11	mg/kg
Chrysene	.879	29	mg/kg
Dibenz[a,h]anthracene	<.64	11	mg/kg
Dibenzofuran	<.64	11	mg/kg
Fluoranthene	2.21	73	mg/kg
Fluorene	<.64	11	mg/kg
Indeno[1,2,3-cd]pyrene	<.64	11	mg/kg
Naphthalene	<.64	11	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01P34 PLUM CREEK DST. KENT WTP @ CHERRY ST.							
Phenanthrene	<.64	11	mg/kg				
Pyrene	1.63	54	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.			
OTHER	**22-OCT-2018**		
PCB-1016	<43.4		ug/kg
PCB-1221	<43.4		ug/kg
PCB-1232	<43.4		ug/kg
PCB-1242	<43.4		ug/kg
PCB-1248	<43.4		ug/kg
PCB-1254	<43.4		ug/kg
PCB-1260	<43.4		ug/kg
4,4'-DDD	<8.67		ug/kg
4,4-DDE	<8.67		ug/kg
4,4'-DDT	<8.67		ug/kg
Aldrin	<8.67		ug/kg
Dieldrin	<8.67		ug/kg
Endosulfan I	<8.67		ug/kg
Endosulfan II	<8.67		ug/kg
Endosulfan sulfate	<8.67		ug/kg
Endrin	<8.67		ug/kg
Endrin aldehyde	<8.67		ug/kg
Heptachlor	<8.67		ug/kg
Heptachlor epoxide	<8.67		ug/kg
Hexachlorobenzene	<8.67		ug/kg
Methoxychlor	<8.67		ug/kg
Mirex	<8.67		ug/kg
a-BHC	<8.67		ug/kg
b-BHC	<8.67		ug/kg
d-BHC	<8.67		ug/kg
y-BHC	<8.67		ug/kg
1,2,4,5-Tetrachlorobenzene	<.868		mg/kg
1,2,4-Trichlorobenzene	<.868		mg/kg
1,2-Dichlorobenzene	<.868		mg/kg
1,3-Dichlorobenzene	<.868		mg/kg
1,3-Dinitrobenzene	<.868		mg/kg
1,4-Dichlorobenzene	<.868		mg/kg
2,3,4,6-Tetrachlorophenol	<.868		mg/kg
2,4,5-Trichlorophenol	<.868		mg/kg
2,4,6-Trichlorophenol	<.868		mg/kg
2,4-Dichlorophenol	<.868		mg/kg
2,4-Dimethylphenol	<4.34		mg/kg
2,4-Dinitrophenol	<4.34		mg/kg
2,4-Dinitrotoluene	<.868		mg/kg
2,6-Dichlorophenol	<.868		mg/kg
2,6-Dinitrotoluene	<.868		mg/kg
2-Acetylaminofluorene	<.868		mg/kg
2-Chloronaphthalene	<.868		mg/kg
2-Chlorophenol	<.868		mg/kg
2-Methylphenol	<.868		mg/kg
2-Nitroaniline	<.868		mg/kg
2-Nitrophenol	<.868		mg/kg
2-Picoline	<.868		mg/kg
3-,4-methylphenol	<.868		mg/kg
3,3'-Dichlorobenzidine	<.868		mg/kg
4,6-Dinitro-2-methylphenol	<4.34		mg/kg
4-Bromophenyl-phenylether	<.868		mg/kg
4-Chloro-3-methylphenol	<4.34		mg/kg
4-Chlorophenyl-phenylether	<.868		mg/kg
4-Nitroaniline	<.868		mg/kg
4-Nitrophenol	<4.34		mg/kg
7,12-Dimethylbenz[a]anthracene	<.868		mg/kg
7,12-Dimethylbenz[a]anthracene	<.868[a]		mg/kg
Acetophenone	<.868		mg/kg
Aniline	<.868		mg/kg
Aniline	<.868[a]		mg/kg
Benzyl Alcohol	<.868		mg/kg
Butylbenzylphthalate	<.868		mg/kg
Di-n-butylphthalate	<.868		mg/kg
Di-n-octylphthalate	<.868		mg/kg
Diethylphthalate	<.868		mg/kg
Dimethylphthalate	<.868		mg/kg
Dinoseb	<.868		mg/kg
Diphenylamine	<.868		mg/kg
Ethyl methanesulfonate	<.868		mg/kg
Hexachlorobenzene	<.868		mg/kg
Hexachlorobutadiene	<.868		mg/kg
Hexachlorocyclopentadiene	<4.34		mg/kg
Hexachlorocyclopentadiene	<4.34[a]		mg/kg
Hexachloroethane	<.868		mg/kg
Hexachloropropene	<.868		mg/kg
Isophorone	<.868		mg/kg
Methyl methanesulfonate	<.868		mg/kg
N-Nitroso-di-n-butylamine	<.868		mg/kg
N-Nitroso-di-n-butylamine	<.868[a]		mg/kg
N-Nitroso-di-n-propylamine	<.868		mg/kg
N-Nitrosomorpholine	<.868		mg/kg
N-Nitrosopiperidine	<.868		mg/kg
N-Nitrosopyrrolidine	<.868		mg/kg
Nitrobenzene	<.868		mg/kg
Pentachlorobenzene	<.868		mg/kg
Pentachlorophenol	<4.34		mg/kg
Phenacetin	<.868		mg/kg
Phenol	<.868		mg/kg
Pronamide	<.868		mg/kg
Safrole	<.868		mg/kg
bis(2-Chloroethoxy)methane	<.868		mg/kg
bis(2-Chloroethyl)ether	<.868		mg/kg
bis(2-Chloroisopropyl)ether	<.868		mg/kg
bis(2-Ethylhexyl)phthalate	<.868		mg/kg
p-Dimethylaminoazobenzene	<.868		mg/kg
PAH	**22-OCT-2018**		
1,4-Naphthoquinone	<.868	14	mg/kg
1,4-Naphthoquinone	<.868[a]	14	mg/kg
2-Methylnaphthalene	<.868	14	mg/kg
2-Methylnaphthalene	<.868[a]	14	mg/kg
3-Methylcholanthrene	<.868	14	mg/kg
Acenaphthene	<.868	14	mg/kg
Acenaphthylene	<.868	14	mg/kg
Anthracene	<.868	14	mg/kg
Benzo(a)anthracene	<.868	14	mg/kg
Benzo(a)pyrene	<.868	14	mg/kg
Benzo[b]fluoranthene	<.868	14	mg/kg
Benzo[g,h,i]perylene	<.868	14	mg/kg
Benzo[k]fluoranthene	<.868	14	mg/kg
Chrysene	<.868	14	mg/kg
Dibenz[a,h]anthracene	<.868	14	mg/kg
Dibenzofuran	<.868	14	mg/kg
Fluoranthene	<.868	14	mg/kg
Fluorene	<.868	14	mg/kg
Indeno[1,2,3-cd]pyrene	<.868	14	mg/kg
Naphthalene	<.868	14	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S03 BREAKNECK CREEK SW OF RAVENNA @ SUMMIT RD.							
Phenanthrene	<.868	14	mg/kg				
Pyrene	<.868	14	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S09 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR			
OTHER	**22-AUG-2017**		
PCB-1016	<41.3		ug/kg
PCB-1221	<41.3		ug/kg
PCB-1232	<41.3		ug/kg
PCB-1242	51.1		ug/kg
PCB-1248	<41.3		ug/kg
PCB-1254	<41.3		ug/kg
PCB-1260	<41.3		ug/kg
4,4'-DDD	<8.27		ug/kg
4,4-DDE	12.5		ug/kg
4,4'-DDT	10.9		ug/kg
Aldrin	<8.27		ug/kg
Dieldrin	<8.27		ug/kg
Endosulfan I	<8.27		ug/kg
Endosulfan II	<8.27		ug/kg
Endosulfan sulfate	<8.27		ug/kg
Endrin	<8.27		ug/kg
Endrin aldehyde	<8.27		ug/kg
Heptachlor	<8.27		ug/kg
Heptachlor epoxide	<8.27		ug/kg
Hexachlorobenzene	<8.27		ug/kg
Methoxychlor	<8.27		ug/kg
Mirex	<8.27		ug/kg
a-BHC	<8.27		ug/kg
b-BHC	<8.27		ug/kg
d-BHC	<8.27		ug/kg
y-BHC	<8.27		ug/kg
1,2,4,5-Tetrachlorobenzene	<.825		mg/kg
1,2,4-Trichlorobenzene	<.825		mg/kg
1,2-Dichlorobenzene	<.825[a]		mg/kg
1,2-Dichlorobenzene	<.825		mg/kg
1,3-Dichlorobenzene	<.825[a]		mg/kg
1,3-Dichlorobenzene	<.825		mg/kg
1,3-Dinitrobenzene	<.825		mg/kg
1,4-Dichlorobenzene	<.825[a]		mg/kg
1,4-Dichlorobenzene	<.825		mg/kg
2,3,4,6-Tetrachlorophenol	<.825[a]		mg/kg
2,3,4,6-Tetrachlorophenol	<.825		mg/kg
2,4,5-Trichlorophenol	<.825		mg/kg
2,4,6-Trichlorophenol	<.825		mg/kg
2,4,6-Trichlorophenol	<.825[a]		mg/kg
2,4-Dichlorophenol	<.825		mg/kg
2,4-Dimethylphenol	<.825		mg/kg
2,4-Dinitrophenol	<4.13		mg/kg
2,4-Dinitrophenol	<4.13[a]		mg/kg
2,4-Dinitrotoluene	<.825		mg/kg
2,6-Dichlorophenol	<.825		mg/kg
2,6-Dinitrotoluene	<.825		mg/kg
2-Acetylaminofluorene	<.825		mg/kg
2-Chloronaphthalene	<.825		mg/kg
2-Chlorophenol	<.825		mg/kg
2-Methylphenol	<.825		mg/kg
2-Nitroaniline	<.825		mg/kg
2-Nitrophenol	<.825		mg/kg
2-Nitrophenol	<.825[a]		mg/kg
2-Picoline	<.825		mg/kg
2-Picoline	<.825[a]		mg/kg
3-,4-methylphenol	<.825		mg/kg
3,3'-Dichlorobenzidine	<.825		mg/kg
4,6-Dinitro-2-methylphenol	<4.13		mg/kg
4,6-Dinitro-2-methylphenol	<4.13[a]		mg/kg
4-Bromophenyl-phenylether	<.825		mg/kg
4-Chloro-3-methylphenol	<4.13		mg/kg
4-Chlorophenyl-phenylether	<.825		mg/kg
4-Nitroaniline	<.825		mg/kg
4-Nitroaniline	<.825[a]		mg/kg
4-Nitrophenol	<4.13		mg/kg
7,12-Dimethylbenz[a]anthracene	<.825		mg/kg
Acetophenone	<.825		mg/kg
Aniline	<.825		mg/kg
Benzyl Alcohol	<.825		mg/kg
Butylbenzylphthalate	<.825		mg/kg
Di-n-butylphthalate	<.825		mg/kg
Di-n-octylphthalate	<.825		mg/kg
Diethylphthalate	<.825		mg/kg
Dimethylphthalate	<.825		mg/kg
Dinoseb	<.825		mg/kg
Diphenylamine	<.825		mg/kg
Ethyl methanesulfonate	<.825		mg/kg
Hexachlorobenzene	<.825		mg/kg
Hexachlorobutadiene	<.825		mg/kg
Hexachlorocyclopentadiene	<.825¿		mg/kg
Hexachlorocyclopentadiene	<.825		mg/kg
Hexachloroethane	<.825		mg/kg
Hexachloroethane	<.825[a]		mg/kg
Hexachloropropene	<.825		mg/kg
Hexachloropropene	<.825[a]		mg/kg
Isophorone	<.825		mg/kg
Isophorone	<.825[a]		mg/kg
Methyl methanesulfonate	<.825		mg/kg
Methyl methanesulfonate	<.825[a]		mg/kg
N-Nitroso-di-n-butylamine	<.825		mg/kg
N-Nitroso-di-n-propylamine	<.825		mg/kg
N-Nitrosomorpholine	<.825		mg/kg
N-Nitrosopiperidine	<.825		mg/kg
N-Nitrosopyrrolidine	<.825		mg/kg
Nitrobenzene	<.825		mg/kg
Pentachlorobenzene	<.825		mg/kg
Pentachlorophenol	<4.13		mg/kg
Pentachlorophenol	<4.13[a]		mg/kg
Phenacetin	<.825		mg/kg
Phenol	<.825		mg/kg
Pronamide	<.825		mg/kg
Safrole	<.825		mg/kg
bis(2-Chloroethoxy)methane	<.825		mg/kg
bis(2-Chloroethyl)ether	<.825		mg/kg
bis(2-Chloroethyl)ether	<.825[a]		mg/kg
bis(2-Chloroisopropyl)ether	<.825		mg/kg
bis(2-Ethylhexyl)phthalate	<.825		mg/kg
p-Dimethylaminoazobenzene	<.825		mg/kg
PAH	**22-AUG-2017**		
1,4-Naphthoquinone	<.825	32	mg/kg
1,4-Naphthoquinone	<.825[a]	32	mg/kg
2-Methylnaphthalene	<.825	32	mg/kg
2-Methylnaphthalene	<.825[a]	32	mg/kg
3-Methylcholanthrene	<.825	32	mg/kg
Acenaphthene	<.825	32	mg/kg
Acenaphthylene	<.825[a]	32	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S09 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP @ CONRAIL RR							
Acenaphthylene	<.825	32	mg/kg				
Anthracene	<.825	32	mg/kg				
Benzo(a)anthracene	<.825	32	mg/kg				
Benzo(a)pyrene	<.825	32	mg/kg				
Benzo[b]fluoranthene	<.825	32	mg/kg				
Benzo[g,h,i]perylene	<.825	32	mg/kg				
Benzo[k]fluoranthene	<.825	32	mg/kg				
Chrysene	<.825	32	mg/kg				
Dibenz[a,h]anthracene	<.825	32	mg/kg				
Dibenzofuran	<.825	32	mg/kg				
Fluoranthene	1.28	100	mg/kg				
Fluorene	<.825	32	mg/kg				
Indeno[1,2,3-cd]pyrene	<.825	32	mg/kg				
Naphthalene	<.825	32	mg/kg				
Phenanthrene	<.825	32	mg/kg				
Pyrene	.976	76	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 2			
OTHER	**18-SEP-2017**		
PCB-1016	<43.8		ug/kg
PCB-1221	<43.8		ug/kg
PCB-1232	<43.8		ug/kg
PCB-1242	50.2		ug/kg
PCB-1248	<43.8		ug/kg
PCB-1254	<43.8		ug/kg
PCB-1260	<43.8		ug/kg
4,4'-DDD	<8.77		ug/kg
4,4-DDE	13.8		ug/kg
4,4'-DDT	13.5		ug/kg
Aldrin	<8.77		ug/kg
Dieldrin	<8.77		ug/kg
Endosulfan I	<8.77		ug/kg
Endosulfan II	<8.77		ug/kg
Endosulfan sulfate	<8.77		ug/kg
Endrin	<8.77		ug/kg
Endrin aldehyde	<8.77		ug/kg
Heptachlor	<8.77		ug/kg
Heptachlor epoxide	<8.77		ug/kg
Hexachlorobenzene	<8.77		ug/kg
Methoxychlor	<8.77		ug/kg
Mirex	<8.77		ug/kg
a-BHC	<8.77		ug/kg
b-BHC	<8.77		ug/kg
d-BHC	<8.77		ug/kg
y-BHC	<8.77		ug/kg
1,2,4,5-Tetrachlorobenzene	<.879		mg/kg
1,2,4-Trichlorobenzene	<.879		mg/kg
1,2-Dichlorobenzene	<.879		mg/kg
1,3-Dichlorobenzene	<.879		mg/kg
1,3-Dinitrobenzene	<.879		mg/kg
1,4-Dichlorobenzene	<.879		mg/kg
2,3,4,6-Tetrachlorophenol	<.879		mg/kg
2,4,5-Trichlorophenol	<.879		mg/kg
2,4,6-Trichlorophenol	<.879		mg/kg
2,4-Dichlorophenol	<.879		mg/kg
2,4-Dimethylphenol	<.879		mg/kg
2,4-Dinitrophenol	<4.4		mg/kg
2,4-Dinitrotoluene	<.879		mg/kg
2,6-Dichlorophenol	<.879		mg/kg
2,6-Dinitrotoluene	<.879		mg/kg
2-Acetylaminofluorene	<.879		mg/kg
2-Chloronaphthalene	<.879		mg/kg
2-Chlorophenol	<.879		mg/kg
2-Methylphenol	<.879		mg/kg
2-Nitroaniline	<.879		mg/kg
2-Nitrophenol	<.879		mg/kg
2-Picoline	<.879		mg/kg
3-,4-methylphenol	<.879		mg/kg
3,3'-Dichlorobenzidine	<.879		mg/kg
3,3'-Dichlorobenzidine	<.879[a]		mg/kg
4,6-Dinitro-2-methylphenol	<4.4		mg/kg
4-Bromophenyl-phenylether	<.879		mg/kg
4-Chloro-3-methylphenol	<4.4		mg/kg
4-Chlorophenyl-phenylether	<.879		mg/kg
4-Nitroaniline	<.879		mg/kg
4-Nitrophenol	<4.4		mg/kg
7,12-Dimethylbenz[a]anthracene	<.879		mg/kg
7,12-Dimethylbenz[a]anthracene	<.879[a]		mg/kg
Acetophenone	<.879		mg/kg
Aniline	<.879		mg/kg
Benzyl Alcohol	<.879		mg/kg
Butylbenzylphthalate	<.879		mg/kg
Di-n-butylphthalate	<.879		mg/kg
Di-n-octylphthalate	<.879		mg/kg
Diethylphthalate	<.879		mg/kg
Dimethylphthalate	<.879		mg/kg
Dinoseb	<.879		mg/kg
Diphenylamine	<.879		mg/kg
Ethyl methanesulfonate	<.879		mg/kg
Hexachlorobenzene	<.879		mg/kg
Hexachlorobutadiene	<.879		mg/kg
Hexachlorocyclopentadiene	<.879		mg/kg
Hexachlorocyclopentadiene	<.879[a]		mg/kg
Hexachloroethane	<.879		mg/kg
Hexachloropropene	<.879		mg/kg
Isophorone	<.879		mg/kg
Methyl methanesulfonate	<.879		mg/kg
Methyl methanesulfonate	<.879[a]		mg/kg
N-Nitroso-di-n-butylamine	<.879		mg/kg
N-Nitroso-di-n-propylamine	<.879		mg/kg
N-Nitrosomorpholine	<.879		mg/kg
N-Nitrosopiperidine	<.879		mg/kg
N-Nitrosopyrrolidine	<.879		mg/kg
Nitrobenzene	<.879		mg/kg
Pentachlorobenzene	<.879		mg/kg
Pentachlorophenol	<4.4		mg/kg
Phenacetin	<.879		mg/kg
Phenol	<.879		mg/kg
Pronamide	<.879		mg/kg
Safrole	<.879		mg/kg
bis(2-Chloroethoxy)methane	<.879		mg/kg
bis(2-Chloroethyl)ether	<.879		mg/kg
bis(2-Chloroisopropyl)ether	<.879		mg/kg
bis(2-Ethylhexyl)phthalate	<.879		mg/kg
p-Dimethylaminoazobenzene	<.879		mg/kg
PAH	**18-SEP-2017**		
1,4-Naphthoquinone	<.879	27	mg/kg
1,4-Naphthoquinone	<.879[a]	27	mg/kg
2-Methylnaphthalene	<.879	27	mg/kg
3-Methylcholanthrene	<.879	27	mg/kg
Acenaphthene	<.879	27	mg/kg
Acenaphthylene	<.879	27	mg/kg
Anthracene	<.879	27	mg/kg
Benzo(a)anthracene	<.879	27	mg/kg
Benzo(a)pyrene	.961	59	mg/kg
Benzo[b]fluoranthene	1.08	66	mg/kg
Benzo[g,h,i]perylene	<.879	27	mg/kg
Benzo[k]fluoranthene	<.879	27	mg/kg
Chrysene	<.879	27	mg/kg
Dibenz[a,h]anthracene	<.879	27	mg/kg
Dibenzofuran	<.879	27	mg/kg
Fluoranthene	1.66	101	mg/kg
Fluorene	<.879	27	mg/kg
Indeno[1,2,3-cd]pyrene	.98	60	mg/kg
Naphthalene	<.879	27	mg/kg
Phenanthrene	<.879	27	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S10 CUYAHOGA R. UPST NEORSD SOUTHERLY WWTP @ RR & S.R. 2							
Pyrene	1.31	80	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S11 CUYAHOGA R. @ HILLSIDE RD.			
OTHER	**24-OCT-2017**		
PCB-1016	<37.4		ug/kg
PCB-1221	<37.4		ug/kg
PCB-1232	<37.4		ug/kg
PCB-1242	<37.4		ug/kg
PCB-1248	<37.4		ug/kg
PCB-1254	72.1		ug/kg
PCB-1260	<37.4		ug/kg
4,4'-DDD	<7.48		ug/kg
4,4-DDE	14		ug/kg
4,4'-DDT	12.1		ug/kg
Aldrin	<7.48		ug/kg
Dieldrin	<7.48		ug/kg
Endosulfan I	<7.48		ug/kg
Endosulfan II	<7.48		ug/kg
Endosulfan sulfate	<7.48		ug/kg
Endrin	<7.48		ug/kg
Endrin aldehyde	<7.48		ug/kg
Heptachlor	<7.48		ug/kg
Heptachlor epoxide	<7.48		ug/kg
Hexachlorobenzene	<7.48		ug/kg
Methoxychlor	<7.48		ug/kg
Mirex	<7.48		ug/kg
a-BHC	<7.48		ug/kg
b-BHC	<7.48		ug/kg
d-BHC	<7.48		ug/kg
y-BHC	<7.48		ug/kg
1,2,4,5-Tetrachlorobenzene	<.747		mg/kg
1,2,4-Trichlorobenzene	<.747		mg/kg
1,2-Dichlorobenzene	<.747		mg/kg
1,3-Dichlorobenzene	<.747		mg/kg
1,3-Dinitrobenzene	<.747		mg/kg
1,4-Dichlorobenzene	<.747		mg/kg
2,3,4,6-Tetrachlorophenol	<.747		mg/kg
2,4,5-Trichlorophenol	<.747		mg/kg
2,4,6-Trichlorophenol	<.747		mg/kg
2,4-Dichlorophenol	<.747		mg/kg
2,4-Dimethylphenol	<.747		mg/kg
2,4-Dinitrophenol	<3.74		mg/kg
2,4-Dinitrotoluene	<.747		mg/kg
2,6-Dichlorophenol	<.747		mg/kg
2,6-Dinitrotoluene	<.747		mg/kg
2-Acetylaminofluorene	<.747		mg/kg
2-Chloronaphthalene	<.747		mg/kg
2-Chlorophenol	<.747		mg/kg
2-Methylphenol	<.747		mg/kg
2-Nitroaniline	<.747		mg/kg
2-Nitrophenol	<.747		mg/kg
2-Picoline	<.747		mg/kg
2-Picoline	<.747[a]		mg/kg
3-,4-methylphenol	<.747		mg/kg
3,3'-Dichlorobenzidine	<.747		mg/kg
4,6-Dinitro-2-methylphenol	<3.74		mg/kg
4-Bromophenyl-phenylether	<.747		mg/kg
4-Chloro-3-methylphenol	<3.74		mg/kg
4-Chlorophenyl-phenylether	<.747		mg/kg
4-Nitroaniline	<.747		mg/kg
4-Nitrophenol	<3.74		mg/kg
7,12-Dimethylbenz[a]anthracene	<.747		mg/kg
Acetophenone	<.747		mg/kg
Aniline	<.747		mg/kg
Benzyl Alcohol	<.747		mg/kg
Butylbenzylphthalate	<.747		mg/kg
Di-n-butylphthalate	<.747		mg/kg
Di-n-octylphthalate	<.747		mg/kg
Diethylphthalate	<.747		mg/kg
Dimethylphthalate	<.747		mg/kg
Dinoseb	<.747		mg/kg
Diphenylamine	<.747		mg/kg
Ethyl methanesulfonate	<.747		mg/kg
Hexachlorobenzene	<.747		mg/kg
Hexachlorobutadiene	<.747		mg/kg
Hexachlorocyclopentadiene	<.747		mg/kg
Hexachlorocyclopentadiene	<.747[a]		mg/kg
Hexachloroethane	<.747		mg/kg
Hexachloropropene	<.747		mg/kg
Isophorone	<.747		mg/kg
Methyl methanesulfonate	<.747[a]		mg/kg
Methyl methanesulfonate	<.747		mg/kg
N-Nitroso-di-n-butylamine	<.747		mg/kg
N-Nitroso-di-n-propylamine	<.747		mg/kg
N-Nitrosomorpholine	<.747		mg/kg
N-Nitrosopiperidine	<.747		mg/kg
N-Nitrosopyrrolidine	<.747		mg/kg
Nitrobenzene	<.747		mg/kg
Pentachlorobenzene	<.747		mg/kg
Pentachlorophenol	<3.74		mg/kg
Phenacetin	<.747		mg/kg
Phenol	<.747		mg/kg
Pronamide	<.747		mg/kg
Safrole	<.747		mg/kg
bis(2-Chloroethoxy)methane	<.747		mg/kg
bis(2-Chloroethyl)ether	<.747		mg/kg
bis(2-Chloroisopropyl)ether	<.747		mg/kg
bis(2-Ethylhexyl)phthalate	<.747		mg/kg
p-Dimethylaminoazobenzene	<.747		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.747	20	mg/kg
2-Methylnaphthalene	<.747	20	mg/kg
3-Methylcholanthrene	<.747	20	mg/kg
Acenaphthene	<.747	20	mg/kg
Acenaphthylene	<.747	20	mg/kg
Anthracene	<.747	20	mg/kg
Benzo(a)anthracene	<.747	20	mg/kg
Benzo(a)pyrene	<.747	20	mg/kg
Benzo[b]fluoranthene	<.747	20	mg/kg
Benzo[g,h,i]perylene	<.747	20	mg/kg
Benzo[k]fluoranthene	<.747	20	mg/kg
Chrysene	<.747	20	mg/kg
Dibenz[a,h]anthracene	<.747	20	mg/kg
Dibenzofuran	<.747	20	mg/kg
Fluoranthene	.754	41	mg/kg
Fluorene	<.747	20	mg/kg
Indeno[1,2,3-cd]pyrene	<.747	20	mg/kg
Naphthalene	<.747	20	mg/kg
Phenanthrene	<.747	20	mg/kg
Pyrene	<.747	20	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S12 CUYAHOGA R. @ FITZWATER RD.			
OTHER	**24-OCT-2017**		
PCB-1016	<33.6		ug/kg
PCB-1221	<33.6		ug/kg
PCB-1232	<33.6		ug/kg
PCB-1242	<33.6		ug/kg
PCB-1248	<33.6		ug/kg
PCB-1254	39.9		ug/kg
PCB-1260	<33.6		ug/kg
4,4'-DDD	<6.72		ug/kg
4,4-DDE	15.1		ug/kg
4,4'-DDT	13.8		ug/kg
Aldrin	<6.72		ug/kg
Dieldrin	<6.72		ug/kg
Endosulfan I	<6.72		ug/kg
Endosulfan II	<6.72		ug/kg
Endosulfan sulfate	<6.72		ug/kg
Endrin	<6.72		ug/kg
Endrin aldehyde	<6.72		ug/kg
Heptachlor	<6.72		ug/kg
Heptachlor epoxide	<6.72		ug/kg
Hexachlorobenzene	<6.72		ug/kg
Methoxychlor	<6.72		ug/kg
Mirex	<6.72		ug/kg
a-BHC	<6.72		ug/kg
b-BHC	<6.72		ug/kg
d-BHC	<6.72		ug/kg
y-BHC	<6.72		ug/kg
1,2,4,5-Tetrachlorobenzene	<.67		mg/kg
1,2,4-Trichlorobenzene	<.67		mg/kg
1,2-Dichlorobenzene	<.67		mg/kg
1,3-Dichlorobenzene	<.67		mg/kg
1,3-Dinitrobenzene	<.67		mg/kg
1,4-Dichlorobenzene	<.67		mg/kg
2,3,4,6-Tetrachlorophenol	<.67		mg/kg
2,4,5-Trichlorophenol	<.67		mg/kg
2,4,6-Trichlorophenol	<.67		mg/kg
2,4-Dichlorophenol	<.67		mg/kg
2,4-Dimethylphenol	<.67		mg/kg
2,4-Dinitrophenol	<3.35		mg/kg
2,4-Dinitrotoluene	<.67		mg/kg
2,6-Dichlorophenol	<.67		mg/kg
2,6-Dinitrotoluene	<.67		mg/kg
2-Acetylaminofluorene	<.67		mg/kg
2-Chloronaphthalene	<.67		mg/kg
2-Chlorophenol	<.67		mg/kg
2-Methylphenol	<.67		mg/kg
2-Nitroaniline	<.67		mg/kg
2-Nitrophenol	<.67		mg/kg
2-Picoline	<.67		mg/kg
2-Picoline	<.67[a]		mg/kg
3-,4-methylphenol	<.67		mg/kg
3,3'-Dichlorobenzidine	<.67		mg/kg
4,6-Dinitro-2-methylphenol	<3.35		mg/kg
4-Bromophenyl-phenylether	<.67		mg/kg
4-Chloro-3-methylphenol	<3.35		mg/kg
4-Chlorophenyl-phenylether	<.67		mg/kg
4-Nitroaniline	<.67		mg/kg
4-Nitrophenol	<3.35		mg/kg
7,12-Dimethylbenz[a]anthracene	<.67		mg/kg
Acetophenone	<.67		mg/kg
Aniline	<.67		mg/kg
Benzyl Alcohol	<.67		mg/kg
Butylbenzylphthalate	<.67		mg/kg
Di-n-butylphthalate	<.67		mg/kg
Di-n-octylphthalate	<.67		mg/kg
Diethylphthalate	<.67		mg/kg
Dimethylphthalate	<.67		mg/kg
Dinoseb	<.67		mg/kg
Diphenylamine	<.67		mg/kg
Ethyl methanesulfonate	<.67		mg/kg
Hexachlorobenzene	<.67		mg/kg
Hexachlorobutadiene	<.67		mg/kg
Hexachlorocyclopentadiene	<.67		mg/kg
Hexachlorocyclopentadiene	<.67[a]		mg/kg
Hexachloroethane	<.67		mg/kg
Hexachloropropene	<.67		mg/kg
Isophorone	<.67		mg/kg
Methyl methanesulfonate	<.67		mg/kg
Methyl methanesulfonate	<.67[a]		mg/kg
N-Nitroso-di-n-butylamine	<.67		mg/kg
N-Nitroso-di-n-propylamine	<.67		mg/kg
N-Nitrosomorpholine	<.67		mg/kg
N-Nitrosopiperidine	<.67		mg/kg
N-Nitrosopyrrolidine	<.67		mg/kg
Nitrobenzene	<.67		mg/kg
Pentachlorobenzene	<.67		mg/kg
Pentachlorophenol	<3.35		mg/kg
Phenacetin	<.67		mg/kg
Phenol	<.67		mg/kg
Pronamide	<.67		mg/kg
Safrole	<.67		mg/kg
bis(2-Chloroethoxy)methane	<.67		mg/kg
bis(2-Chloroethyl)ether	<.67		mg/kg
bis(2-Chloroisopropyl)ether	<.67		mg/kg
bis(2-Ethylhexyl)phthalate	<.67		mg/kg
p-Dimethylaminoazobenzene	<.67		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.67	22	mg/kg
2-Methylnaphthalene	<.67	22	mg/kg
3-Methylcholanthrene	<.67	22	mg/kg
Acenaphthene	<.67	22	mg/kg
Acenaphthylene	<.67	22	mg/kg
Anthracene	<.67	22	mg/kg
Benzo(a)anthracene	<.67	22	mg/kg
Benzo(a)pyrene	<.67	22	mg/kg
Benzo[b]fluoranthene	<.67	22	mg/kg
Benzo[g,h,i]perylene	<.67	22	mg/kg
Benzo[k]fluoranthene	<.67	22	mg/kg
Chrysene	<.67	22	mg/kg
Dibenz[a,h]anthracene	<.67	22	mg/kg
Dibenzofuran	<.67	22	mg/kg
Fluoranthene	<.67	22	mg/kg
Fluorene	<.67	22	mg/kg
Indeno[1,2,3-cd]pyrene	<.67	22	mg/kg
Naphthalene	<.67	22	mg/kg
Phenanthrene	<.67	22	mg/kg
Pyrene	<.67	22	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S13 CUYAHOGA R. AT JAITE @ HIGHLAND RD.			
OTHER	**24-OCT-2017**		
PCB-1016	<36.8		ug/kg
PCB-1221	<36.8		ug/kg
PCB-1232	<36.8		ug/kg
PCB-1242	<36.8		ug/kg
PCB-1248	<36.8		ug/kg
PCB-1254	56.3		ug/kg
PCB-1260	<36.8		ug/kg
4,4'-DDD	<7.36		ug/kg
4,4-DDE	22.4		ug/kg
4,4'-DDT	19.4		ug/kg
Aldrin	<7.36		ug/kg
Dieldrin	<7.36		ug/kg
Endosulfan I	<7.36		ug/kg
Endosulfan II	<7.36		ug/kg
Endosulfan sulfate	<7.36		ug/kg
Endrin	<7.36		ug/kg
Endrin aldehyde	<7.36		ug/kg
Heptachlor	<7.36		ug/kg
Heptachlor epoxide	<7.36		ug/kg
Hexachlorobenzene	<7.36		ug/kg
Methoxychlor	18.4[i]		ug/kg
Mirex	<7.36		ug/kg
a-BHC	<7.36		ug/kg
b-BHC	<7.36		ug/kg
d-BHC	<7.36		ug/kg
y-BHC	<7.36		ug/kg
1,2,4,5-Tetrachlorobenzene	<.733		mg/kg
1,2,4-Trichlorobenzene	<.733		mg/kg
1,2-Dichlorobenzene	<.733		mg/kg
1,3-Dichlorobenzene	<.733		mg/kg
1,3-Dinitrobenzene	<.733		mg/kg
1,4-Dichlorobenzene	<.733		mg/kg
2,3,4,6-Tetrachlorophenol	<.733		mg/kg
2,4,5-Trichlorophenol	<.733		mg/kg
2,4,6-Trichlorophenol	<.733		mg/kg
2,4-Dichlorophenol	<.733		mg/kg
2,4-Dimethylphenol	<.733		mg/kg
2,4-Dinitrophenol	<3.66		mg/kg
2,4-Dinitrotoluene	<.733		mg/kg
2,6-Dichlorophenol	<.733		mg/kg
2,6-Dinitrotoluene	<.733		mg/kg
2-Acetylaminofluorene	<.733		mg/kg
2-Chloronaphthalene	<.733		mg/kg
2-Chlorophenol	<.733		mg/kg
2-Methylphenol	<.733		mg/kg
2-Nitroaniline	<.733		mg/kg
2-Nitrophenol	<.733		mg/kg
2-Picoline	<.733		mg/kg
2-Picoline	<.733[a]		mg/kg
3-,4-methylphenol	<.733		mg/kg
3,3'-Dichlorobenzidine	<.733		mg/kg
4,6-Dinitro-2-methylphenol	<3.66		mg/kg
4-Bromophenyl-phenylether	<.733		mg/kg
4-Chloro-3-methylphenol	<3.66		mg/kg
4-Chlorophenyl-phenylether	<.733		mg/kg
4-Nitroaniline	<.733		mg/kg
4-Nitrophenol	<3.66		mg/kg
7,12-Dimethylbenz[a]anthracene	<.733		mg/kg
Acetophenone	<.733		mg/kg
Aniline	<.733		mg/kg
Benzyl Alcohol	<.733		mg/kg
Butylbenzylphthalate	<.733		mg/kg
Di-n-butylphthalate	<.733		mg/kg
Di-n-octylphthalate	<.733		mg/kg
Diethylphthalate	<.733		mg/kg
Dimethylphthalate	<.733		mg/kg
Dinoseb	<.733		mg/kg
Diphenylamine	<.733		mg/kg
Ethyl methanesulfonate	<.733		mg/kg
Hexachlorobenzene	<.733		mg/kg
Hexachlorobutadiene	<.733		mg/kg
Hexachlorocyclopentadiene	<.733		mg/kg
Hexachlorocyclopentadiene	<.733[a]		mg/kg
Hexachloroethane	<.733		mg/kg
Hexachloropropene	<.733		mg/kg
Isophorone	<.733		mg/kg
Methyl methanesulfonate	<.733		mg/kg
Methyl methanesulfonate	<.733[a]		mg/kg
N-Nitroso-di-n-butylamine	<.733		mg/kg
N-Nitroso-di-n-propylamine	<.733		mg/kg
N-Nitrosomorpholine	<.733		mg/kg
N-Nitrosopiperidine	<.733		mg/kg
N-Nitrosopyrrolidine	<.733		mg/kg
Nitrobenzene	<.733		mg/kg
Pentachlorobenzene	<.733		mg/kg
Pentachlorophenol	<3.66		mg/kg
Phenacetin	<.733		mg/kg
Phenol	<.733		mg/kg
Pronamide	<.733		mg/kg
Safrole	<.733		mg/kg
bis(2-Chloroethoxy)methane	<.733		mg/kg
bis(2-Chloroethyl)ether	<.733		mg/kg
bis(2-Chloroisopropyl)ether	<.733		mg/kg
bis(2-Ethylhexyl)phthalate	<.733		mg/kg
p-Dimethylaminoazobenzene	<.733		mg/kg
PAH	**24-OCT-2017**		
1,4-Naphthoquinone	<.733	18	mg/kg
2-Methylnaphthalene	<.733	18	mg/kg
3-Methylcholanthrene	<.733	18	mg/kg
Acenaphthene	<.733	18	mg/kg
Acenaphthylene	<.733	18	mg/kg
Anthracene	<.733	18	mg/kg
Benzo(a)anthracene	<.733	18	mg/kg
Benzo(a)pyrene	<.733	18	mg/kg
Benzo[b]fluoranthene	<.733	18	mg/kg
Benzo[g,h,i]perylene	<.733	18	mg/kg
Benzo[k]fluoranthene	<.733	18	mg/kg
Chrysene	<.733	18	mg/kg
Dibenz[a,h]anthracene	<.733	18	mg/kg
Dibenzofuran	<.733	18	mg/kg
Fluoranthene	<.733	18	mg/kg
Fluorene	<.733	18	mg/kg
Indeno[1,2,3-cd]pyrene	<.733	18	mg/kg
Naphthalene	<.733	18	mg/kg
Phenanthrene	<.733	18	mg/kg
Pyrene	<.733	18	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S17 CUYAHOGA R. UPST. KENT WWTP @ FULLER PARK			
OTHER	**23-OCT-2017**		
PCB-1016	<37.7		ug/kg
PCB-1221	<37.7		ug/kg
PCB-1232	<37.7		ug/kg
PCB-1242	<37.7		ug/kg
PCB-1248	<37.7		ug/kg
PCB-1254	59.3[i]		ug/kg
PCB-1260	<37.7		ug/kg
4,4'-DDD	20.4		ug/kg
4,4-DDE	<7.55		ug/kg
4,4'-DDT	<7.55		ug/kg
Aldrin	<7.55		ug/kg
Dieldrin	<7.55		ug/kg
Endosulfan I	<7.55		ug/kg
Endosulfan II	<7.55		ug/kg
Endosulfan sulfate	<7.55		ug/kg
Endrin	<7.55		ug/kg
Endrin aldehyde	<7.55		ug/kg
Heptachlor	<7.55		ug/kg
Heptachlor epoxide	<7.55		ug/kg
Hexachlorobenzene	<7.55		ug/kg
Methoxychlor	<7.55		ug/kg
Mirex	<7.55		ug/kg
a-BHC	<7.55		ug/kg
b-BHC	<7.55		ug/kg
d-BHC	<7.55		ug/kg
y-BHC	<7.55		ug/kg
1,2,4,5-Tetrachlorobenzene	<.752		mg/kg
1,2,4-Trichlorobenzene	<.752		mg/kg
1,2-Dichlorobenzene	<.752		mg/kg
1,3-Dichlorobenzene	<.752		mg/kg
1,3-Dinitrobenzene	<.752		mg/kg
1,4-Dichlorobenzene	<.752		mg/kg
2,3,4,6-Tetrachlorophenol	<.752		mg/kg
2,4,5-Trichlorophenol	<.752		mg/kg
2,4,6-Trichlorophenol	<.752		mg/kg
2,4-Dichlorophenol	<.752		mg/kg
2,4-Dimethylphenol	<.752		mg/kg
2,4-Dinitrophenol	<3.76		mg/kg
2,4-Dinitrotoluene	<.752		mg/kg
2,6-Dichlorophenol	<.752		mg/kg
2,6-Dinitrotoluene	<.752		mg/kg
2-Acetylaminofluorene	<.752		mg/kg
2-Chloronaphthalene	<.752		mg/kg
2-Chlorophenol	<.752		mg/kg
2-Methylphenol	<.752		mg/kg
2-Nitroaniline	<.752		mg/kg
2-Nitrophenol	<.752		mg/kg
2-Picoline	<.752		mg/kg
3-,4-methylphenol	<.752		mg/kg
3,3'-Dichlorobenzidine	<.752		mg/kg
4,6-Dinitro-2-methylphenol	<3.76		mg/kg
4-Bromophenyl-phenylether	<.752		mg/kg
4-Chloro-3-methylphenol	<3.76		mg/kg
4-Chlorophenyl-phenylether	<.752		mg/kg
4-Nitroaniline	<.752		mg/kg
4-Nitrophenol	<3.76		mg/kg
7,12-Dimethylbenz[a]anthracene	<.752		mg/kg
7,12-Dimethylbenz[a]anthracene	<.752[a]		mg/kg
Acetophenone	<.752		mg/kg
Aniline	<.752		mg/kg
Benzyl Alcohol	<.752		mg/kg
Butylbenzylphthalate	<.752		mg/kg
Di-n-butylphthalate	<.752		mg/kg
Di-n-octylphthalate	<.752		mg/kg
Diethylphthalate	<.752		mg/kg
Dimethylphthalate	<.752		mg/kg
Dinoseb	<.752		mg/kg
Diphenylamine	<.752		mg/kg
Ethyl methanesulfonate	<.752		mg/kg
Hexachlorobenzene	<.752		mg/kg
Hexachlorobutadiene	<.752		mg/kg
Hexachlorocyclopentadiene	<.752		mg/kg
Hexachlorocyclopentadiene	<.752[a]		mg/kg
Hexachloroethane	<.752		mg/kg
Hexachloropropene	<.752		mg/kg
Isophorone	<.752		mg/kg
Methyl methanesulfonate	<.752		mg/kg
N-Nitroso-di-n-butylamine	<.752		mg/kg
N-Nitroso-di-n-propylamine	<.752		mg/kg
N-Nitrosomorpholine	<.752		mg/kg
N-Nitrosopiperidine	<.752		mg/kg
N-Nitrosopyrrolidine	<.752		mg/kg
Nitrobenzene	<.752		mg/kg
Pentachlorobenzene	<.752		mg/kg
Pentachlorophenol	<3.76		mg/kg
Phenacetin	<.752		mg/kg
Phenol	<.752		mg/kg
Pronamide	<.752		mg/kg
Safrole	<.752		mg/kg
bis(2-Chloroethoxy)methane	<.752		mg/kg
bis(2-Chloroethyl)ether	<.752		mg/kg
bis(2-Chloroisopropyl)ether	<.752		mg/kg
bis(2-Ethylhexyl)phthalate	<.752		mg/kg
p-Dimethylaminoazobenzene	<.752		mg/kg
PAH	**23-OCT-2017**		
1,4-Naphthoquinone	<.752	5	mg/kg
2-Methylnaphthalene	<.752	5	mg/kg
3-Methylcholanthrene	<.752	5	mg/kg
Acenaphthene	<.752	5	mg/kg
Acenaphthylene	<.752	5	mg/kg
Anthracene	<.752	5	mg/kg
Benzo(a)anthracene	1.02	13	mg/kg
Benzo(a)pyrene	1.04	13	mg/kg
Benzo[b]fluoranthene	1.25	16	mg/kg
Benzo[g,h,i]perylene	.821	10	mg/kg
Benzo[k]fluoranthene	.767	10	mg/kg
Chrysene	1.74	22	mg/kg
Dibenz[a,h]anthracene	<.752	5	mg/kg
Dibenzofuran	<.752	5	mg/kg
Fluoranthene	2.72	34	mg/kg
Fluorene	<.752	5	mg/kg
Indeno[1,2,3-cd]pyrene	.837	10	mg/kg
Naphthalene	<.752	5	mg/kg
Phenanthrene	1.29	16	mg/kg
Pyrene	2.88	36	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303			
OTHER	**03-AUG-2017**		
PCB-1016	<39.4		ug/kg
PCB-1221	<39.4		ug/kg
PCB-1232	<39.4		ug/kg
PCB-1242	<39.4		ug/kg
PCB-1248	<39.4		ug/kg
PCB-1254	<39.4		ug/kg
PCB-1260	<39.4		ug/kg
4,4'-DDD	<7.88		ug/kg
4,4-DDE	<7.88		ug/kg
4,4'-DDT	<7.88		ug/kg
Aldrin	<7.88		ug/kg
Dieldrin	<7.88		ug/kg
Endosulfan I	<7.88		ug/kg
Endosulfan II	<7.88		ug/kg
Endosulfan sulfate	<7.88		ug/kg
Endrin	<7.88		ug/kg
Endrin aldehyde	<7.88		ug/kg
Heptachlor	<7.88		ug/kg
Heptachlor epoxide	<7.88		ug/kg
Hexachlorobenzene	<7.88		ug/kg
Methoxychlor	<7.88		ug/kg
Mirex	<7.88		ug/kg
a-BHC	<7.88		ug/kg
b-BHC	<7.88		ug/kg
d-BHC	<7.88		ug/kg
y-BHC	<7.88		ug/kg
1,2,4,5-Tetrachlorobenzene	<.787		mg/kg
1,2,4-Trichlorobenzene	<.787		mg/kg
1,2-Dichlorobenzene	<.787		mg/kg
1,3-Dichlorobenzene	<.787		mg/kg
1,3-Dinitrobenzene	<.787		mg/kg
1,4-Dichlorobenzene	<.787		mg/kg
2,3,4,6-Tetrachlorophenol	<.787		mg/kg
2,4,5-Trichlorophenol	<.787		mg/kg
2,4,6-Trichlorophenol	<.787		mg/kg
2,4-Dichlorophenol	<.787		mg/kg
2,4-Dimethylphenol	<.787		mg/kg
2,4-Dinitrophenol	<3.94		mg/kg
2,4-Dinitrotoluene	<.787		mg/kg
2,6-Dichlorophenol	<.787		mg/kg
2,6-Dinitrotoluene	<.787		mg/kg
2-Acetylaminofluorene	<.787		mg/kg
2-Chloronaphthalene	<.787		mg/kg
2-Chlorophenol	<.787		mg/kg
2-Methylphenol	<.787		mg/kg
2-Nitroaniline	<.787		mg/kg
2-Nitrophenol	<.787		mg/kg
2-Picoline	<.787		mg/kg
2-Picoline	<.787[a]		mg/kg
3-,4-methylphenol	<.787		mg/kg
3,3'-Dichlorobenzidine	<.787		mg/kg
3,3'-Dichlorobenzidine	<.787[a]		mg/kg
4,6-Dinitro-2-methylphenol	<3.94		mg/kg
4-Bromophenyl-phenylether	<.787		mg/kg
4-Chloro-3-methylphenol	<3.94		mg/kg
4-Chlorophenyl-phenylether	<.787		mg/kg
4-Nitroaniline	<.787		mg/kg
4-Nitrophenol	<3.94		mg/kg
7,12-Dimethylbenz[a]anthracene	<.787		mg/kg
7,12-Dimethylbenz[a]anthracene	<.787[a]		mg/kg
Acetophenone	<.787		mg/kg
Aniline	<.787		mg/kg
Benzyl Alcohol	<.787		mg/kg
Butylbenzylphthalate	<.787		mg/kg
Di-n-butylphthalate	<.787		mg/kg
Di-n-octylphthalate	<.787		mg/kg
Diethylphthalate	<.787		mg/kg
Dimethylphthalate	<.787		mg/kg
Dinoseb	<.787		mg/kg
Diphenylamine	<.787		mg/kg
Ethyl methanesulfonate	<.787		mg/kg
Hexachlorobenzene	<.787		mg/kg
Hexachlorobutadiene	<.787		mg/kg
Hexachlorocyclopentadiene	<.787		mg/kg
Hexachlorocyclopentadiene	<.787[a]		mg/kg
Hexachloroethane	<.787		mg/kg
Hexachloropropene	<.787		mg/kg
Hexachloropropene	<.787[a]		mg/kg
Isophorone	<.787		mg/kg
Methyl methanesulfonate	<.787		mg/kg
N-Nitroso-di-n-butylamine	<.787		mg/kg
N-Nitroso-di-n-propylamine	<.787		mg/kg
N-Nitrosomorpholine	<.787		mg/kg
N-Nitrosopiperidine	<.787		mg/kg
N-Nitrosopyrrolidine	<.787		mg/kg
Nitrobenzene	<.787		mg/kg
Pentachlorobenzene	<.787		mg/kg
Pentachlorophenol	<3.94		mg/kg
Phenacetin	<.787		mg/kg
Phenol	<.787		mg/kg
Pronamide	<.787		mg/kg
Safrole	<.787		mg/kg
bis(2-Chloroethoxy)methane	<.787		mg/kg
bis(2-Chloroethyl)ether	<.787		mg/kg
bis(2-Chloroisopropyl)ether	<.787		mg/kg
bis(2-Ethylhexyl)phthalate	<.787		mg/kg
p-Dimethylaminoazobenzene	<.787		mg/kg
PAH	**03-AUG-2017**		
1,4-Naphthoquinone	<.787	13	mg/kg
1,4-Naphthoquinone	<.787[a]	13	mg/kg
2-Methylnaphthalene	<.787	13	mg/kg
3-Methylcholanthrene	<.787	13	mg/kg
Acenaphthene	<.787	13	mg/kg
Acenaphthylene	<.787	13	mg/kg
Anthracene	<.787	13	mg/kg
Benzo(a)anthracene	<.787	13	mg/kg
Benzo(a)pyrene	<.787	13	mg/kg
Benzo[b]fluoranthene	<.787	13	mg/kg
Benzo[g,h,i]perylene	<.787	13	mg/kg
Benzo[k]fluoranthene	<.787	13	mg/kg
Chrysene	<.787	13	mg/kg
Dibenz[a,h]anthracene	<.787	13	mg/kg
Dibenzofuran	<.787	13	mg/kg
Fluoranthene	<.787	13	mg/kg
Fluorene	<.787	13	mg/kg
Indeno[1,2,3-cd]pyrene	<.787	13	mg/kg
Naphthalene	<.787	13	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S19 CUYAHOGA R. AT SHALERSVILLE @ ST. RT. 303							
Phenanthrene	<.787	13	mg/kg				
Pyrene	<.787	13	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.			
OTHER	**11-OCT-2018**		
PCB-1016	<34.1		ug/kg
PCB-1221	<34.1		ug/kg
PCB-1232	<34.1		ug/kg
PCB-1242	114		ug/kg
PCB-1248	<34.1		ug/kg
PCB-1254	157		ug/kg
PCB-1260	65.8		ug/kg
4,4'-DDD	<6.82		ug/kg
4,4-DDE	<6.82		ug/kg
4,4'-DDT	<6.82		ug/kg
Aldrin	<6.82		ug/kg
Dieldrin	<6.82		ug/kg
Endosulfan I	<6.82		ug/kg
Endosulfan II	<6.82		ug/kg
Endosulfan sulfate	<6.82		ug/kg
Endrin	<6.82		ug/kg
Endrin aldehyde	<6.82		ug/kg
Endrin aldehyde	<6.82[a]		ug/kg
Heptachlor	<6.82		ug/kg
Heptachlor epoxide	<6.82		ug/kg
Hexachlorobenzene	<6.82		ug/kg
Hexachlorobenzene	<6.82[a]		ug/kg
Methoxychlor	<6.82		ug/kg
Mirex	<6.82		ug/kg
a-BHC	<6.82		ug/kg
b-BHC	<6.82		ug/kg
d-BHC	<6.82		ug/kg
y-BHC	<6.82		ug/kg
1,2,4,5-Tetrachlorobenzene	<.686		mg/kg
1,2,4-Trichlorobenzene	<.686		mg/kg
1,2-Dichlorobenzene	<.686		mg/kg
1,3-Dichlorobenzene	<.686		mg/kg
1,3-Dinitrobenzene	<.686		mg/kg
1,4-Dichlorobenzene	<.686		mg/kg
2,3,4,6-Tetrachlorophenol	<.686		mg/kg
2,4,5-Trichlorophenol	<.686		mg/kg
2,4,6-Trichlorophenol	<.686		mg/kg
2,4-Dichlorophenol	<.686		mg/kg
2,4-Dimethylphenol	<3.43		mg/kg
2,4-Dinitrophenol	<3.43		mg/kg
2,4-Dinitrotoluene	<.686		mg/kg
2,6-Dichlorophenol	<.686		mg/kg
2,6-Dinitrotoluene	<.686		mg/kg
2-Acetylaminofluorene	<.686		mg/kg
2-Chloronaphthalene	<.686		mg/kg
2-Chlorophenol	<.686		mg/kg
2-Methylphenol	<.686		mg/kg
2-Nitroaniline	<.686		mg/kg
2-Nitrophenol	<.686		mg/kg
2-Picoline	<.686		mg/kg
3-,4-methylphenol	<.686		mg/kg
3,3'-Dichlorobenzidine	<.686		mg/kg
4,6-Dinitro-2-methylphenol	<3.43		mg/kg
4-Bromophenyl-phenylether	<.686		mg/kg
4-Chloro-3-methylphenol	<3.43		mg/kg
4-Chlorophenyl-phenylether	<.686		mg/kg
4-Nitroaniline	<.686		mg/kg
4-Nitrophenol	<3.43		mg/kg
7,12-Dimethylbenz[a]anthracene	<.686		mg/kg
7,12-Dimethylbenz[a]anthracene	<.686[a]		mg/kg
Acetophenone	<.686		mg/kg
Aniline	<.686		mg/kg
Benzyl Alcohol	<.686		mg/kg
Butylbenzylphthalate	<.686		mg/kg
Di-n-butylphthalate	<.686		mg/kg
Di-n-octylphthalate	<.686		mg/kg
Diethylphthalate	<.686		mg/kg
Dimethylphthalate	<.686		mg/kg
Dinoseb	<.686		mg/kg
Diphenylamine	<.686		mg/kg
Ethyl methanesulfonate	<.686		mg/kg
Hexachlorobenzene	<.686		mg/kg
Hexachlorobutadiene	<.686		mg/kg
Hexachlorocyclopentadiene	<3.43		mg/kg
Hexachlorocyclopentadiene	<3.43[a]		mg/kg
Hexachloroethane	<.686		mg/kg
Hexachloropropene	<.686		mg/kg
Isophorone	<.686		mg/kg
Methyl methanesulfonate	<.686		mg/kg
N-Nitroso-di-n-butylamine	<.686		mg/kg
N-Nitroso-di-n-propylamine	<.686		mg/kg
N-Nitrosomorpholine	<.686		mg/kg
N-Nitrosopiperidine	<.686		mg/kg
N-Nitrosopyrrolidine	<.686		mg/kg
Nitrobenzene	<.686		mg/kg
Pentachlorobenzene	<.686		mg/kg
Pentachlorophenol	<3.43		mg/kg
Phenacetin	<.686		mg/kg
Phenol	<.686		mg/kg
Pronamide	<.686		mg/kg
Safrole	<.686		mg/kg
bis(2-Chloroethoxy)methane	<.686		mg/kg
bis(2-Chloroethyl)ether	<.686		mg/kg
bis(2-Chloroisopropyl)ether	<.686		mg/kg
bis(2-Ethylhexyl)phthalate	.725		mg/kg
p-Dimethylaminoazobenzene	<.686		mg/kg
PAH	**11-OCT-2018**		
1,4-Naphthoquinone	<.686		mg/kg
2-Methylnaphthalene	<.686		mg/kg
3-Methylcholanthrene	<.686		mg/kg
Acenaphthene	<.686		mg/kg
Acenaphthylene	<.686		mg/kg
Anthracene	<.686		mg/kg
Benzo(a)anthracene	<.686		mg/kg
Benzo(a)pyrene	.738		mg/kg
Benzo[b]fluoranthene	.888		mg/kg
Benzo[g,h,i]perylene	.687		mg/kg
Benzo[k]fluoranthene	<.686		mg/kg
Chrysene	<.686		mg/kg
Dibenz[a,h]anthracene	<.686		mg/kg
Dibenzofuran	<.686		mg/kg
Fluoranthene	.988		mg/kg
Fluorene	<.686		mg/kg
Indeno[1,2,3-cd]pyrene	.817		mg/kg
Naphthalene	<.686		mg/kg
Phenanthrene	<.686		mg/kg
Pyrene	.751		mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S24 TINKERS CREEK AT MOUTH @ CANAL RD.							

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.			
OTHER	**09-OCT-2018**		
PCB-1016	<27.7		ug/kg
PCB-1221	<27.7		ug/kg
PCB-1232	<27.7		ug/kg
PCB-1242	<27.7		ug/kg
PCB-1248	<27.7		ug/kg
PCB-1254	<27.7		ug/kg
PCB-1260	<27.7		ug/kg
4,4'-DDD	<5.55		ug/kg
4,4-DDE	<5.55		ug/kg
4,4'-DDT	<5.55		ug/kg
Aldrin	<5.55		ug/kg
Dieldrin	<5.55		ug/kg
Endosulfan I	<5.55		ug/kg
Endosulfan II	<5.55		ug/kg
Endosulfan sulfate	<5.55		ug/kg
Endrin	<5.55		ug/kg
Endrin aldehyde	<5.55		ug/kg
Endrin aldehyde	<5.55[a]		ug/kg
Heptachlor	<5.55		ug/kg
Heptachlor epoxide	<5.55		ug/kg
Hexachlorobenzene	<5.55		ug/kg
Hexachlorobenzene	<5.55[a]		ug/kg
Methoxychlor	<5.55		ug/kg
Mirex	<5.55		ug/kg
a-BHC	<5.55		ug/kg
b-BHC	<5.55		ug/kg
d-BHC	<5.55		ug/kg
y-BHC	<5.55		ug/kg
1,2,4,5-Tetrachlorobenzene	<.555		mg/kg
1,2,4-Trichlorobenzene	<.555		mg/kg
1,2-Dichlorobenzene	<.555		mg/kg
1,3-Dichlorobenzene	<.555		mg/kg
1,3-Dinitrobenzene	<.555		mg/kg
1,4-Dichlorobenzene	<.555		mg/kg
2,3,4,6-Tetrachlorophenol	<.555		mg/kg
2,4,5-Trichlorophenol	<.555		mg/kg
2,4,6-Trichlorophenol	<.555		mg/kg
2,4-Dichlorophenol	<.555		mg/kg
2,4-Dimethylphenol	<2.78		mg/kg
2,4-Dinitrophenol	<2.78		mg/kg
2,4-Dinitrotoluene	<.555		mg/kg
2,6-Dichlorophenol	<.555		mg/kg
2,6-Dinitrotoluene	<.555		mg/kg
2-Acetylaminofluorene	<.555		mg/kg
2-Chloronaphthalene	<.555		mg/kg
2-Chlorophenol	<.555		mg/kg
2-Methylphenol	<.555		mg/kg
2-Nitroaniline	<.555		mg/kg
2-Nitrophenol	<.555		mg/kg
2-Picoline	<.555		mg/kg
3-,4-methylphenol	<.555		mg/kg
3,3'-Dichlorobenzidine	<.555		mg/kg
4,6-Dinitro-2-methylphenol	<2.78		mg/kg
4-Bromophenyl-phenylether	<.555		mg/kg
4-Chloro-3-methylphenol	<2.78		mg/kg
4-Chlorophenyl-phenylether	<.555		mg/kg
4-Nitroaniline	<.555		mg/kg
4-Nitrophenol	<2.78		mg/kg
7,12-Dimethylbenz[a]anthracene	<.555		mg/kg
7,12-Dimethylbenz[a]anthracene	<.555[a]		mg/kg
Acetophenone	<.555		mg/kg
Aniline	<.555		mg/kg
Benzyl Alcohol	<.555		mg/kg
Butylbenzylphthalate	<.555		mg/kg
Di-n-butylphthalate	<.555		mg/kg
Di-n-octylphthalate	<.555		mg/kg
Diethylphthalate	<.555		mg/kg
Dimethylphthalate	<.555		mg/kg
Dinoseb	<.555		mg/kg
Diphenylamine	<.555		mg/kg
Ethyl methanesulfonate	<.555		mg/kg
Hexachlorobenzene	<.555		mg/kg
Hexachlorobutadiene	<.555		mg/kg
Hexachlorocyclopentadiene	<2.78[a]		mg/kg
Hexachlorocyclopentadiene	<2.78		mg/kg
Hexachloroethane	<.555		mg/kg
Hexachloropropene	<.555		mg/kg
Isophorone	<.555		mg/kg
Methyl methanesulfonate	<.555		mg/kg
N-Nitroso-di-n-butylamine	<.555		mg/kg
N-Nitroso-di-n-propylamine	<.555		mg/kg
N-Nitrosomorpholine	<.555		mg/kg
N-Nitrosopiperidine	<.555		mg/kg
N-Nitrosopyrrolidine	<.555		mg/kg
Nitrobenzene	<.555		mg/kg
Pentachlorobenzene	<.555		mg/kg
Pentachlorophenol	<2.78		mg/kg
Phenacetin	<.555		mg/kg
Phenol	<.555		mg/kg
Pronamide	<.555		mg/kg
Safrole	<.555		mg/kg
bis(2-Chloroethoxy)methane	<.555		mg/kg
bis(2-Chloroethyl)ether	<.555		mg/kg
bis(2-Chloroisopropyl)ether	<.555		mg/kg
bis(2-Ethylhexyl)phthalate	1.22		mg/kg
p-Dimethylaminoazobenzene	<.555		mg/kg
PAH	**09-OCT-2018**		
1,4-Naphthoquinone	<.555	21	mg/kg
2-Methylnaphthalene	<.555	21	mg/kg
3-Methylcholanthrene	<.555	21	mg/kg
Acenaphthene	<.555	21	mg/kg
Acenaphthylene	<.555	21	mg/kg
Anthracene	<.555	21	mg/kg
Benzo(a)anthracene	<.555	21	mg/kg
Benzo(a)pyrene	<.555	21	mg/kg
Benzo[b]fluoranthene	.892	67	mg/kg
Benzo[g,h,i]perylene	<.555	21	mg/kg
Benzo[k]fluoranthene	<.555	21	mg/kg
Chrysene	<.555	21	mg/kg
Dibenz[a,h]anthracene	<.555	21	mg/kg
Dibenzofuran	<.555	21	mg/kg
Fluoranthene	.811	61	mg/kg
Fluorene	<.555	21	mg/kg
Indeno[1,2,3-cd]pyrene	.665	50	mg/kg
Naphthalene	<.555	21	mg/kg
Phenanthrene	<.555	21	mg/kg
Pyrene	.582	44	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S29 TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.							

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S49 BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE			
OTHER	**13-AUG-2018**		
PCB-1016	<27.5		ug/kg
PCB-1221	<27.5		ug/kg
PCB-1232	<27.5		ug/kg
PCB-1242	<27.5		ug/kg
PCB-1248	<27.5		ug/kg
PCB-1254	<27.5		ug/kg
PCB-1260	<27.5		ug/kg
4,4'-DDD	<5.51		ug/kg
4,4-DDE	<5.51		ug/kg
4,4'-DDT	<5.51		ug/kg
Aldrin	<5.51		ug/kg
Dieldrin	<5.51		ug/kg
Endosulfan I	<5.51		ug/kg
Endosulfan II	<5.51		ug/kg
Endosulfan sulfate	<5.51		ug/kg
Endrin	<5.51		ug/kg
Endrin aldehyde	<5.51		ug/kg
Heptachlor	<5.51		ug/kg
Heptachlor epoxide	<5.51		ug/kg
Hexachlorobenzene	<5.51		ug/kg
Methoxychlor	<5.51		ug/kg
Mirex	<5.51		ug/kg
a-BHC	<5.51		ug/kg
b-BHC	<5.51		ug/kg
d-BHC	<5.51		ug/kg
y-BHC	<5.51		ug/kg
1,2,4,5-Tetrachlorobenzene	<.552		mg/kg
1,2,4-Trichlorobenzene	<.552		mg/kg
1,2-Dichlorobenzene	<.552		mg/kg
1,3-Dichlorobenzene	<.552		mg/kg
1,3-Dinitrobenzene	<.552		mg/kg
1,4-Dichlorobenzene	<.552		mg/kg
2,3,4,6-Tetrachlorophenol	<.552		mg/kg
2,4,5-Trichlorophenol	<.552		mg/kg
2,4,6-Trichlorophenol	<.552		mg/kg
2,4-Dichlorophenol	<.552		mg/kg
2,4-Dimethylphenol	<2.76		mg/kg
2,4-Dinitrophenol	<2.76		mg/kg
2,4-Dinitrotoluene	<.552		mg/kg
2,6-Dichlorophenol	<.552		mg/kg
2,6-Dinitrotoluene	<.552		mg/kg
2-Acetylaminofluorene	<.552		mg/kg
2-Chloronaphthalene	<.552		mg/kg
2-Chlorophenol	<.552		mg/kg
2-Methylphenol	<.552		mg/kg
2-Nitroaniline	<.552		mg/kg
2-Nitrophenol	<.552		mg/kg
2-Picoline	<.552		mg/kg
3-,4-methylphenol	<.552		mg/kg
3,3'-Dichlorobenzidine	<.552		mg/kg
4,6-Dinitro-2-methylphenol	<2.76		mg/kg
4-Bromophenyl-phenylether	<.552		mg/kg
4-Chloro-3-methylphenol	<2.76		mg/kg
4-Chlorophenyl-phenylether	<.552		mg/kg
4-Nitroaniline	<.552		mg/kg
4-Nitrophenol	<2.76		mg/kg
7,12-Dimethylbenz[a]anthracene	<.552		mg/kg
Acetophenone	<.552		mg/kg
Aniline	<.552		mg/kg
Aniline	<.552[a]		mg/kg
Benzyl Alcohol	<.552		mg/kg
Butylbenzylphthalate	<.552		mg/kg
Di-n-butylphthalate	<.552		mg/kg
Di-n-octylphthalate	<.552		mg/kg
Diethylphthalate	<.552		mg/kg
Dimethylphthalate	<.552		mg/kg
Dinoseb	<.552		mg/kg
Diphenylamine	<.552		mg/kg
Ethyl methanesulfonate	<.552		mg/kg
Hexachlorobenzene	<.552		mg/kg
Hexachlorobutadiene	<.552		mg/kg
Hexachlorocyclopentadiene	<2.76		mg/kg
Hexachloroethane	<.552		mg/kg
Hexachloropropene	<.552		mg/kg
Isophorone	<.552		mg/kg
Methyl methanesulfonate	<.552		mg/kg
N-Nitroso-di-n-butylamine	<.552		mg/kg
N-Nitroso-di-n-propylamine	<.552		mg/kg
N-Nitrosomorpholine	<.552		mg/kg
N-Nitrosopiperidine	<.552		mg/kg
N-Nitrosopyrrolidine	<.552		mg/kg
Nitrobenzene	<.552		mg/kg
Pentachlorobenzene	<.552		mg/kg
Pentachlorophenol	<2.76		mg/kg
Phenacetin	<.552		mg/kg
Phenol	<.552		mg/kg
Pronamide	<.552		mg/kg
Safrole	<.552		mg/kg
bis(2-Chloroethoxy)methane	<.552		mg/kg
bis(2-Chloroethyl)ether	<.552		mg/kg
bis(2-Chloroisopropyl)ether	<.552		mg/kg
bis(2-Ethylhexyl)phthalate	<.552		mg/kg
p-Dimethylaminoazobenzene	<.552		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.552	29	mg/kg
2-Methylnaphthalene	<.552	29	mg/kg
3-Methylcholanthrene	<.552	29	mg/kg
Acenaphthene	<.552	29	mg/kg
Acenaphthylene	<.552	29	mg/kg
Anthracene	<.552	29	mg/kg
Benzo(a)anthracene	<.552	29	mg/kg
Benzo(a)pyrene	<.552	29	mg/kg
Benzo[b]fluoranthene	<.552	29	mg/kg
Benzo[g,h,i]perylene	<.552	29	mg/kg
Benzo[k]fluoranthene	<.552	29	mg/kg
Chrysene	<.552	29	mg/kg
Dibenz[a,h]anthracene	<.552	29	mg/kg
Dibenzofuran	<.552	29	mg/kg
Fluoranthene	<.552	29	mg/kg
Fluorene	<.552	29	mg/kg
Indeno[1,2,3-cd]pyrene	<.552	29	mg/kg
Naphthalene	<.552	29	mg/kg
Phenanthrene	<.552	29	mg/kg
Pyrene	<.552	29	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.			
OTHER	**23-OCT-2018**		
PCB-1016	<32.3		ug/kg
PCB-1221	<32.3		ug/kg
PCB-1232	<32.3		ug/kg
PCB-1242	58.7		ug/kg
PCB-1248	<32.3		ug/kg
PCB-1254	151		ug/kg
PCB-1260	39.6		ug/kg
4,4'-DDD	<6.47		ug/kg
4,4-DDE	<6.47		ug/kg
4,4'-DDT	<6.47		ug/kg
Aldrin	<6.47		ug/kg
Dieldrin	<6.47		ug/kg
Endosulfan I	<6.47		ug/kg
Endosulfan II	<6.47		ug/kg
Endosulfan sulfate	<6.47		ug/kg
Endrin	<6.47		ug/kg
Endrin aldehyde	<6.47		ug/kg
Heptachlor	<6.47		ug/kg
Heptachlor epoxide	<6.47		ug/kg
Hexachlorobenzene	<6.47		ug/kg
Methoxychlor	<6.47		ug/kg
Mirex	<6.47		ug/kg
a-BHC	<6.47		ug/kg
b-BHC	<6.47		ug/kg
d-BHC	<6.47		ug/kg
y-BHC	<6.47		ug/kg
1,2,4,5-Tetrachlorobenzene	<.643		mg/kg
1,2,4-Trichlorobenzene	<.643		mg/kg
1,2-Dichlorobenzene	<.643		mg/kg
1,3-Dichlorobenzene	<.643		mg/kg
1,3-Dinitrobenzene	<.643		mg/kg
1,4-Dichlorobenzene	<.643		mg/kg
2,3,4,6-Tetrachlorophenol	<.643		mg/kg
2,4,5-Trichlorophenol	<.643		mg/kg
2,4,6-Trichlorophenol	<.643		mg/kg
2,4-Dichlorophenol	<.643		mg/kg
2,4-Dimethylphenol	<3.21		mg/kg
2,4-Dinitrophenol	<3.21		mg/kg
2,4-Dinitrotoluene	<.643		mg/kg
2,6-Dichlorophenol	<.643		mg/kg
2,6-Dinitrotoluene	<.643		mg/kg
2-Acetylaminofluorene	<.643		mg/kg
2-Chloronaphthalene	<.643		mg/kg
2-Chlorophenol	<.643		mg/kg
2-Methylphenol	<.643		mg/kg
2-Nitroaniline	<.643		mg/kg
2-Nitrophenol	<.643		mg/kg
2-Picoline	<.643		mg/kg
3-,4-methylphenol	<.643		mg/kg
3,3'-Dichlorobenzidine	<.643		mg/kg
4,6-Dinitro-2-methylphenol	<3.21		mg/kg
4-Bromophenyl-phenylether	<.643		mg/kg
4-Chloro-3-methylphenol	<3.21		mg/kg
4-Chlorophenyl-phenylether	<.643		mg/kg
4-Nitroaniline	<.643		mg/kg
4-Nitrophenol	<3.21		mg/kg
7,12-Dimethylbenz[a]anthracene	<.643		mg/kg
7,12-Dimethylbenz[a]anthracene	<.643[a]		mg/kg
Acetophenone	<.643		mg/kg
Aniline	<.643		mg/kg
Aniline	<.643[a]		mg/kg
Benzyl Alcohol	<.643		mg/kg
Butylbenzylphthalate	<.643		mg/kg
Di-n-butylphthalate	<.643		mg/kg
Di-n-octylphthalate	<.643		mg/kg
Diethylphthalate	<.643		mg/kg
Dimethylphthalate	<.643		mg/kg
Dinoseb	<.643		mg/kg
Diphenylamine	<.643		mg/kg
Ethyl methanesulfonate	<.643		mg/kg
Hexachlorobenzene	<.643		mg/kg
Hexachlorobutadiene	<.643		mg/kg
Hexachlorocyclopentadiene	<3.21		mg/kg
Hexachlorocyclopentadiene	<3.21[a]		mg/kg
Hexachloroethane	<.643		mg/kg
Hexachloropropene	<.643		mg/kg
Isophorone	<.643		mg/kg
Methyl methanesulfonate	<.643		mg/kg
N-Nitroso-di-n-butylamine	<.643		mg/kg
N-Nitroso-di-n-butylamine	<.643[a]		mg/kg
N-Nitroso-di-n-propylamine	<.643		mg/kg
N-Nitrosomorpholine	<.643		mg/kg
N-Nitrosopiperidine	<.643		mg/kg
N-Nitrosopyrrolidine	<.643		mg/kg
Nitrobenzene	<.643		mg/kg
Pentachlorobenzene	<.643		mg/kg
Pentachlorophenol	<3.21		mg/kg
Phenacetin	<.643		mg/kg
Phenol	<.643		mg/kg
Pronamide	<.643		mg/kg
Safrole	<.643		mg/kg
bis(2-Chloroethoxy)methane	<.643		mg/kg
bis(2-Chloroethyl)ether	<.643		mg/kg
bis(2-Chloroisopropyl)ether	<.643		mg/kg
bis(2-Ethylhexyl)phthalate	.758		mg/kg
p-Dimethylaminoazobenzene	<.643		mg/kg
PAH	**23-OCT-2018**		
1,4-Naphthoquinone	<.643	5	mg/kg
1,4-Naphthoquinone	<.643[a]	5	mg/kg
2-Methylnaphthalene	<.643	5	mg/kg
2-Methylnaphthalene	<.643[a]	5	mg/kg
3-Methylcholanthrene	<.643	5	mg/kg
Acenaphthene	<.643	5	mg/kg
Acenaphthylene	<.643	5	mg/kg
Anthracene	.818	12	mg/kg
Benzo(a)anthracene	3.51	52	mg/kg
Benzo(a)pyrene	3.32	50	mg/kg
Benzo[b]fluoranthene	4.23	63	mg/kg
Benzo[g,h,i]perylene	2.4	36	mg/kg
Benzo[k]fluoranthene	2.64	39	mg/kg
Chrysene	4.69	70	mg/kg
Dibenz[a,h]anthracene	<.643	5	mg/kg
Dibenzofuran	<.643	5	mg/kg
Fluoranthene	10.8	161	mg/kg
Fluorene	<.643	5	mg/kg
Indeno[1,2,3-cd]pyrene	2.69	40	mg/kg
Naphthalene	<.643	5	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01S82 L. CUYAHOGA R. AT AKRON @ BANK ST.							
Phenanthrene	4.54	68	mg/kg				
Pyrene	8.14	121	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W11 BRANDYWINE CREEK NEAR HUDSON @ HINES HILL RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<29.5		ug/kg
PCB-1221	<29.5		ug/kg
PCB-1232	<29.5		ug/kg
PCB-1242	<29.5		ug/kg
PCB-1248	<29.5		ug/kg
PCB-1254	<29.5		ug/kg
PCB-1260	<29.5		ug/kg
4,4'-DDD	<5.91		ug/kg
4,4-DDE	<5.91		ug/kg
4,4'-DDT	<5.91		ug/kg
Aldrin	<5.91		ug/kg
Dieldrin	<5.91		ug/kg
Endosulfan I	<5.91		ug/kg
Endosulfan II	<5.91		ug/kg
Endosulfan sulfate	<5.91		ug/kg
Endrin	<5.91		ug/kg
Endrin aldehyde	<5.91		ug/kg
Heptachlor	<5.91		ug/kg
Heptachlor epoxide	<5.91		ug/kg
Hexachlorobenzene	<5.91		ug/kg
Methoxychlor	<5.91		ug/kg
Mirex	<5.91		ug/kg
a-BHC	<5.91		ug/kg
b-BHC	<5.91		ug/kg
d-BHC	<5.91		ug/kg
y-BHC	<5.91		ug/kg
1,2,4,5-Tetrachlorobenzene	<.585		mg/kg
1,2,4-Trichlorobenzene	<.585		mg/kg
1,2-Dichlorobenzene	<.585		mg/kg
1,3-Dichlorobenzene	<.585		mg/kg
1,3-Dinitrobenzene	<.585		mg/kg
1,4-Dichlorobenzene	<.585		mg/kg
2,3,4,6-Tetrachlorophenol	<.585		mg/kg
2,4,5-Trichlorophenol	<.585		mg/kg
2,4,6-Trichlorophenol	<.585		mg/kg
2,4-Dichlorophenol	<.585		mg/kg
2,4-Dimethylphenol	<2.92		mg/kg
2,4-Dinitrophenol	<2.92		mg/kg
2,4-Dinitrotoluene	<.585		mg/kg
2,6-Dichlorophenol	<.585		mg/kg
2,6-Dinitrotoluene	<.585		mg/kg
2-Acetylaminofluorene	<.585		mg/kg
2-Chloronaphthalene	<.585		mg/kg
2-Chlorophenol	<.585		mg/kg
2-Methylphenol	<.585		mg/kg
2-Nitroaniline	<.585		mg/kg
2-Nitrophenol	<.585		mg/kg
2-Picoline	<.585		mg/kg
3-,4-methylphenol	<.585		mg/kg
3,3'-Dichlorobenzidine	<.585		mg/kg
4,6-Dinitro-2-methylphenol	<2.92		mg/kg
4-Bromophenyl-phenylether	<.585		mg/kg
4-Chloro-3-methylphenol	<2.92		mg/kg
4-Chlorophenyl-phenylether	<.585		mg/kg
4-Nitroaniline	<.585		mg/kg
4-Nitrophenol	<2.92		mg/kg
7,12-Dimethylbenz[a]anthracene	<.585		mg/kg
Acetophenone	<.585		mg/kg
Aniline	<.585		mg/kg
Aniline	<.585[a]		mg/kg
Benzyl Alcohol	<.585		mg/kg
Butylbenzylphthalate	<.585		mg/kg
Di-n-butylphthalate	<.585		mg/kg
Di-n-octylphthalate	<.585		mg/kg
Diethylphthalate	<.585		mg/kg
Dimethylphthalate	<.585		mg/kg
Dinoseb	<.585		mg/kg
Diphenylamine	<.585		mg/kg
Ethyl methanesulfonate	<.585		mg/kg
Hexachlorobenzene	<.585		mg/kg
Hexachlorobutadiene	<.585		mg/kg
Hexachlorocyclopentadiene	<2.92		mg/kg
Hexachloroethane	<.585		mg/kg
Hexachloropropene	<.585		mg/kg
Isophorone	<.585		mg/kg
Methyl methanesulfonate	<.585		mg/kg
N-Nitroso-di-n-butylamine	<.585		mg/kg
N-Nitroso-di-n-propylamine	<.585		mg/kg
N-Nitrosomorpholine	<.585		mg/kg
N-Nitrosopiperidine	<.585		mg/kg
N-Nitrosopyrrolidine	<.585		mg/kg
Nitrobenzene	<.585		mg/kg
Pentachlorobenzene	<.585		mg/kg
Pentachlorophenol	<2.92		mg/kg
Phenacetin	<.585		mg/kg
Phenol	<.585		mg/kg
Pronamide	<.585		mg/kg
Safrole	<.585		mg/kg
bis(2-Chloroethoxy)methane	<.585		mg/kg
bis(2-Chloroethyl)ether	<.585		mg/kg
bis(2-Chloroisopropyl)ether	<.585		mg/kg
bis(2-Ethylhexyl)phthalate	<.585		mg/kg
p-Dimethylaminoazobenzene	<.585		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.585	17	mg/kg
2-Methylnaphthalene	<.585	17	mg/kg
3-Methylcholanthrene	<.585	17	mg/kg
Acenaphthene	<.585	17	mg/kg
Acenaphthylene	<.585	17	mg/kg
Anthracene	<.585	17	mg/kg
Benzo(a)anthracene	.704	40	mg/kg
Benzo(a)pyrene	.883	50	mg/kg
Benzo[b]fluoranthene	1.02	58	mg/kg
Benzo[g,h,i]perylene	.794	45	mg/kg
Benzo[k]fluoranthene	.705	40	mg/kg
Chrysene	1.16	66	mg/kg
Dibenz[a,h]anthracene	<.585	17	mg/kg
Dibenzofuran	<.585	17	mg/kg
Fluoranthene	2.5	142	mg/kg
Fluorene	<.585	17	mg/kg
Indeno[1,2,3-cd]pyrene	.864	49	mg/kg
Naphthalene	<.585	17	mg/kg
Phenanthrene	.962	55	mg/kg
Pyrene	1.91	109	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W22 CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP.			
OTHER	**03-AUG-2017**		
PCB-1016	<35.5		ug/kg
PCB-1221	<35.5		ug/kg
PCB-1232	<35.5		ug/kg
PCB-1242	<35.5		ug/kg
PCB-1248	<35.5		ug/kg
PCB-1254	<35.5		ug/kg
PCB-1260	<35.5		ug/kg
4,4'-DDD	<7.1		ug/kg
4,4-DDE	<7.1		ug/kg
4,4'-DDT	<7.1		ug/kg
Aldrin	<7.1		ug/kg
Dieldrin	<7.1		ug/kg
Endosulfan I	<7.1		ug/kg
Endosulfan II	<7.1		ug/kg
Endosulfan sulfate	<7.1		ug/kg
Endrin	<7.1		ug/kg
Endrin aldehyde	<7.1		ug/kg
Heptachlor	<7.1		ug/kg
Heptachlor epoxide	<7.1		ug/kg
Hexachlorobenzene	<7.1		ug/kg
Methoxychlor	<7.1		ug/kg
Mirex	<7.1		ug/kg
a-BHC	<7.1		ug/kg
b-BHC	<7.1		ug/kg
d-BHC	<7.1		ug/kg
y-BHC	<7.1		ug/kg
1,2,4,5-Tetrachlorobenzene	<.706		mg/kg
1,2,4-Trichlorobenzene	<.706		mg/kg
1,2-Dichlorobenzene	<.706		mg/kg
1,3-Dichlorobenzene	<.706		mg/kg
1,3-Dinitrobenzene	<.706		mg/kg
1,4-Dichlorobenzene	<.706		mg/kg
2,3,4,6-Tetrachlorophenol	<.706		mg/kg
2,4,5-Trichlorophenol	<.706		mg/kg
2,4,6-Trichlorophenol	<.706		mg/kg
2,4-Dichlorophenol	<.706		mg/kg
2,4-Dimethylphenol	<.706		mg/kg
2,4-Dinitrophenol	<3.53		mg/kg
2,4-Dinitrotoluene	<.706		mg/kg
2,6-Dichlorophenol	<.706		mg/kg
2,6-Dinitrotoluene	<.706		mg/kg
2-Acetylaminofluorene	<.706		mg/kg
2-Chloronaphthalene	<.706		mg/kg
2-Chlorophenol	<.706		mg/kg
2-Methylphenol	<.706		mg/kg
2-Nitroaniline	<.706		mg/kg
2-Nitrophenol	<.706		mg/kg
2-Picoline	<.706		mg/kg
2-Picoline	<.706[a]		mg/kg
3-,4-methylphenol	<.706		mg/kg
3,3'-Dichlorobenzidine	<.706		mg/kg
3,3'-Dichlorobenzidine	<.706[a]		mg/kg
4,6-Dinitro-2-methylphenol	<3.53		mg/kg
4-Bromophenyl-phenylether	<.706		mg/kg
4-Chloro-3-methylphenol	<3.53		mg/kg
4-Chlorophenyl-phenylether	<.706		mg/kg
4-Nitroaniline	<.706		mg/kg
4-Nitrophenol	<3.53		mg/kg
7,12-Dimethylbenz[a]anthracene	<.706		mg/kg
7,12-Dimethylbenz[a]anthracene	<.706[a]		mg/kg
Acetophenone	<.706		mg/kg
Aniline	<.706		mg/kg
Benzyl Alcohol	<.706		mg/kg
Butylbenzylphthalate	<.706		mg/kg
Di-n-butylphthalate	<.706		mg/kg
Di-n-octylphthalate	<.706		mg/kg
Diethylphthalate	<.706		mg/kg
Dimethylphthalate	<.706		mg/kg
Dinoseb	<.706		mg/kg
Diphenylamine	<.706		mg/kg
Ethyl methanesulfonate	<.706		mg/kg
Hexachlorobenzene	<.706		mg/kg
Hexachlorobutadiene	<.706		mg/kg
Hexachlorocyclopentadiene	<.706		mg/kg
Hexachlorocyclopentadiene	<.706[a]		mg/kg
Hexachloroethane	<.706		mg/kg
Hexachloropropene	<.706		mg/kg
Hexachloropropene	<.706[a]		mg/kg
Isophorone	<.706		mg/kg
Methyl methanesulfonate	<.706		mg/kg
N-Nitroso-di-n-butylamine	<.706		mg/kg
N-Nitroso-di-n-propylamine	<.706		mg/kg
N-Nitrosomorpholine	<.706		mg/kg
N-Nitrosopiperidine	<.706		mg/kg
N-Nitrosopyrrolidine	<.706		mg/kg
Nitrobenzene	<.706		mg/kg
Pentachlorobenzene	<.706		mg/kg
Pentachlorophenol	<3.53		mg/kg
Phenacetin	<.706		mg/kg
Phenol	<.706		mg/kg
Pronamide	<.706		mg/kg
Safrole	<.706		mg/kg
bis(2-Chloroethoxy)methane	<.706		mg/kg
bis(2-Chloroethyl)ether	<.706		mg/kg
bis(2-Chloroisopropyl)ether	<.706		mg/kg
bis(2-Ethylhexyl)phthalate	<.706		mg/kg
p-Dimethylaminoazobenzene	<.706		mg/kg
PAH	**03-AUG-2017**		
1,4-Naphthoquinone	<.706	12	mg/kg
1,4-Naphthoquinone	<.706[a]	12	mg/kg
2-Methylnaphthalene	<.706	12	mg/kg
3-Methylcholanthrene	<.706	12	mg/kg
Acenaphthene	<.706	12	mg/kg
Acenaphthylene	<.706	12	mg/kg
Anthracene	<.706	12	mg/kg
Benzo(a)anthracene	<.706	12	mg/kg
Benzo(a)pyrene	<.706	12	mg/kg
Benzo[b]fluoranthene	<.706	12	mg/kg
Benzo[g,h,i]perylene	<.706	12	mg/kg
Benzo[k]fluoranthene	<.706	12	mg/kg
Chrysene	<.706	12	mg/kg
Dibenz[a,h]anthracene	<.706	12	mg/kg
Dibenzofuran	<.706	12	mg/kg
Fluoranthene	<.706	12	mg/kg
Fluorene	<.706	12	mg/kg
Indeno[1,2,3-cd]pyrene	<.706	12	mg/kg
Naphthalene	<.706	12	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W22 CUYAHOGA R. AT MANTUA, UPST. MANTALINE CORP.							
Phenanthrene	<.706	12	mg/kg				
Pyrene	<.706	12	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W37 FISH CREEK AT KENT @ N. RIVER RD.			
OTHER	**13-AUG-2018**		
PCB-1016	<28		ug/kg
PCB-1221	<28		ug/kg
PCB-1232	<28		ug/kg
PCB-1242	<28		ug/kg
PCB-1248	<28		ug/kg
PCB-1254	<28		ug/kg
PCB-1260	<28		ug/kg
4,4'-DDD	6.86		ug/kg
4,4-DDE	<5.6		ug/kg
4,4'-DDT	<5.6		ug/kg
Aldrin	<5.6		ug/kg
Dieldrin	<5.6		ug/kg
Endosulfan I	<5.6		ug/kg
Endosulfan II	<5.6		ug/kg
Endosulfan sulfate	<5.6		ug/kg
Endrin	<5.6		ug/kg
Endrin aldehyde	<5.6		ug/kg
Heptachlor	<5.6		ug/kg
Heptachlor epoxide	<5.6		ug/kg
Hexachlorobenzene	<5.6		ug/kg
Methoxychlor	<5.6		ug/kg
Mirex	<5.6		ug/kg
a-BHC	<5.6		ug/kg
b-BHC	<5.6		ug/kg
d-BHC	<5.6		ug/kg
y-BHC	<5.6		ug/kg
1,2,4,5-Tetrachlorobenzene	<.558		mg/kg
1,2,4-Trichlorobenzene	<.558		mg/kg
1,2-Dichlorobenzene	<.558		mg/kg
1,3-Dichlorobenzene	<.558		mg/kg
1,3-Dinitrobenzene	<.558		mg/kg
1,4-Dichlorobenzene	<.558		mg/kg
2,3,4,6-Tetrachlorophenol	<.558		mg/kg
2,4,5-Trichlorophenol	<.558		mg/kg
2,4,6-Trichlorophenol	<.558		mg/kg
2,4-Dichlorophenol	<.558		mg/kg
2,4-Dimethylphenol	<2.79		mg/kg
2,4-Dinitrophenol	<2.79		mg/kg
2,4-Dinitrotoluene	<.558		mg/kg
2,6-Dichlorophenol	<.558		mg/kg
2,6-Dinitrotoluene	<.558		mg/kg
2-Acetylaminofluorene	<.558		mg/kg
2-Chloronaphthalene	<.558		mg/kg
2-Chlorophenol	<.558		mg/kg
2-Methylphenol	<.558		mg/kg
2-Nitroaniline	<.558		mg/kg
2-Nitrophenol	<.558		mg/kg
2-Picoline	<.558		mg/kg
3-,4-methylphenol	<.558		mg/kg
3,3'-Dichlorobenzidine	<.558		mg/kg
4,6-Dinitro-2-methylphenol	<2.79		mg/kg
4-Bromophenyl-phenylether	<.558		mg/kg
4-Chloro-3-methylphenol	<2.79		mg/kg
4-Chlorophenyl-phenylether	<.558		mg/kg
4-Nitroaniline	<.558		mg/kg
4-Nitrophenol	<2.79		mg/kg
7,12-Dimethylbenz[a]anthracene	<.558		mg/kg
Acetophenone	<.558		mg/kg
Aniline	<.558		mg/kg
Aniline	<.558[a]		mg/kg
Benzyl Alcohol	<.558		mg/kg
Butylbenzylphthalate	<.558		mg/kg
Di-n-butylphthalate	<.558		mg/kg
Di-n-octylphthalate	<.558		mg/kg
Diethylphthalate	<.558		mg/kg
Dimethylphthalate	<.558		mg/kg
Dinoseb	<.558		mg/kg
Diphenylamine	<.558		mg/kg
Ethyl methanesulfonate	<.558		mg/kg
Hexachlorobenzene	<.558		mg/kg
Hexachlorobutadiene	<.558		mg/kg
Hexachlorocyclopentadiene	<2.79		mg/kg
Hexachloroethane	<.558		mg/kg
Hexachloropropene	<.558		mg/kg
Isophorone	<.558		mg/kg
Methyl methanesulfonate	<.558		mg/kg
N-Nitroso-di-n-butylamine	<.558		mg/kg
N-Nitroso-di-n-propylamine	<.558		mg/kg
N-Nitrosomorpholine	<.558		mg/kg
N-Nitrosopiperidine	<.558		mg/kg
N-Nitrosopyrrolidine	<.558		mg/kg
Nitrobenzene	<.558		mg/kg
Pentachlorobenzene	<.558		mg/kg
Pentachlorophenol	<2.79		mg/kg
Phenacetin	<.558		mg/kg
Phenol	<.558		mg/kg
Pronamide	<.558		mg/kg
Safrole	<.558		mg/kg
bis(2-Chloroethoxy)methane	<.558		mg/kg
bis(2-Chloroethyl)ether	<.558		mg/kg
bis(2-Chloroisopropyl)ether	<.558		mg/kg
bis(2-Ethylhexyl)phthalate	<.558		mg/kg
p-Dimethylaminoazobenzene	<.558		mg/kg
PAH	**13-AUG-2018**		
1,4-Naphthoquinone	<.558	11	mg/kg
2-Methylnaphthalene	<.558	11	mg/kg
3-Methylcholanthrene	<.558	11	mg/kg
Acenaphthene	<.558	11	mg/kg
Acenaphthylene	<.558	11	mg/kg
Anthracene	<.558	11	mg/kg
Benzo(a)anthracene	1.83	72	mg/kg
Benzo(a)pyrene	2.02	80	mg/kg
Benzo[b]fluoranthene	2.51	99	mg/kg
Benzo[g,h,i]perylene	1.6	63	mg/kg
Benzo[k]fluoranthene	1.78	70	mg/kg
Chrysene	2.7	106	mg/kg
Dibenz[a,h]anthracene	<.558	11	mg/kg
Dibenzofuran	<.558	11	mg/kg
Fluoranthene	6.07	239	mg/kg
Fluorene	<.558	11	mg/kg
Indeno[1,2,3-cd]pyrene	1.88	74	mg/kg
Naphthalene	<.558	11	mg/kg
Phenanthrene	2.24	88	mg/kg
Pyrene	4.79	189	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W43 CUYAHOGA R. @ LTV FOOTBRIDGE			
OTHER	**22-AUG-2017**		
PCB-1016	<39.4		ug/kg
PCB-1221	<39.4		ug/kg
PCB-1232	<39.4		ug/kg
PCB-1242	70.8		ug/kg
PCB-1248	<39.4		ug/kg
PCB-1254	<39.4		ug/kg
PCB-1260	343		ug/kg
4,4'-DDD	<7.88		ug/kg
4,4-DDE	15.9		ug/kg
4,4'-DDT	<7.88		ug/kg
Aldrin	<7.88		ug/kg
Dieldrin	11.5		ug/kg
Endosulfan I	<7.88		ug/kg
Endosulfan II	<7.88		ug/kg
Endosulfan sulfate	<7.88		ug/kg
Endrin	<7.88		ug/kg
Endrin aldehyde	<7.88		ug/kg
Heptachlor	<7.88		ug/kg
Heptachlor epoxide	<7.88		ug/kg
Hexachlorobenzene	<7.88		ug/kg
Methoxychlor	<7.88		ug/kg
Mirex	<7.88		ug/kg
a-BHC	<7.88		ug/kg
b-BHC	<7.88		ug/kg
d-BHC	<7.88		ug/kg
y-BHC	<7.88		ug/kg
1,2,4,5-Tetrachlorobenzene	<.787		mg/kg
1,2,4-Trichlorobenzene	<.787		mg/kg
1,2-Dichlorobenzene	<.787		mg/kg
1,2-Dichlorobenzene	<.787[a]		mg/kg
1,3-Dichlorobenzene	<.787		mg/kg
1,3-Dichlorobenzene	<.787[a]		mg/kg
1,3-Dinitrobenzene	<.787		mg/kg
1,4-Dichlorobenzene	<.787		mg/kg
1,4-Dichlorobenzene	<.787[a]		mg/kg
2,3,4,6-Tetrachlorophenol	<.787		mg/kg
2,3,4,6-Tetrachlorophenol	<.787[a]		mg/kg
2,4,5-Trichlorophenol	<.787		mg/kg
2,4,6-Trichlorophenol	<.787		mg/kg
2,4,6-Trichlorophenol	<.787[a]		mg/kg
2,4-Dichlorophenol	<.787		mg/kg
2,4-Dimethylphenol	<.787		mg/kg
2,4-Dinitrophenol	<3.93		mg/kg
2,4-Dinitrophenol	<3.93[a]		mg/kg
2,4-Dinitrotoluene	<.787		mg/kg
2,6-Dichlorophenol	<.787		mg/kg
2,6-Dinitrotoluene	<.787		mg/kg
2-Acetylaminofluorene	<.787		mg/kg
2-Chloronaphthalene	<.787		mg/kg
2-Chlorophenol	<.787		mg/kg
2-Methylphenol	<.787		mg/kg
2-Nitroaniline	<.787		mg/kg
2-Nitrophenol	<.787[a]		mg/kg
2-Nitrophenol	<.787		mg/kg
2-Picoline	<.787		mg/kg
2-Picoline	<.787[a]		mg/kg
3-,4-methylphenol	<.787		mg/kg
3,3'-Dichlorobenzidine	<.787		mg/kg
4,6-Dinitro-2-methylphenol	<3.93		mg/kg
4,6-Dinitro-2-methylphenol	<3.93[a]		mg/kg
4-Bromophenyl-phenylether	<.787		mg/kg
4-Chloro-3-methylphenol	<3.93		mg/kg
4-Chlorophenyl-phenylether	<.787		mg/kg
4-Nitroaniline	<.787		mg/kg
4-Nitroaniline	<.787[a]		mg/kg
4-Nitrophenol	<3.93		mg/kg
7,12-Dimethylbenz[a]anthracene	<.787		mg/kg
Acetophenone	<.787		mg/kg
Aniline	<.787		mg/kg
Benzyl Alcohol	<.787		mg/kg
Butylbenzylphthalate	<.787		mg/kg
Di-n-butylphthalate	<.787		mg/kg
Di-n-octylphthalate	<.787		mg/kg
Diethylphthalate	<.787		mg/kg
Dimethylphthalate	<.787		mg/kg
Dinoseb	<.787		mg/kg
Diphenylamine	<.787		mg/kg
Ethyl methanesulfonate	<.787		mg/kg
Hexachlorobenzene	<.787		mg/kg
Hexachlorobutadiene	<.787		mg/kg
Hexachlorocyclopentadiene	<.787¿		mg/kg
Hexachlorocyclopentadiene	<.787		mg/kg
Hexachloroethane	<.787		mg/kg
Hexachloroethane	<.787[a]		mg/kg
Hexachloropropene	<.787		mg/kg
Hexachloropropene	<.787[a]		mg/kg
Isophorone	<.787[a]		mg/kg
Isophorone	<.787		mg/kg
Methyl methanesulfonate	<.787[a]		mg/kg
Methyl methanesulfonate	<.787		mg/kg
N-Nitroso-di-n-butylamine	<.787		mg/kg
N-Nitroso-di-n-propylamine	<.787		mg/kg
N-Nitrosomorpholine	<.787		mg/kg
N-Nitrosopiperidine	<.787		mg/kg
N-Nitrosopyrrolidine	<.787		mg/kg
Nitrobenzene	<.787		mg/kg
Pentachlorobenzene	<.787		mg/kg
Pentachlorophenol	<3.93		mg/kg
Pentachlorophenol	<3.93[a]		mg/kg
Phenacetin	<.787		mg/kg
Phenol	<.787		mg/kg
Pronamide	<.787		mg/kg
Safrole	<.787		mg/kg
bis(2-Chloroethoxy)methane	<.787		mg/kg
bis(2-Chloroethyl)ether	<.787[a]		mg/kg
bis(2-Chloroethyl)ether	<.787		mg/kg
bis(2-Chloroisopropyl)ether	<.787		mg/kg
bis(2-Ethylhexyl)phthalate	<.787		mg/kg
p-Dimethylaminoazobenzene	<.787		mg/kg
PAH	**22-AUG-2017**		
1,4-Naphthoquinone	<.787	22	mg/kg
1,4-Naphthoquinone	<.787[a]	22	mg/kg
2-Methylnaphthalene	<.787	22	mg/kg
2-Methylnaphthalene	<.787[a]	22	mg/kg
3-Methylcholanthrene	<.787	22	mg/kg
Acenaphthene	<.787	22	mg/kg
Acenaphthylene	<.787	22	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W43 CUYAHOGA R. @ LTV FOOTBRIDGE							
Acenaphthylene	<.787[a]	22	mg/kg				
Anthracene	<.787	22	mg/kg				
Benzo(a)anthracene	<.787	22	mg/kg				
Benzo(a)pyrene	<.787	22	mg/kg				
Benzo[b]fluoranthene	<.787	22	mg/kg				
Benzo[g,h,i]perylene	<.787	22	mg/kg				
Benzo[k]fluoranthene	<.787	22	mg/kg				
Chrysene	<.787	22	mg/kg				
Dibenz[a,h]anthracene	<.787	22	mg/kg				
Dibenzofuran	<.787	22	mg/kg				
Fluoranthene	1.12	63	mg/kg				
Fluorene	<.787	22	mg/kg				
Indeno[1,2,3-cd]pyrene	<.787	22	mg/kg				
Naphthalene	<.787	22	mg/kg				
Phenanthrene	<.787	22	mg/kg				
Pyrene	.871	49	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W70 CUYAHOGA R. @ STANDING ROCK CEMETERY (FREE FLOWING)							
OTHER	**23-OCT-2017**						
PCB-1016	<50.5		ug/kg				
PCB-1221	<50.5		ug/kg				
PCB-1232	<50.5		ug/kg				
PCB-1242	<50.5		ug/kg				
PCB-1248	<50.5		ug/kg				
PCB-1254	<50.5i		ug/kg				
PCB-1254	<50.5		ug/kg				
PCB-1260	<50.5		ug/kg				
4,4'-DDD	<10.1		ug/kg				
4,4-DDE	<10.1		ug/kg				
4,4'-DDT	<10.1		ug/kg				
Aldrin	<10.1		ug/kg				
Dieldrin	<10.1		ug/kg				
Endosulfan I	<10.1		ug/kg				
Endosulfan II	<10.1		ug/kg				
Endosulfan sulfate	<10.1		ug/kg				
Endrin	<10.1		ug/kg				
Endrin aldehyde	<10.1		ug/kg				
Heptachlor	<10.1		ug/kg				
Heptachlor epoxide	<10.1		ug/kg				
Hexachlorobenzene	<10.1		ug/kg				
Methoxychlor	<10.1		ug/kg				
Mirex	<10.1		ug/kg				
a-BHC	<10.1		ug/kg				
b-BHC	<10.1		ug/kg				
d-BHC	<10.1		ug/kg				
y-BHC	<10.1		ug/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W71 POTTER CREEK @ TRARES RD.			
OTHER	**22-OCT-2018**		
PCB-1016	<63.4		ug/kg
PCB-1221	<63.4		ug/kg
PCB-1232	<63.4		ug/kg
PCB-1242	<63.4		ug/kg
PCB-1248	<63.4		ug/kg
PCB-1254	<63.4		ug/kg
PCB-1260	<63.4		ug/kg
4,4'-DDD	<12.7		ug/kg
4,4-DDE	<12.7		ug/kg
4,4'-DDT	<12.7		ug/kg
Aldrin	<12.7		ug/kg
Dieldrin	<12.7		ug/kg
Endosulfan I	<12.7		ug/kg
Endosulfan II	<12.7		ug/kg
Endosulfan sulfate	<12.7		ug/kg
Endrin	<12.7		ug/kg
Endrin aldehyde	<12.7		ug/kg
Heptachlor	<12.7		ug/kg
Heptachlor epoxide	<12.7		ug/kg
Hexachlorobenzene	<12.7		ug/kg
Methoxychlor	<12.7		ug/kg
Mirex	<12.7		ug/kg
a-BHC	<12.7		ug/kg
b-BHC	<12.7		ug/kg
d-BHC	<12.7		ug/kg
y-BHC	<12.7		ug/kg
1,2,4,5-Tetrachlorobenzene	<1.28		mg/kg
1,2,4-Trichlorobenzene	<1.28		mg/kg
1,2-Dichlorobenzene	<1.28		mg/kg
1,3-Dichlorobenzene	<1.28		mg/kg
1,3-Dinitrobenzene	<1.28		mg/kg
1,4-Dichlorobenzene	<1.28		mg/kg
2,3,4,6-Tetrachlorophenol	<1.28		mg/kg
2,4,5-Trichlorophenol	<1.28		mg/kg
2,4,6-Trichlorophenol	<1.28		mg/kg
2,4-Dichlorophenol	<1.28		mg/kg
2,4-Dimethylphenol	<6.39		mg/kg
2,4-Dinitrophenol	<6.39		mg/kg
2,4-Dinitrotoluene	<1.28		mg/kg
2,6-Dichlorophenol	<1.28		mg/kg
2,6-Dinitrotoluene	<1.28		mg/kg
2-Acetylaminofluorene	<1.28		mg/kg
2-Chloronaphthalene	<1.28		mg/kg
2-Chlorophenol	<1.28		mg/kg
2-Methylphenol	<1.28		mg/kg
2-Nitroaniline	<1.28		mg/kg
2-Nitrophenol	<1.28		mg/kg
2-Picoline	<1.28		mg/kg
3-,4-methylphenol	<1.28		mg/kg
3,3'-Dichlorobenzidine	<1.28		mg/kg
4,6-Dinitro-2-methylphenol	<6.39		mg/kg
4-Bromophenyl-phenylether	<1.28		mg/kg
4-Chloro-3-methylphenol	<6.39		mg/kg
4-Chlorophenyl-phenylether	<1.28		mg/kg
4-Nitroaniline	<1.28		mg/kg
4-Nitrophenol	<6.39		mg/kg
7,12-Dimethylbenz[a]anthracene	<1.28		mg/kg
7,12-Dimethylbenz[a]anthracene	<1.28[a]		mg/kg
Acetophenone	<1.28		mg/kg
Aniline	<1.28		mg/kg
Aniline	<1.28[a]		mg/kg
Benzyl Alcohol	<1.28		mg/kg
Butylbenzylphthalate	<1.28		mg/kg
Di-n-butylphthalate	<1.28		mg/kg
Di-n-octylphthalate	<1.28		mg/kg
Diethylphthalate	<1.28		mg/kg
Dimethylphthalate	<1.28		mg/kg
Dinoseb	<1.28		mg/kg
Diphenylamine	<1.28		mg/kg
Ethyl methanesulfonate	<1.28		mg/kg
Hexachlorobenzene	<1.28		mg/kg
Hexachlorobutadiene	<1.28		mg/kg
Hexachlorocyclopentadiene	<6.39		mg/kg
Hexachlorocyclopentadiene	<6.39[a]		mg/kg
Hexachloroethane	<1.28		mg/kg
Hexachloropropene	<1.28		mg/kg
Isophorone	<1.28		mg/kg
Methyl methanesulfonate	<1.28		mg/kg
N-Nitroso-di-n-butylamine	<1.28		mg/kg
N-Nitroso-di-n-butylamine	<1.28[a]		mg/kg
N-Nitroso-di-n-propylamine	<1.28		mg/kg
N-Nitrosomorpholine	<1.28		mg/kg
N-Nitrosopiperidine	<1.28		mg/kg
N-Nitrosopyrrolidine	<1.28		mg/kg
Nitrobenzene	<1.28		mg/kg
Pentachlorobenzene	<1.28		mg/kg
Pentachlorophenol	<6.39		mg/kg
Phenacetin	<1.28		mg/kg
Phenol	<1.28		mg/kg
Pronamide	<1.28		mg/kg
Safrole	<1.28		mg/kg
bis(2-Chloroethoxy)methane	<1.28		mg/kg
bis(2-Chloroethyl)ether	<1.28		mg/kg
bis(2-Chloroisopropyl)ether	<1.28		mg/kg
bis(2-Ethylhexyl)phthalate	<1.28		mg/kg
p-Dimethylaminoazobenzene	<1.28		mg/kg
PAH	**22-OCT-2018**		
1,4-Naphthoquinone	<1.28	7	mg/kg
1,4-Naphthoquinone	<1.28[a]	7	mg/kg
2-Methylnaphthalene	<1.28	7	mg/kg
2-Methylnaphthalene	<1.28[a]	7	mg/kg
3-Methylcholanthrene	<1.28	7	mg/kg
Acenaphthene	<1.28	7	mg/kg
Acenaphthylene	<1.28	7	mg/kg
Anthracene	<1.28	7	mg/kg
Benzo(a)anthracene	<1.28	7	mg/kg
Benzo(a)pyrene	<1.28	7	mg/kg
Benzo[b]fluoranthene	<1.28	7	mg/kg
Benzo[g,h,i]perylene	<1.28	7	mg/kg
Benzo[k]fluoranthene	<1.28	7	mg/kg
Chrysene	<1.28	7	mg/kg
Dibenz[a,h]anthracene	<1.28	7	mg/kg
Dibenzofuran	<1.28	7	mg/kg
Fluoranthene	<1.28	7	mg/kg
Fluorene	<1.28	7	mg/kg
Indeno[1,2,3-cd]pyrene	<1.28	7	mg/kg
Naphthalene	<1.28	7	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W71 POTTER CREEK @ TRARES RD.							
Phenanthrene	<1.28	7	mg/kg				
Pyrene	<1.28	7	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD.			
OTHER	**09-OCT-2018**		
PCB-1016	<29.8		ug/kg
PCB-1221	<29.8		ug/kg
PCB-1232	<29.8		ug/kg
PCB-1242	<29.8		ug/kg
PCB-1248	<29.8		ug/kg
PCB-1254	<29.8		ug/kg
PCB-1260	<29.8		ug/kg
4,4'-DDD	<5.95		ug/kg
4,4-DDE	<5.95		ug/kg
4,4'-DDT	<5.95		ug/kg
Aldrin	<5.95		ug/kg
Dieldrin	<5.95		ug/kg
Endosulfan I	<5.95		ug/kg
Endosulfan II	<5.95		ug/kg
Endosulfan sulfate	<5.95		ug/kg
Endrin	<5.95		ug/kg
Endrin aldehyde	<5.95		ug/kg
Endrin aldehyde	<5.95[a]		ug/kg
Heptachlor	<5.95		ug/kg
Heptachlor epoxide	<5.95		ug/kg
Hexachlorobenzene	<5.95		ug/kg
Hexachlorobenzene	<5.95[a]		ug/kg
Methoxychlor	<5.95		ug/kg
Mirex	<5.95		ug/kg
a-BHC	<5.95		ug/kg
b-BHC	<5.95		ug/kg
d-BHC	<5.95		ug/kg
y-BHC	<5.95		ug/kg
1,2,4,5-Tetrachlorobenzene	<.595		mg/kg
1,2,4-Trichlorobenzene	<.595		mg/kg
1,2-Dichlorobenzene	<.595		mg/kg
1,3-Dichlorobenzene	<.595		mg/kg
1,3-Dinitrobenzene	<.595		mg/kg
1,4-Dichlorobenzene	<.595		mg/kg
2,3,4,6-Tetrachlorophenol	<.595		mg/kg
2,4,5-Trichlorophenol	<.595		mg/kg
2,4,6-Trichlorophenol	<.595		mg/kg
2,4-Dichlorophenol	<.595		mg/kg
2,4-Dimethylphenol	<2.98		mg/kg
2,4-Dinitrophenol	<2.98		mg/kg
2,4-Dinitrotoluene	<.595		mg/kg
2,6-Dichlorophenol	<.595		mg/kg
2,6-Dinitrotoluene	<.595		mg/kg
2-Acetylaminofluorene	<.595		mg/kg
2-Chloronaphthalene	<.595		mg/kg
2-Chlorophenol	<.595		mg/kg
2-Methylphenol	<.595		mg/kg
2-Nitroaniline	<.595		mg/kg
2-Nitrophenol	<.595		mg/kg
2-Picoline	<.595		mg/kg
3-,4-methylphenol	<.595		mg/kg
3,3'-Dichlorobenzidine	<.595		mg/kg
4,6-Dinitro-2-methylphenol	<2.98		mg/kg
4-Bromophenyl-phenylether	<.595		mg/kg
4-Chloro-3-methylphenol	<2.98		mg/kg
4-Chlorophenyl-phenylether	<.595		mg/kg
4-Nitroaniline	<.595		mg/kg
4-Nitrophenol	<2.98		mg/kg
7,12-Dimethylbenz[a]anthracene	<.595		mg/kg
7,12-Dimethylbenz[a]anthracene	<.595[a]		mg/kg
Acetophenone	<.595		mg/kg
Aniline	<.595		mg/kg
Benzyl Alcohol	<.595		mg/kg
Butylbenzylphthalate	<.595		mg/kg
Di-n-butylphthalate	<.595		mg/kg
Di-n-octylphthalate	<.595		mg/kg
Diethylphthalate	<.595		mg/kg
Dimethylphthalate	<.595		mg/kg
Dinoseb	<.595		mg/kg
Diphenylamine	<.595		mg/kg
Ethyl methanesulfonate	<.595		mg/kg
Hexachlorobenzene	<.595		mg/kg
Hexachlorobutadiene	<.595		mg/kg
Hexachlorocyclopentadiene	<2.98		mg/kg
Hexachlorocyclopentadiene	<2.98[a]		mg/kg
Hexachloroethane	<.595		mg/kg
Hexachloropropene	<.595		mg/kg
Isophorone	<.595		mg/kg
Methyl methanesulfonate	<.595		mg/kg
N-Nitroso-di-n-butylamine	<.595		mg/kg
N-Nitroso-di-n-propylamine	<.595		mg/kg
N-Nitrosomorpholine	<.595		mg/kg
N-Nitrosopiperidine	<.595		mg/kg
N-Nitrosopyrrolidine	<.595		mg/kg
Nitrobenzene	<.595		mg/kg
Pentachlorobenzene	<.595		mg/kg
Pentachlorophenol	<2.98		mg/kg
Phenacetin	<.595		mg/kg
Phenol	<.595		mg/kg
Pronamide	<.595		mg/kg
Safrole	<.595		mg/kg
bis(2-Chloroethoxy)methane	<.595		mg/kg
bis(2-Chloroethyl)ether	<.595		mg/kg
bis(2-Chloroisopropyl)ether	<.595		mg/kg
bis(2-Ethylhexyl)phthalate	<.595		mg/kg
p-Dimethylaminoazobenzene	<.595		mg/kg
PAH	**09-OCT-2018**		
1,4-Naphthoquinone	<.595	20	mg/kg
2-Methylnaphthalene	<.595	20	mg/kg
3-Methylcholanthrene	<.595	20	mg/kg
Acenaphthene	<.595	20	mg/kg
Acenaphthylene	<.595	20	mg/kg
Anthracene	<.595	20	mg/kg
Benzo(a)anthracene	<.595	20	mg/kg
Benzo(a)pyrene	<.595	20	mg/kg
Benzo[b]fluoranthene	<.595	20	mg/kg
Benzo[g,h,i]perylene	<.595	20	mg/kg
Benzo[k]fluoranthene	<.595	20	mg/kg
Chrysene	<.595	20	mg/kg
Dibenz[a,h]anthracene	<.595	20	mg/kg
Dibenzofuran	<.595	20	mg/kg
Fluoranthene	<.595	20	mg/kg
Fluorene	<.595	20	mg/kg
Indeno[1,2,3-cd]pyrene	<.595	20	mg/kg
Naphthalene	<.595	20	mg/kg
Phenanthrene	<.595	20	mg/kg
Pyrene	<.595	20	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W76 W. BR. CUYAHOGA R.@ RAPIDS RD.							

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W77 CUYAHOGA R. @ RUSSELL PARK			
OTHER	**03-AUG-2017**		
PCB-1016	<28.1		ug/kg
PCB-1221	<28.1		ug/kg
PCB-1232	<28.1		ug/kg
PCB-1242	<28.1		ug/kg
PCB-1248	<28.1		ug/kg
PCB-1254	<28.1		ug/kg
PCB-1260	<28.1		ug/kg
4,4'-DDD	<5.62		ug/kg
4,4-DDE	<5.62		ug/kg
4,4'-DDT	<5.62		ug/kg
Aldrin	<5.62		ug/kg
Dieldrin	<5.62		ug/kg
Endosulfan I	<5.62		ug/kg
Endosulfan II	<5.62		ug/kg
Endosulfan sulfate	<5.62		ug/kg
Endrin	<5.62		ug/kg
Endrin aldehyde	<5.62		ug/kg
Heptachlor	<5.62		ug/kg
Heptachlor epoxide	<5.62		ug/kg
Hexachlorobenzene	<5.62		ug/kg
Methoxychlor	<5.62		ug/kg
Mirex	<5.62		ug/kg
a-BHC	<5.62		ug/kg
b-BHC	<5.62		ug/kg
d-BHC	<5.62		ug/kg
y-BHC	<5.62		ug/kg
1,2,4,5-Tetrachlorobenzene	<.56		mg/kg
1,2,4-Trichlorobenzene	<.56		mg/kg
1,2-Dichlorobenzene	<.56		mg/kg
1,3-Dichlorobenzene	<.56		mg/kg
1,3-Dinitrobenzene	<.56		mg/kg
1,4-Dichlorobenzene	<.56		mg/kg
2,3,4,6-Tetrachlorophenol	<.56		mg/kg
2,4,5-Trichlorophenol	<.56		mg/kg
2,4,6-Trichlorophenol	<.56		mg/kg
2,4-Dichlorophenol	<.56		mg/kg
2,4-Dimethylphenol	<.56		mg/kg
2,4-Dinitrophenol	<2.8		mg/kg
2,4-Dinitrotoluene	<.56		mg/kg
2,6-Dichlorophenol	<.56		mg/kg
2,6-Dinitrotoluene	<.56		mg/kg
2-Acetylaminofluorene	<.56		mg/kg
2-Chloronaphthalene	<.56		mg/kg
2-Chlorophenol	<.56		mg/kg
2-Methylphenol	<.56		mg/kg
2-Nitroaniline	<.56		mg/kg
2-Nitrophenol	<.56		mg/kg
2-Picoline	<.56		mg/kg
2-Picoline	<.56[a]		mg/kg
3-,4-methylphenol	<.56		mg/kg
3,3'-Dichlorobenzidine	<.56		mg/kg
3,3'-Dichlorobenzidine	<.56[a]		mg/kg
4,6-Dinitro-2-methylphenol	<2.8		mg/kg
4-Bromophenyl-phenylether	<.56		mg/kg
4-Chloro-3-methylphenol	<2.8		mg/kg
4-Chlorophenyl-phenylether	<.56		mg/kg
4-Nitroaniline	<.56		mg/kg
4-Nitrophenol	<2.8		mg/kg
7,12-Dimethylbenz[a]anthracene	<.56		mg/kg
7,12-Dimethylbenz[a]anthracene	<.56[a]		mg/kg
Acetophenone	<.56		mg/kg
Aniline	<.56		mg/kg
Benzyl Alcohol	<.56		mg/kg
Butylbenzylphthalate	<.56		mg/kg
Di-n-butylphthalate	<.56		mg/kg
Di-n-octylphthalate	<.56		mg/kg
Diethylphthalate	<.56		mg/kg
Dimethylphthalate	<.56		mg/kg
Dinoseb	<.56		mg/kg
Diphenylamine	<.56		mg/kg
Ethyl methanesulfonate	<.56		mg/kg
Hexachlorobenzene	<.56		mg/kg
Hexachlorobutadiene	<.56		mg/kg
Hexachlorocyclopentadiene	<.56		mg/kg
Hexachlorocyclopentadiene	<.56[a]		mg/kg
Hexachloroethane	<.56		mg/kg
Hexachloropropene	<.56		mg/kg
Hexachloropropene	<.56[a]		mg/kg
Isophorone	<.56		mg/kg
Methyl methanesulfonate	<.56		mg/kg
N-Nitroso-di-n-butylamine	<.56		mg/kg
N-Nitroso-di-n-propylamine	<.56		mg/kg
N-Nitrosomorpholine	<.56		mg/kg
N-Nitrosopiperidine	<.56		mg/kg
N-Nitrosopyrrolidine	<.56		mg/kg
Nitrobenzene	<.56		mg/kg
Pentachlorobenzene	<.56		mg/kg
Pentachlorophenol	<2.8		mg/kg
Phenacetin	<.56		mg/kg
Phenol	<.56		mg/kg
Pronamide	<.56		mg/kg
Safrole	<.56		mg/kg
bis(2-Chloroethoxy)methane	<.56		mg/kg
bis(2-Chloroethyl)ether	<.56		mg/kg
bis(2-Chloroisopropyl)ether	<.56		mg/kg
bis(2-Ethylhexyl)phthalate	<.56		mg/kg
p-Dimethylaminoazobenzene	<.56		mg/kg
PAH	**03-AUG-2017**		
1,4-Naphthoquinone	<.56	21	mg/kg
1,4-Naphthoquinone	<.56[a]	21	mg/kg
2-Methylnaphthalene	<.56	21	mg/kg
3-Methylcholanthrene	<.56	21	mg/kg
Acenaphthene	<.56	21	mg/kg
Acenaphthylene	<.56	21	mg/kg
Anthracene	<.56	21	mg/kg
Benzo(a)anthracene	<.56	21	mg/kg
Benzo(a)pyrene	<.56	21	mg/kg
Benzo[b]fluoranthene	<.56	21	mg/kg
Benzo[g,h,i]perylene	<.56	21	mg/kg
Benzo[k]fluoranthene	<.56	21	mg/kg
Chrysene	<.56	21	mg/kg
Dibenz[a,h]anthracene	<.56	21	mg/kg
Dibenzofuran	<.56	21	mg/kg
Fluoranthene	<.56	21	mg/kg
Fluorene	<.56	21	mg/kg
Indeno[1,2,3-cd]pyrene	<.56	21	mg/kg
Naphthalene	<.56	21	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W77 CUYAHOGA R. @ RUSSELL PARK							
Phenanthrene	<.56	21	mg/kg				
Pyrene	<.56	21	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F01W83 BREAKNECK CREEK NEAR MOUTH			
OTHER	**22-OCT-2018**		
PCB-1016	<32.9		ug/kg
PCB-1221	<32.9		ug/kg
PCB-1232	<32.9		ug/kg
PCB-1242	<32.9		ug/kg
PCB-1248	<32.9		ug/kg
PCB-1254	<32.9		ug/kg
PCB-1260	<32.9		ug/kg
4,4'-DDD	<6.57		ug/kg
4,4-DDE	<6.57		ug/kg
4,4'-DDT	<6.57		ug/kg
Aldrin	<6.57		ug/kg
Dieldrin	<6.57		ug/kg
Endosulfan I	<6.57		ug/kg
Endosulfan II	<6.57		ug/kg
Endosulfan sulfate	<6.57		ug/kg
Endrin	<6.57		ug/kg
Endrin aldehyde	<6.57		ug/kg
Heptachlor	<6.57		ug/kg
Heptachlor epoxide	<6.57		ug/kg
Hexachlorobenzene	<6.57		ug/kg
Methoxychlor	<6.57		ug/kg
Mirex	<6.57		ug/kg
a-BHC	<6.57		ug/kg
b-BHC	<6.57		ug/kg
d-BHC	<6.57		ug/kg
y-BHC	<6.57		ug/kg
1,2,4,5-Tetrachlorobenzene	<.652		mg/kg
1,2,4-Trichlorobenzene	<.652		mg/kg
1,2-Dichlorobenzene	<.652		mg/kg
1,3-Dichlorobenzene	<.652		mg/kg
1,3-Dinitrobenzene	<.652		mg/kg
1,4-Dichlorobenzene	<.652		mg/kg
2,3,4,6-Tetrachlorophenol	<.652		mg/kg
2,4,5-Trichlorophenol	<.652		mg/kg
2,4,6-Trichlorophenol	<.652		mg/kg
2,4-Dichlorophenol	<.652		mg/kg
2,4-Dimethylphenol	<3.26		mg/kg
2,4-Dinitrophenol	<3.26		mg/kg
2,4-Dinitrotoluene	<.652		mg/kg
2,6-Dichlorophenol	<.652		mg/kg
2,6-Dinitrotoluene	<.652		mg/kg
2-Acetylaminofluorene	<.652		mg/kg
2-Chloronaphthalene	<.652		mg/kg
2-Chlorophenol	<.652		mg/kg
2-Methylphenol	<.652		mg/kg
2-Nitroaniline	<.652		mg/kg
2-Nitrophenol	<.652		mg/kg
2-Picoline	<.652		mg/kg
3-,4-methylphenol	<.652		mg/kg
3,3'-Dichlorobenzidine	<.652		mg/kg
4,6-Dinitro-2-methylphenol	<3.26		mg/kg
4-Bromophenyl-phenylether	<.652		mg/kg
4-Chloro-3-methylphenol	<3.26		mg/kg
4-Chlorophenyl-phenylether	<.652		mg/kg
4-Nitroaniline	<.652		mg/kg
4-Nitrophenol	<3.26		mg/kg
7,12-Dimethylbenz[a]anthracene	<.652		mg/kg
7,12-Dimethylbenz[a]anthracene	<.652[a]		mg/kg
Acetophenone	<.652		mg/kg
Aniline	<.652		mg/kg
Aniline	<.652[a]		mg/kg
Benzyl Alcohol	<.652		mg/kg
Butylbenzylphthalate	<.652		mg/kg
Di-n-butylphthalate	<.652		mg/kg
Di-n-octylphthalate	<.652		mg/kg
Diethylphthalate	<.652		mg/kg
Dimethylphthalate	<.652		mg/kg
Dinoseb	<.652		mg/kg
Diphenylamine	<.652		mg/kg
Ethyl methanesulfonate	<.652		mg/kg
Hexachlorobenzene	<.652		mg/kg
Hexachlorobutadiene	<.652		mg/kg
Hexachlorocyclopentadiene	<3.26		mg/kg
Hexachlorocyclopentadiene	<3.26[a]		mg/kg
Hexachloroethane	<.652		mg/kg
Hexachloropropene	<.652		mg/kg
Isophorone	<.652		mg/kg
Methyl methanesulfonate	<.652		mg/kg
N-Nitroso-di-n-butylamine	<.652		mg/kg
N-Nitroso-di-n-butylamine	<.652[a]		mg/kg
N-Nitroso-di-n-propylamine	<.652		mg/kg
N-Nitrosomorpholine	<.652		mg/kg
N-Nitrosopiperidine	<.652		mg/kg
N-Nitrosopyrrolidine	<.652		mg/kg
Nitrobenzene	<.652		mg/kg
Pentachlorobenzene	<.652		mg/kg
Pentachlorophenol	<3.26		mg/kg
Phenacetin	<.652		mg/kg
Phenol	<.652		mg/kg
Pronamide	<.652		mg/kg
Safrole	<.652		mg/kg
bis(2-Chloroethoxy)methane	<.652		mg/kg
bis(2-Chloroethyl)ether	<.652		mg/kg
bis(2-Chloroisopropyl)ether	<.652		mg/kg
bis(2-Ethylhexyl)phthalate	<.652		mg/kg
p-Dimethylaminoazobenzene	<.652		mg/kg
PAH	**22-OCT-2018**		
1,4-Naphthoquinone	<.652	7	mg/kg
1,4-Naphthoquinone	<.652[a]	7	mg/kg
2-Methylnaphthalene	<.652	7	mg/kg
2-Methylnaphthalene	<.652[a]	7	mg/kg
3-Methylcholanthrene	<.652	7	mg/kg
Acenaphthene	<.652	7	mg/kg
Acenaphthylene	<.652	7	mg/kg
Anthracene	<.652	7	mg/kg
Benzo(a)anthracene	<.652	7	mg/kg
Benzo(a)pyrene	<.652	7	mg/kg
Benzo[b]fluoranthene	<.652	7	mg/kg
Benzo[g,h,i]perylene	<.652	7	mg/kg
Benzo[k]fluoranthene	<.652	7	mg/kg
Chrysene	<.652	7	mg/kg
Dibenz[a,h]anthracene	<.652	7	mg/kg
Dibenzofuran	<.652	7	mg/kg
Fluoranthene	1.06	22	mg/kg
Fluorene	<.652	7	mg/kg
Indeno[1,2,3-cd]pyrene	<.652	7	mg/kg
Naphthalene	<.652	7	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F01W83 BREAKNECK CREEK NEAR MOUTH							
Phenanthrene	<.652	7	mg/kg				
Pyrene	.777	16	mg/kg				

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units
F99Q02 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP			
OTHER	**22-AUG-2017**		
PCB-1016	<31.1		ug/kg
PCB-1221	<31.1		ug/kg
PCB-1232	<31.1		ug/kg
PCB-1242	48.9		ug/kg
PCB-1248	<31.1		ug/kg
PCB-1254	<31.1		ug/kg
PCB-1260	<31.1		ug/kg
4,4'-DDD	<6.23		ug/kg
4,4-DDE	6.57		ug/kg
4,4'-DDT	7.01		ug/kg
Aldrin	<6.23		ug/kg
Dieldrin	<6.23		ug/kg
Endosulfan I	<6.23		ug/kg
Endosulfan II	<6.23		ug/kg
Endosulfan sulfate	<6.23		ug/kg
Endrin	<6.23		ug/kg
Endrin aldehyde	<6.23		ug/kg
Heptachlor	<6.23		ug/kg
Heptachlor epoxide	<6.23		ug/kg
Hexachlorobenzene	<6.23		ug/kg
Methoxychlor	<6.23		ug/kg
Mirex	<6.23		ug/kg
a-BHC	<6.23		ug/kg
b-BHC	<6.23		ug/kg
d-BHC	<6.23		ug/kg
y-BHC	<6.23		ug/kg
1,2,4,5-Tetrachlorobenzene	<.626		mg/kg
1,2,4-Trichlorobenzene	<.626		mg/kg
1,2-Dichlorobenzene	<.626		mg/kg
1,2-Dichlorobenzene	<.626[a]		mg/kg
1,3-Dichlorobenzene	<.626		mg/kg
1,3-Dichlorobenzene	<.626[a]		mg/kg
1,3-Dinitrobenzene	<.626		mg/kg
1,4-Dichlorobenzene	<.626		mg/kg
1,4-Dichlorobenzene	<.626[a]		mg/kg
2,3,4,6-Tetrachlorophenol	<.626		mg/kg
2,3,4,6-Tetrachlorophenol	<.626[a]		mg/kg
2,4,5-Trichlorophenol	<.626		mg/kg
2,4,6-Trichlorophenol	<.626		mg/kg
2,4,6-Trichlorophenol	<.626[a]		mg/kg
2,4-Dichlorophenol	<.626		mg/kg
2,4-Dimethylphenol	<.626		mg/kg
2,4-Dinitrophenol	<3.13		mg/kg
2,4-Dinitrophenol	<3.13[a]		mg/kg
2,4-Dinitrotoluene	<.626		mg/kg
2,6-Dichlorophenol	<.626		mg/kg
2,6-Dinitrotoluene	<.626		mg/kg
2-Acetylaminofluorene	<.626		mg/kg
2-Chloronaphthalene	<.626		mg/kg
2-Chlorophenol	<.626		mg/kg
2-Methylphenol	<.626		mg/kg
2-Nitroaniline	<.626		mg/kg
2-Nitrophenol	<.626		mg/kg
2-Nitrophenol	<.626[a]		mg/kg
2-Picoline	<.626		mg/kg
2-Picoline	<.626[a]		mg/kg
3-,4-methylphenol	<.626		mg/kg
3,3'-Dichlorobenzidine	<.626		mg/kg
4,6-Dinitro-2-methylphenol	<3.13		mg/kg
4,6-Dinitro-2-methylphenol	<3.13[a]		mg/kg
4-Bromophenyl-phenylether	<.626		mg/kg
4-Chloro-3-methylphenol	<3.13		mg/kg
4-Chlorophenyl-phenylether	<.626		mg/kg
4-Nitroaniline	<.626		mg/kg
4-Nitroaniline	<.626[a]		mg/kg
4-Nitrophenol	<3.13		mg/kg
7,12-Dimethylbenz[a]anthracene	<.626		mg/kg
Acetophenone	<.626		mg/kg
Aniline	<.626		mg/kg
Benzyl Alcohol	<.626		mg/kg
Butylbenzylphthalate	<.626		mg/kg
Di-n-butylphthalate	<.626		mg/kg
Di-n-octylphthalate	<.626		mg/kg
Diethylphthalate	<.626		mg/kg
Dimethylphthalate	<.626		mg/kg
Dinoseb	<.626		mg/kg
Diphenylamine	<.626		mg/kg
Ethyl methanesulfonate	<.626		mg/kg
Hexachlorobenzene	<.626		mg/kg
Hexachlorobutadiene	<.626		mg/kg
Hexachlorocyclopentadiene	<.626		mg/kg
Hexachlorocyclopentadiene	<.626¿		mg/kg
Hexachloroethane	<.626		mg/kg
Hexachloroethane	<.626[a]		mg/kg
Hexachloropropene	<.626		mg/kg
Hexachloropropene	<.626[a]		mg/kg
Isophorone	<.626[a]		mg/kg
Isophorone	<.626		mg/kg
Methyl methanesulfonate	<.626		mg/kg
Methyl methanesulfonate	<.626[a]		mg/kg
N-Nitroso-di-n-butylamine	<.626		mg/kg
N-Nitroso-di-n-propylamine	<.626		mg/kg
N-Nitrosomorpholine	<.626		mg/kg
N-Nitrosopiperidine	<.626		mg/kg
N-Nitrosopyrrolidine	<.626		mg/kg
Nitrobenzene	<.626		mg/kg
Pentachlorobenzene	<.626		mg/kg
Pentachlorophenol	<3.13		mg/kg
Pentachlorophenol	<3.13[a]		mg/kg
Phenacetin	<.626		mg/kg
Phenol	<.626		mg/kg
Pronamide	<.626		mg/kg
Safrole	<.626		mg/kg
bis(2-Chloroethoxy)methane	<.626		mg/kg
bis(2-Chloroethyl)ether	<.626		mg/kg
bis(2-Chloroethyl)ether	<.626[a]		mg/kg
bis(2-Chloroisopropyl)ether	<.626		mg/kg
bis(2-Ethylhexyl)phthalate	<.626		mg/kg
p-Dimethylaminoazobenzene	<.626		mg/kg
PAH	**22-AUG-2017**		
1,4-Naphthoquinone	<.626	41	mg/kg
1,4-Naphthoquinone	<.626[a]	41	mg/kg
2-Methylnaphthalene	<.626	41	mg/kg
2-Methylnaphthalene	<.626[a]	41	mg/kg
3-Methylcholanthrene	<.626	41	mg/kg
Acenaphthene	<.626	41	mg/kg
Acenaphthylene	<.626	41	mg/kg

Appendix Table 4. Organic parameters from sediment samples collected during the Cuyahoga basin survey, 2017&18.

PARAMETER	RESULT	normalized PAH	Units	PARAMETER	RESULT	normalized PAH	Units
F99Q02 CUYAHOGA R. DST. NEORSD SOUTHERLY WWTP							
Acenaphthylene	<.626[a]	41	mg/kg				
Anthracene	<.626	41	mg/kg				
Benzo(a)anthracene	<.626	41	mg/kg				
Benzo(a)pyrene	<.626	41	mg/kg				
Benzo[b]fluoranthene	<.626	41	mg/kg				
Benzo[g,h,i]perylene	<.626	41	mg/kg				
Benzo[k]fluoranthene	<.626	41	mg/kg				
Chrysene	<.626	41	mg/kg				
Dibenz[a,h]anthracene	<.626	41	mg/kg				
Dibenzofuran	<.626	41	mg/kg				
Fluoranthene	.999	130	mg/kg				
Fluorene	<.626	41	mg/kg				
Indeno[1,2,3-cd]pyrene	<.626	41	mg/kg				
Naphthalene	<.626	41	mg/kg				
Phenanthrene	<.626	41	mg/kg				
Pyrene	.765	100	mg/kg				

¡ Deteced in Blank; º Exceeds Calibration; ¿ QC Criteria Not Met; ¹ Invalid Colony Count; ¥ CoAnalyeCorrelation; £ Matrix Interference; ªEstimatedValue; ¯Holding/Shipping Time Exceeded; ¤ PesticideGCDiff

Appendix O – Shipping Channel Biological and Water Chemistry sampling results.

Cuyahoga Ship Channel (RM 5.6 to mouth)

The Cuyahoga River ship channel is a federally maintained navigation channel within the lower portion of the Cuyahoga River lacustuary. It begins upstream from downtown Cleveland at river mile 5.6 and empties into the harbor portion of Lake Erie. The channel averages 275 feet in width and the navigable areas are generally maintained to a uniform depth of twenty-three feet. The sediment that naturally collects within the Cuyahoga River ship channel is dredged to maintain the depth which is essential for commerce traffic. The shipping also has vertical sheet piling in many areas. The maintenance of the channel is important to commerce and the economic well-being of the Cleveland area. These activities generally limit the amount of instream cover available for the biota and negatively impact overall habitat quality compared to other comparable lacustruaries with less pervasive development.

In addition to physical habitat limitations, *severe* dissolved oxygen depletion related to massive amounts of pollution historically left this portion of the river severely degraded and with very few or no fish present during summer conditions. Formerly, the only measurement for success here was "fish passage" during migratory periods (February to May). Otherwise, these waters were regarded as Limited Resource Waters (LRW) due to the severe oxygen depletion and habitat constraints precluding any semblance of warmwater biological communities persisting here. The LRW aquatic life use is not considered fishable/ swimmable.

There has been tremendous advancement in control of point source discharges, CSOs, and non-point source runoff. Currently, there are numerous NPDES permitted dischargers and CSOs, as well as non-point loadings and other illicit discharges/spills that still can affect water quality in the lower river. Though recent sampling by Ohio EPA, NEORSD, and others all suggest water quality has improved dramatically through this industrial, working section of the river compared to the severely degraded conditions documented during the earliest surveys. Given the improvements to water quality, habitat restoration efforts have been implemented in some portions of the shipping channel, including "fish shelves" being constructed within some margin areas to provide refugia for the biota.

An intensive study to fully characterize water quality and the DO regime through the shipping channel was conducted through 2018 and 2019. This effort occurred alongside the primary integrated watershed survey that occured in the Cuyahoga waershed. Continuous sonde monitoring data, surface water chemistry grab samples, and grab field parameters were all evaluated to help determine the DO and chemical regime through the shipping channel. Biological sampling also occurred at two locations in and near the shipping channel during the integrated watershed survey, including at RM 2.74 (200005) within the Scranton Flats habitat restoration area and around RM 5.8 (F01W43) in the upper limits of the shipping channel. Biological and chemical sampling also occurred near the upstream extent of the Cuyahoga lacustuary at Harvard Road (RM 7.1, 502130) and near the first lotic riffle area near RM 8.6 (200025) in 2017. The results from these efforts will be used to help determine appropriate beneficial uses for the lacustuary and shipping channel portions of the Cuyahoga River.

Water Quality Continuous Monitoring Sondes

At two locations, at the beginning of the Cuyahoga Ship Channel (RM 5.6) and at the Scranton Road habitat restoration project (RM 2.74), sondes were deployed in 2018 and 2019. Sondes were deployed to assess the dissolved oxygen (DO) concentrations within the channel. DO measurements were recorded every half hour from 8/27/2018 through 11/6/2018 and 6/26/2019 through 10/25/2019. Dissolved oxygen fluctuates in a stream due to various factors such as: biological activity, flow, re-aeration, and temperature. During summer months, flow is decreased, pollutant sources are less diluted, water temperatures are higher, and biological activities increase. Figure 1 shows the 2018 daily average flow conditions and median daily discharge in the Cuyahoga River at Independence USGS gage with daily averaged dissolved oxygen (DO) collected at RM 5.6 and RM 2.74. The DO daily averages ranged from 4.08 to 9.99 mg/l at RM 2.74 and ranged from 6.64 to 10.81 mg/l at RM 5.6. The 2019 DO averages are shown for both locations in with daily average flow and median discharge at the Independence USGS gage in Figure 2. In 2019, daily DO averages ranged from 4.44 to 8.22 mg/l at RM 2.74 and 6.83 to 9.82 mg/l at RM 5.6.

The severely depleted DO and anoxic conditions documented here historically (Ohio EPA 1994, 2003) were not observed at either location in either 2018 or 2019. Though close, average DO concentrations did not fall below the 4.0 mg/l Outside Mixing Zone Average (OMZA) criteria for Modified Warmwater Habitat (MWH) streams during sonde deployment. Though not shown in the figures below, individual half hour DO measurements at both locations *never dropped below 3.0 mg/l*, which is the Outside Mixing Zone Minimum (OMZM) criteria for MWH.

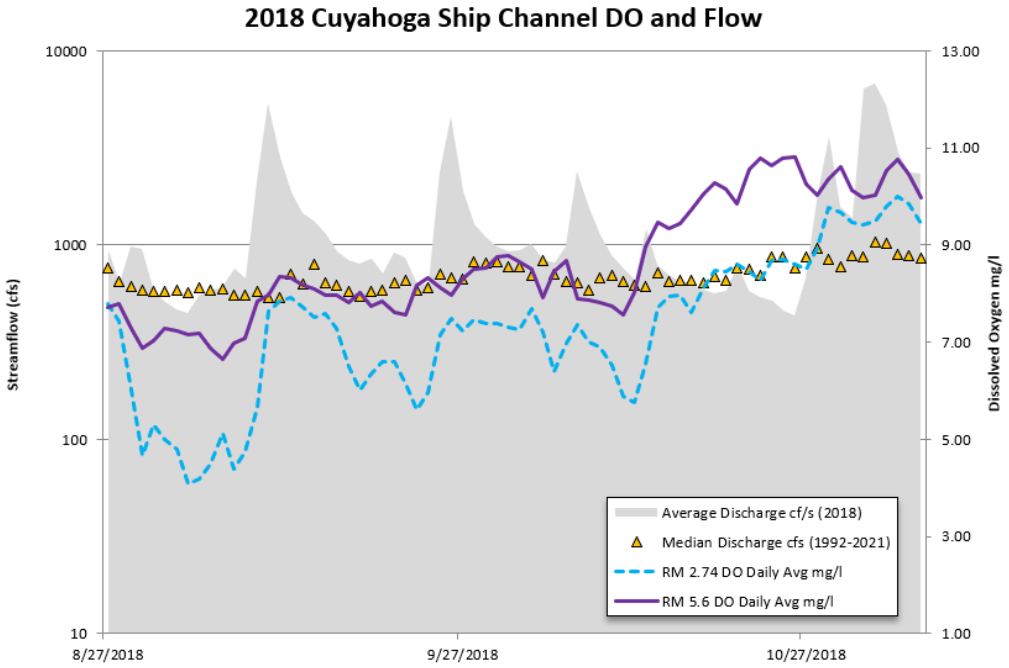

Figure 1 – Daily average flow conditions in the Cuyahoga River at Independence USGS gage in 2018 with daily averaged dissolved oxygen (DO).

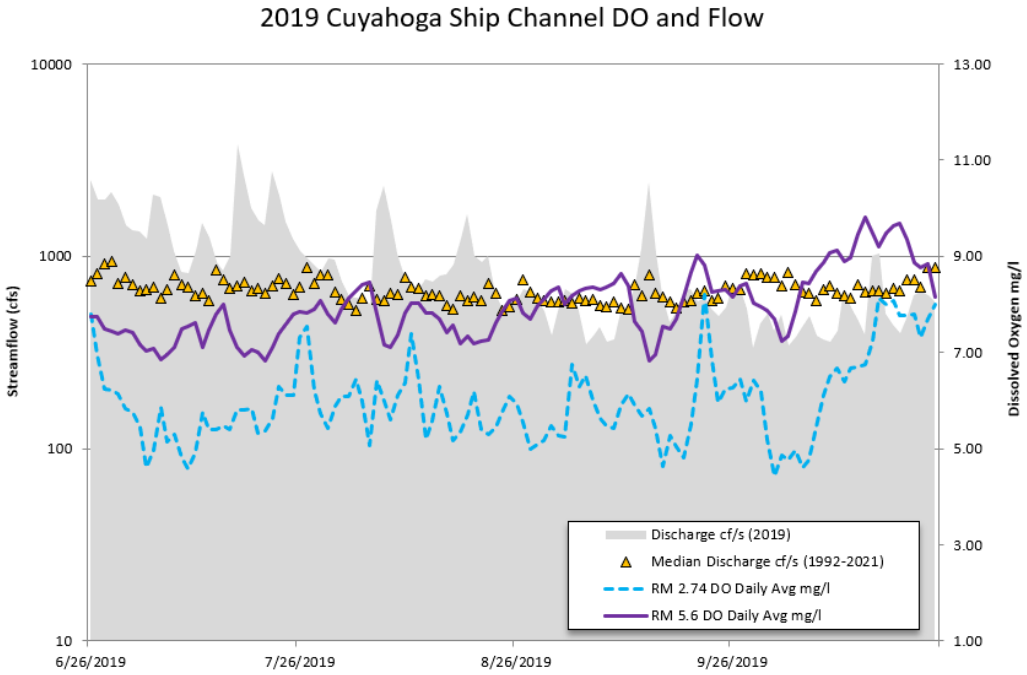

Figure 2 – Daily average flow conditions in the Cuyahoga River at Independence USGS gage in 2019 with daily averaged dissolved oxygen (DO).

Water Quality

In 2018 and 2019, grab DO measurements were recorded during water sample collections at two locations within the Cuyahoga Ship Channel, RM 2.74 and 5.6 (Figure 3). DO measurements collected during water chemistry grab samples are effective at characterizing water quality parameters that change based on flow. At RM 5.6, DO grab samples ranged from 6.19 to 8.59 mg/l, and at RM 2.74, DO grab samples ranged from 4.41 to 7.66 mg/l. Throughout 2018 and 2019, no individual DO grab concentrations fell below 3.0 mg/l, which is the OMZM criteria for MWH. There were no water quality exceedances in samples collected for this study. Similar to other areas draining developed land, there were numerous sediment metals and organic sediments contaminants that were elevated above TEC at these two locations in 2017; all values were below the PEC (TSD Table 10 & Table 11). There were also two occasions where organic parameters were detected in the water column with their presence likely attributable to legacy sources (TSD Table 9). These elevated parameters are likely related to heavy urban development and other legacy sources.

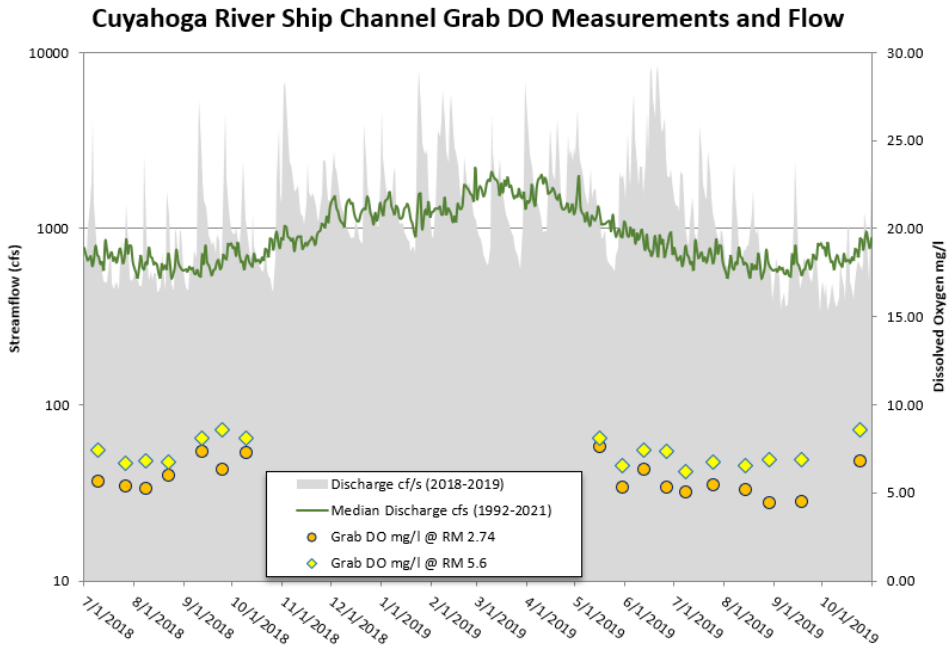

Figure 3 – Grab dissolved oxygen (DO) measurements recorded in 2018 and 2019.

Biological and Habitat Quality

Biological and habitat sampling occurred at several locations throughout the lower portions of the Cuyahoga mainstem, including two samples in and near the shipping channel (Table 1). The free-flowing portions of the river were primarily evaluated using the traditional biological community (IBI, MIwb, ICI) metrics. Similarly, the lacustuary and shipping channel portions of the river were primarily evaluated using the lacustuary IBI and ICI. Both the traditional and lacustuary metrics are displayed for comparison.

The lacustuary indices (L-IBI and L-ICI) are derivations of the original biological indices that are designed to evaluate biological integrity in lacustuary stream segments and nearshore Lake Erie environments (Thoma 1999, Ohio EPA 2017). These lacustuary indices are calibrated to more lentic, or pooled, conditions, while the traditional biological indices are intended to evaluate biological integrity in flowing (lotic) stream environments.

The criteria used to determine aquatic life attainment for the traditional index scores do not apply in Lake Erie lacustuaries (3745-1-07:Table 7-1). The lacustuary indices were used as the primary tool to evaluate assemblages through this portion of the Cuyahoga River.

Table 1 – Summary of Ohio EPA sampling results from the lacustuary portions of the Cuyahoga River (2017) and Grand River (2012).

STORET	RM	Drain. Area (mi^2)	IBI	L-IBI	MIwb	ICI	L-ICI	QHEI
Cuyahoga River (free flowing)				**WWH Existing**				
200025	8.6	745.0	44	42	10.16	46	58	78.75
502130	7.1	786.0	30*	40	9.14	32^{NS}	54	67.25
Cuyahoga River (lacustuary)				**MWH Recommended**				
F01W43	5.6	788.0	28	32	8.51	-	-	32.5
200005	2.74	806.0	34	36	9.00	12	22	-
Grand River (lacustuary)				**WWH Existing**				
G02S14	3.1	700.0	36	40	8.42	16	32	-
502520	2.3	702.0	35	45	8.80	14	22	-

NS Nonsignificant departure from biocriteria (≤4 IBI or ICI units, or ≤0.5 MIwb units).
* Indicates significant departure from applicable biocriteria (>4 IBI or ICI units, or >0.5 MIwb units).

Instream habitat through the lower portions of the Cuyahoga River mainstem is influenced by Lake Erie water levels and the lacustuary portions of the river are officially recognized to extend from the Harvard Dennison Road bridge (RM 7.1) to the mouth. Habitat conditions gradually become more lake-influenced downstream from here. However, changes in lake levels can also shift the areas influenced by lacustuary conditions. Though there was still discernible streamflow at RM 7.1 in 2017, the first functional mainstem riffle did not occur until near RM 8.65. Recent rise in lake water levels have increased the amount of the Cuyahoga River influenced by Lake Erie.

Though instream habitat was still good at RM 7.1, no riffles were present. There was, however, glide habitat over a shallow gravel bar downstream from Big Creek that had riffle-like qualities and supported two darter species. Very deep pools limited electroshocking efficiency through the lower portions of the zone. Gizzard Shad dominated the fish assemblage at this site and caused the IBI to be depressed by several points. Fish assemblages were influenced by the natural limitations related to Lake Erie influenced conditions. Macroinvertebrate assemblages here marginally met WWH expectations for flowing waters (Table 1).

The electrofishing zone at F01W43 extended from about RM 5.8 downstream to around RM 5.5. Heavy siltation was pervasive along the mid channel and inside banks where sheet piling wasn't present and deposition was possible. However, there were some bridge pilings, large woody debris, rip-rapped banks, overhanging vegetation, and other areas with instream structure and depth heterogeneity that offered some habitat and refugia.

Schools of both Largemouth and Smallmouth Buffalo were collected during sampling here in 2017 and these species comprised over 50 percent of fish biomass. Largemouth and Smallmouth Bass, Yellow Perch, Freshwater Drum , two sunfish species, and six minnow species were among the native taxa collected at this site (Appendix E). The Lacustuary IBI and MIwb scores were generally in the fair range and scores reflected the siltation and channel modifications. Macroinvertebrate samples were unable to be collected from this location.

Further downstream into the shipping channel, biological sampling at RM 2.74 (200005) occurred over the Scranton Flats fish shelf and habitat restoration area. This habitat restoration area provides an area of refugia away from the main shipping channel including areas of depth heterogeneity and increased amounts of instream cover (e.g., aquatic plants, large woody debris). The positive influences from habitat restoration were evident. Fish sampling here recorded 24 native species, including four native sucker species, three catfish species (including Flathead Catfish), five sunfish species, four minnow species, Largemouth and Smallmouth Bass, White Bass, and a 1 kg Northern Pike (Appendix E). Lacustuary IBI and MIwb scores were in the fair to good range here. Fish tissue sampling efforts through the lower river (RMs 2.74-0.3) in 2018 also yielded native fish species collected from around areas of structure like docks, bridge pylons, piers, rip-rap along stream banks, and other areas of depth heterogeneity or structure. Macroinvertebrate assemblages here were notably influenced by lentic conditions at both locations.

The NEORSD has previously collected samples from several locations though the lower shipping channel in areas not included in the Ohio EPA survey (Table 2). Their most recent biological data from the shipping channel largely mirrors the improved biological condition documented during the Ohio EPA survey.

Table 2 – NEORSD biological sampling results from the Cuyahoga River lacustuary, 2016.

STORET	RM	Drain. Area (mi^2)	IBI	L-IBI	MIwb	ICI	L-ICI	QHEI
Cuyahoga River (lacustuary)								
F01W43	5.9	788.0	34	33	7.93	14	24	36.5
200005	2.7	805.0	28	36	8.85	10	12	32.5
F01A64	0.3	808.0	24	30	6.3	10	30	27.5

Summary

Historically, both severely degraded water quality conditions from numerous pollution sources and the habitat limitations associated with being a federally maintained shipping channel precluded any semblance of warmwater biological communities. Only the most pollution tolerant species were able to persist here during the harsh summer conditions and there was no year-round residency. The only expectations for aquatic life were fish passage from the months of January to May.

The current survey documented both *significant* improvements to water quality and biological conditions through the shipping channel portions of the Cuyahoga River. The substantially degraded chemical conditions have improved drastically and no longer preclude even year-round residency of some native fish species in portions of the shipping channel. Fish community quality tended to be in the fair range at most sampling locations, however the highest fish scores were in the good range (Tables 1 & 2)

Instream habitats are still generally limited through much the lower river due to vast swaths of sheet piling precluding more littoral habitats and the sediment dredging activities in the federally maintained ship channel segment. However, habitat restoration and enhancement projects have shown an ability to support a diverse array of native fish species, even during summer conditions. Where there instream habitat is present through the lower river, semblances of warmwater communities now persist, including important fish taxa groups like round bodied suckers, sunfish, piscivores, catfish, and various minnows. Compared to other less developed Lake Erie lacustuaries like the Grand River, biological assemblages, through the Cuyahoga lacustuary are still somewhat limited by the pervasiveness of sheet piling and hardened banks (Table 1).

Appendix P– Bacteriological Sampling Results

Appendix Table 1 – Cuyahoga River Watershed Bacteria Results (2017 & 2018)

Station ID	Location	Date	E. coli (#/100ml)
200037	Cuyahoga R at Cuyahoga Falls Upst Waterworks	6/13/2017	131
		6/30/2017	260
		7/7/2017	6020
		7/19/2017	104
		8/7/2017	1300
		8/22/2017	180
200042	Cuyahoga R at Akron 0.5 mi dst Old Portage Trail	6/13/2017	125
		6/30/2017	1720
		7/7/2017	24200
		7/19/2017	108
		8/7/2017	613
		8/22/2017	285
200113	BRIMFIELD DITCH NEAR KENT, NEAR MOUTH	6/14/2018	262
		6/26/2018	995
		6/28/2018	987
		7/5/2018	32100
		7/12/2018	432
		7/23/2018	1725
		7/27/2018	4902
		8/8/2018	436
		8/14/2018	397
		8/16/2018	273
300509	Cuyahoga R near Brecksville @ St Rt 82	6/13/2017	91
		6/30/2017	1130
		7/7/2017	142
		7/19/2017	133
		8/7/2017	345
		8/22/2017	79
300516	Cuyahoga R at Munroe Falls Upst Old dam	6/13/2017	105
		6/30/2017	113
		7/7/2017	480
		7/19/2017	45
		8/7/2017	921
		8/22/2017	98
300518	Cuyahoga R at Kent Upst Old dam	6/13/2017	86
		6/30/2017	603
		7/7/2017	6500
		7/19/2017	51
		8/7/2017	579
		8/22/2017	93
300574	Cuyahoga R DST Fish Creek WWTP	6/13/2017	109

		6/30/2017	1940
		7/7/2017	221
		7/19/2017	58
		8/7/2017	613
		8/22/2017	134
303830	Cuyahoga R @ Scranton Rd Habitat Restoration	6/30/2017	236
		8/7/2017	187
		7/7/2017	26000
		7/19/2017	96
		8/22/2017	836
303949	TRIB. TO CUYAHOGA R. (21.40) @ RIVERVIEW RD	6/20/2018	454
		6/29/2018	386
		7/6/2018	2610
		7/18/2018	146
		7/20/2018	435
		8/8/2018	276
		8/10/2018	488
		8/16/2018	135
		8/23/2018	276
		8/30/2018	816
303950	MORROW DITCH	6/14/2018	350
		6/26/2018	37
		6/28/2018	319
		7/5/2018	2140
		7/12/2018	225
		7/23/2018	6867
		7/27/2018	6131
		8/3/2018	657
		8/8/2018	6498
		8/16/2018	798
502010	Cuyahoga River R. Dst Akron WWTP@ Bolanz Rd	6/13/2017	81
		6/30/2017	157
		7/7/2017	308
		7/19/2017	118
		8/7/2017	727
		8/22/2017	215
502020	Cuyahoga R at Independence @ Old Rockside Rd	6/30/2017	3330
		7/7/2017	466
		7/19/2017	130
		8/7/2017	166
		8/22/2017	4600
502030	Cuyahoga R at Hiram Rapids @ Winchell Rd	6/13/2017	19
		6/30/2017	72
		7/7/2017	210

		7/19/2017	43
		8/7/2017	89
		8/22/2017	55
502120	BIG CREEK @ JENNINGS AVE.	6/13/2018	17900
		6/25/2018	1440
		7/5/2018	18200
		7/16/2018	517
		7/19/2018	488
		7/26/2018	6511
		7/31/2018	1414
		8/6/2018	816
		9/4/2018	579
		9/7/2018	1733
502130	Cuyahoga R at Cleveland @ Lower Harvard Ave	6/30/2017	1420
		7/7/2017	25900
		7/19/2017	91
		8/7/2017	124
		8/22/2017	866
502150	Cuyahoga River at Akron @ Cuyahoga St.	6/13/2017	50
		6/30/2017	80
		7/7/2017	5290
		7/19/2017	60
		8/7/2017	241
		8/22/2017	550
502170	Cuyahoga R @ Station Rd (impounded)	6/13/2017	84
		6/30/2017	2210
		7/7/2017	457
		7/19/2017	115
		8/7/2017	328
		8/22/2017	122
502180	L. CUYAHOGA R. AT AKRON, NEAR MOUTH	6/26/2018	666
		6/28/2018	2140
		7/5/2018	65100
		7/12/2018	166
		7/23/2018	383
		7/27/2018	5475
		7/31/2018	556
		8/3/2018	291
		8/8/2018	770
		8/16/2018	24196
F01A25	Cuyahoga R upst Cleveland Southerly WWTP	6/30/2017	3570
		7/7/2017	16300
		7/19/2017	141
		8/7/2017	148

		8/22/2017	138
F01A53	Cuyahoga R at Burton @ St rt 87	6/13/2017	337
		6/30/2017	723
		7/7/2017	325
		7/19/2017	205
		8/7/2017	187
		8/22/2017	202
F01A58	Cuyahoga R @ Boston Mills Rd	6/13/2017	96
		6/30/2017	142
		7/7/2017	179
		7/19/2017	133
		8/7/2017	411
		8/22/2017	157
F01G02	Cuyahoga R @ Chardon-Windsor Rd	6/13/2017	3920
		6/30/2017	1240
		7/7/2017	4480
		7/19/2017	717
		8/7/2017	301
		8/22/2017	431
F01G33	SLIPPER RUN (28.78) @ RIVERVIEW RD	7/31/2018	494
		8/1/2018	54
		8/6/2018	105
		9/4/2018	345
		9/7/2018	66
F01G38	SAGAMORE CREEK @ CANAL RD.	6/5/2018	37
		6/20/2018	229
		6/29/2018	53
		7/6/2018	11200
		7/18/2018	19
		7/20/2018	34
		8/8/2018	115
		8/10/2018	60
		8/16/2018	45
		8/23/2018	63
F01G41	TRIB. TO CUYAHOGA R. (14.33) @ STONE RD.	6/13/2018	113
		6/25/2018	117
		7/5/2018	128
		7/16/2018	37
		7/19/2018	37
		7/26/2018	27
		7/31/2018	18
		8/6/2018	41
		9/4/2018	74
		9/7/2018	61

F01P09	MILL CREEK @ BROADWAY RD.	6/13/2018	2590
		6/25/2018	3240
		7/5/2018	17600
		7/16/2018	3447
		7/19/2018	1733
		7/26/2018	6152
		7/31/2018	12263
		8/6/2018	5446
		9/4/2018	15531
		9/7/2018	3873
F01P10	WEST CREEK NEAR BROOKLYN HEIGHTS @ ST. RT. 17	6/13/2018	742
		6/25/2018	252
		7/5/2018	2180
		7/16/2018	411
		7/19/2018	299
		7/26/2018	365
		7/31/2018	326
		8/6/2018	308
		9/4/2018	291
		9/7/2018	387
F01P13	CHIPPEWA CREEK AT BRECKSVILLE @ RIVERVIEW RD.	6/5/2018	389
		6/20/2018	569
		6/29/2018	123
		7/6/2018	8160
		7/18/2018	59
		7/20/2018	33
		8/8/2018	1733
		8/10/2018	179
		8/16/2018	297
		8/23/2018	122
		8/30/2018	727
F01P14	FURNACE RUN NEAR EVERETT @ RIVERVIEW RD.	6/13/2018	448
		6/25/2018	399
		7/5/2018	2480
		7/16/2018	105
		7/19/2018	88
		7/26/2018	88
		7/31/2018	36
		8/6/2018	122
		9/4/2018	1014
		9/7/2018	260
F01P15	YELLOW CREEK NEAR BOTZUM @ RIVERVIEW RD.	6/13/2018	450
		6/25/2018	189
		7/5/2018	1380

		7/16/2018	219
		7/19/2018	132
		7/26/2018	148
		7/31/2018	114
		8/6/2018	119
		9/4/2018	2613
		9/7/2018	365
F01P24	MUD BROOK N OF AKRON @ AKRON-PENINSULA RD.	6/13/2018	616
		6/25/2018	226
		7/5/2018	228
		7/16/2018	105
		7/19/2018	217
		7/26/2018	387
		7/31/2018	288
		8/6/2018	172
		9/4/2018	866
		9/7/2018	617
F01P25	MUD BROOK AT STOW @ SEASONS RD.	6/13/2018	495
		6/25/2018	624
		7/5/2018	3650
		7/16/2018	363
		7/19/2018	455
		7/26/2018	326
		7/31/2018	862
		8/6/2018	488
		9/4/2018	770
		9/7/2018	862
F01P29	Cuyahoga R dst Lake Rockwell @ ravenna rd	6/13/2017	6
		6/30/2017	104
		7/7/2017	10
		7/19/2017	365
		8/7/2017	15
		8/22/2017	37
F01P34	PLUM CREEK DST. KENT WTP @ CHERRY ST	6/14/2018	244
		6/26/2018	288
		6/28/2018	285
		7/5/2018	15500
		7/12/2018	310
		7/23/2018	630
		7/27/2018	2397
		8/3/2018	527
		8/8/2018	217
		8/16/2018	995
F01P51	E BR Cuyahoga R near middlefield @ St Rt 608	6/13/2017	96

		6/30/2017	114
		7/7/2017	28
		7/19/2017	115
		8/7/2017	177
		8/22/2017	15
F01S09	Cuyahoga R dst Southerly WWTP @ Conrail RR	6/30/2017	6680
		7/7/2017	2450
		7/19/2017	145
		8/7/2017	137
		8/22/2017	186
F01S10	Cuyahoga R upst Cleveland Southerly WWTP@ RR & SR21	6/30/2017	8210
		7/7/2017	6870
		7/19/2017	137
		8/7/2017	210
		8/22/2017	298
F01S11	Cuyahoga R @ Hillside Rd	6/30/2017	1370
		7/7/2017	276
		7/19/2017	119
		8/7/2017	201
		8/22/2017	155
F01S12	Cuyahoga R @ Fitzwater Rd	6/30/2017	1120
		7/7/2017	126
		7/19/2017	105
		8/7/2017	205
		8/22/2017	120
F01S13	Cuyahoga R at Jaite @ Highland Rd	6/13/2017	64
		6/30/2017	733
		7/7/2017	167
		7/19/2017	150
		8/7/2017	432
		8/22/2017	206
F01S17	Cuyahoga R Upst Kent WWTP @ Fuller Park	6/13/2017	57
		6/30/2017	185
		7/7/2017	334
		7/19/2017	61
		8/7/2017	344
		8/22/2017	260
F01S19	Cuyahoga R at Shalersville @ SR 303	6/13/2017	58
		6/30/2017	637
		7/7/2017	146
		7/19/2017	104
		8/7/2017	117
		8/22/2017	196
F01S21	BIG CREEK @ BIG CREEK PARKWAY	6/13/2018	145

		6/25/2018	806
		7/5/2018	40900
		7/16/2018	866
		7/19/2018	1046
		7/26/2018	1553
		7/31/2018	1733
		8/6/2018	6498
		9/4/2018	770
		9/7/2018	1986
F01S24	TINKERS CREEK AT MOUTH @ CANAL RD.	6/5/2018	357
		6/20/2018	1930
		6/29/2018	1150
		7/6/2018	13000
		7/18/2018	179
		7/20/2018	87
		8/8/2018	1628
		8/10/2018	359
		8/16/2018	151
		8/23/2018	480
F01S25	TINKERS CREEK UPST. WOOD CREEK, ADJ. BUTTON RD.	6/5/2018	288
		6/20/2018	1660
		6/29/2018	1350
		7/6/2018	14100
		7/18/2018	74
		7/20/2018	80
		8/8/2018	936
		8/10/2018	135
		8/16/2018	43
		8/23/2018	1724
F01S29	TINKERS CREEK DST. TWINSBURG WWTP @ E. IDLEWOOD DR.	6/5/2018	399
		6/20/2018	1200
		6/29/2018	1200
		7/6/2018	13000
		7/18/2018	179
		7/20/2018	197
		8/8/2018	612
		8/10/2018	397
		8/16/2018	256
		8/23/2018	377
F01S32	TINKERS CREEK @ HUDSON-AURORA RD.	6/20/2018	418
		6/29/2018	697
		7/6/2018	4610
		7/18/2018	182
		7/20/2018	361

		8/8/2018	299
		8/10/2018	550
		8/16/2018	272
		8/23/2018	277
		6/5/2018	464
F01S36	WOOD CREEK DST. BEDFORD WWTP, NEAR MOUTH	6/5/2018	1030
		6/20/2018	15500
		6/29/2018	311
		7/6/2018	6930
		7/18/2018	365
		7/20/2018	124
		8/8/2018	1120
		8/10/2018	133
		8/16/2018	228
		8/23/2018	1120
F01S40	POND BROOK NEAR AURORA @ ST. RT. 82	6/5/2018	350
		6/29/2018	350
		7/6/2018	2180
		7/18/2018	305
		7/20/2018	583
		8/8/2018	600
		8/10/2018	697
		8/16/2018	243
		8/23/2018	441
F01S46	POWERS BROOK DST. HUDSON #6 WWTP @ SOD FARM RD.	6/13/2018	330
		6/25/2018	306
		7/5/2018	1140
		7/16/2018	127
		7/19/2018	131
		7/26/2018	157
		7/31/2018	202
		8/6/2018	105
		9/4/2018	166
		9/7/2018	645
F01S49	BRANDYWINE CREEK NEAR MOUTH, UPST. TECUMSEH DRIVE	6/13/2018	222
		6/25/2018	166
		7/5/2018	3080
		7/16/2018	44
		7/19/2018	53
		7/26/2018	45
		7/31/2018	15
		8/6/2018	73
		9/4/2018	1455
		9/7/2018	91

F01S51	BREAKNECK CREEK @ POWDER MILL RD.	6/14/2018	328
		6/26/2018	637
		6/28/2018	1500
		7/5/2018	5480
		7/12/2018	216
		7/23/2018	420
		7/27/2018	2053
		8/3/2018	411
		8/8/2018	248
		8/16/2018	387
F01S84	L. CUYAHOGA R. AT AKRON @ MASSILLON RD.	6/14/2018	282
		6/26/2018	441
		6/28/2018	1140
		7/5/2018	19800
		7/12/2018	494
		7/23/2018	322
		7/27/2018	5231
		8/3/2018	435
		8/8/2018	1553
		8/16/2018	411
F01W22	Cuyahoga R at Mantua Upst Mantaline Corp	6/13/2017	88
		6/30/2017	49
		7/7/2017	269
		7/19/2017	101
		8/7/2017	87
		8/22/2017	187
F01W37	FISH CREEK AT KENT @ N. RIVER RD.	6/14/2018	281
		6/26/2018	623
		6/28/2018	576
		7/5/2018	6490
		7/12/2018	366
		7/23/2018	399
		7/27/2018	1724
		8/3/2018	517
		8/8/2018	338
		8/16/2018	1300
F01W70	Cuyahoga R @ Standing Rock Cemetery	6/13/2017	68
		6/30/2017	283
		7/7/2017	225
		7/19/2017	74
		8/7/2017	184
		8/22/2017	49
F01W72	BLACK BROOK @ FOX RD.	6/14/2018	136
		6/26/2018	55

		6/28/2018	238
		7/5/2018	41
		7/12/2018	43
		7/23/2018	73
		7/27/2018	101
		8/3/2018	114
		8/8/2018	86
		8/16/2018	124
F01W74	BRIDGE CREEK @ TAYLOR MAY RD.	6/14/2018	523
		6/26/2018	344
		6/28/2018	1330
		7/5/2018	2140
		7/12/2018	356
		7/23/2018	408
		7/27/2018	533
		8/3/2018	201
		8/8/2018	579
		8/16/2018	494
F01W75	BRIDGE CREEK DST. LADUE RESERVOIR @ STAFFORD RD.	6/14/2018	54
		6/26/2018	128
		6/28/2018	81
		7/5/2018	85
		7/12/2018	49
		7/23/2018	94
		7/27/2018	96
		8/3/2018	79
		8/8/2018	65
		8/16/2018	91
F01W76	W. BR. CUYAHOGA R.@ RAPIDS RD.	6/14/2018	422
		6/26/2018	184
		6/28/2018	2430
		7/5/2018	244
		7/12/2018	168
		7/23/2018	466
		7/27/2018	6131
		8/3/2018	304
		8/8/2018	278
		8/16/2018	288
F01W77	Cuyahoga R @ Russel Park	6/13/2017	117
		6/30/2017	355
		7/7/2017	399
		7/19/2017	108
		8/7/2017	233
		8/22/2017	301

F99Q02	Cuyahoga R Dst Cleveland Southerly WWTP	6/30/2017	3280
		7/7/2017	5170
		7/19/2017	140
		8/7/2017	161
		8/22/2017	122