NON-CODIFIED VERSION

SECTION III
ARTICLE 8
STORMWATER CONVEYANCE, EROSION CONTROL, AND POLLUTION PREVENTION

WHEREAS, the City desires to establish guidelines to minimize the dangers of flooding to life and property and to protect local water quality and maintain the integrity of stream channels, that certain runoff control devices be provided as land areas are developed or redeveloped. The design criteria for stormwater conveyance structures are outlined in this article."

WHEREAS, the City desires to control soil erosion and sedimentation resulting from land disturbing activities within the City of Murray; and

WHEREAS, the City desires to establish guidelines, conservation practices, and planning activities which minimize soil erosion and sedimentation; and

WHEREAS, the City is required to and desires to comply with all applicable state and federal requirements pertaining to the Clean Water Act, including limitation of discharge of pollutants as set forth by the Kentucky Pollution Discharge Elimination System (KPDES) and all applicable provisions of the National Pollutant Discharge Elimination Systems (NPDES) storm water general permit for Phase II communities, and in particular those parts that require local governments to comply with water pollution control requirements.

A. PURPOSE

Proper stormwater management and good water quality are ~~is~~ vital in promoting the health, safety and general welfare of the public. It is the intent of this chapter, in an effort to minimize the dangers of flooding to life and property, and to assist in the preservation and protection of the Murray water quality and natural environment and more specifically:

A. Regulating the alteration of land and topography.

B. Regulating the removal of vegetation.

C. Requiring re-vegetation, and reducing erosion and sedimentation through control requirements.

D. Reducing pollutants in stormwater discharges.

E. Prohibiting non-stormwater discharges to the storm sewer drainage system.

The design criteria for stormwater conveyance, erosion control, and stormwater pollution prevention are outlined in this ordinance.

B. DEFINITIONS

For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

80th PERCENTILE RAINFALL EVENT. The rainfall event, based on historical rainfall records, that represents an event that is equal to or greater than 80 percent of the rainfall events that would be expected to occur in a typical year.

AUTHORIZED ENFORCEMENT AGENCY. Mayor, City of Murray, MS4 Operator or authorized representative.

BEST MANAGEMENT PRACTICE OR BMP. Any structural or nonstructural control measure utilized to improve the quality and, as appropriate, reduce the quantity of stormwater run-off. The term includes schedules of activities, prohibitions of practice, treatment requirements, operation and maintenance procedures, use of containment facilities, land use planning, policy techniques, and other management practices.

CHANNEl. A natural or man-made watercourse of perceptible extent, with definite bed and banks to confine and conduct continuously or periodically flowing water.

CLEAN WATER ACT. The Federal regulations (33 U.S.C. -1251 et seq. and as amended) that prohibit the discharge of pollutants to waters of the United States unless such discharge is in accordance with an approved National Pollutant Discharge Elimination System (NPDES) permit.

CONSTRUCTION ACTIVITY. Activities subject to NPDES Construction Permits include construction projects resulting in land disturbance of 1 acre or more. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

CONTIGUITY. An entity's proximity to a designated MS4 area in such a way that it allows for direct discharges of stormwater run-off into the regulate MS4 conveyance.

CONTROLLED RELEASE STRUCTURE. A facility constructed to regulate the volume of stormwater runoff that is conveyed during a specific length of time.

CONVEYANCE. Any structure process for transferring stormwater between at least two (2) points. The term includes piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains, and roadways.

CONVEYANCE STRUCTURES. Water carrying devices or improvements such as

channels, ditches, storm sewers, culverts, inlets, and the like.

CULVERTS AND CROSS DRAINS. A short, closed (covered) conduit that passes stormwater runoff under an embankment.

DETENTION* or *RETENTION. Delaying the rate of stormwater runoff in a controlled manner, typically by using temporary storage areas and a man-made outlet device.

DEVELOPED. Conditions after construction or other manmade change to improved or unimproved (land), including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations.

DISPOSAL. The 1) discharge; 2) deposit; 3) injection; 4) spilling; 5) leaking; or 6) placing of any solid waste or hazardous waste into or on any land or water so that the solid waste or hazardous waste, or any constituent of the waste, may enter the environment, be emitted into the air, or be discharged into any waters, including ground waters.

ERODED. Weathered or worn away outer layers of soil by the action of water.

ESCP PLAN. Erosion and Sediment Control Plan which includes a set of best management practices or equivalent measures designed to control surface runoff and erosion and to retain sediment on a specific development site or parcel of land during the period in which pre-construction and construction related land disturbances, fills, and soil storage occur, and before final improvements are completed, all in accordance with this Ordinance.

EXCESS STORMWATER. That portion of stormwater runoff, which exceeds the capacity of the storm sewers or natural drainage channels serving a specific watershed.

EXISTING STORMWATER FACILITY. Any existing structural feature that slows, treats, filters, or infiltrates runoff after a rainfall event.

GARBAGE. All animal solid, vegetable solid, and semisolid wastes resulting from the 1) processing; 2) handling; 3) preparation; 4) cooking; 5) serving; or 6) consumption of food or food materials.

HAZARDOUS WASTE. Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infections characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

HOTSPOT. An area where the land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in Storm Water.

ILLICIT DISCHARGE. Any discharge to an MS4 conveyance that is not composed entirely of stormwater.

ILLICIT CONNECTIONS. An illicit connection is defined as either of the following:

A. Any drain or conveyance, whether on the surface or subsurface, which allows an illegal discharge to enter the storm drain system including but not limited to any conveyances which allows any non-stormwater discharge including sewage, process wastewater, effluent, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains, washing machines, bathtubs, and sinks regardless of whether said drain or connection had been previously allowed, permitted, or approved by any enforcement agency.

B. Any drain or conveyance connected from a commercial or industrial land use to the storm drain system which has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

IMPERVIOUS SURFACE. Asphalt, concrete or any other surface, which does not allow measurable infiltration.

INDUSTRIAL ACTIVITY. Activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26(b) (14).

INLET (STORM DRAIN). An opening leading to an underground pipe or open ditch for carrying surface runoff.

(MS4) MUNICIPAL SEPARATE STORM SEWER SYSTEM. A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, and storm drains) owned or operated by a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial water, stormwater, or other wastes, that discharge to waters of the United States.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT. A permit issued by EPA or the Kentucky Department of Environmental Protection that authorizes the discharge of pollutants to waters of the United States, whether the permit is applicable on an individual, group, or general area wide basis.

NATURAL DRAINAGE. Water which flows in natural channels formed by the surface topography of the earth.

NON-STORMWATER DISCHARGE. Any discharge to the storm drain system that is not composed entirely of stormwater.

NOTICE OF INTENT (NOI). Formal notice to the EPA or a state agency having delegated NPDES authority that a construction project seeking coverage under a General Permit is about to begin.

OFF-SITE. External to the boundary of a development.

ON-SITE. Internal to the boundary of a development.

PERSON. Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

POINT DISCHARGE (OUTFALL). Release of stormwater at a specific location.

POLLUTANT. Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, solvents: oil and automotive fluids; non-hazardous liquid and solid wastes; yard wastes; refuse, rubbish, garbage, litter, floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, effluent, fecal coliform, E. Coli, and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from construction a building or structure and noxious or offensive matter of any kind.

POND. An inland body of standing water that is usually smaller than a Lake.

PREMISES. Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

RECEIVING WATERS . The "water of the Commonwealth" as defined in KRS 224.01-010 (33) into which the regulated stormwater discharges (modified EPA CGP).

REDEVELOPMENT. The improvement of a lot or lots that have been previously developed.

REVIEW STAFF. The City Engineer and/or other designated officials.

RUBBISH. Combustible and noncombustible waste materials except garbage; the term shall include the residue from the burning of wood, coal, coke and other combustible materials, paper, rags, cartons, boxes, wood excelsior, rubber, leather, tree branches, yard trimmings, tin cans, metals, mineral matter, glass, crockery and dust and other similar materials.

RUNOFF. Rainfall excess after natural losses from infiltration, evaporation, transpiration, or incidental pondage.

SEDIMENT. Solid material, either mineral or organic, that is in suspension, is being transported, or has been moved from its site of origin by erosion.

STORM DRAINAGE SYSTEM. Publicly owned facilities by which stormwater is collected and/or conveyed, including but not limited to any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and other drainage structures.

STORM SEWER. Two or more inlets connected by pipes.

STORMWATER. Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

STORMWATER POLLUTION PREVENTION PLAN. A document which describes the Best Management Practices (BMPs) and activities to be implemented by a person or business to identify source of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters.

STORMWATER RUNOFF RELEASE RATE. The rate at which stormwater runoff is released from dominate to servient land.

STORMWATER STORAGE AREA. An area designed to temporarily accumulate excess stormwater.

STREAM. For the specific purpose of Vegetated Buffers, a Stream is defined as a linear surface water conveyance that can be characterized with either perennial or ephemeral base flow.

STRUCTURE. Anything constructed or erected such that the use of it requires a more or less permanent location on or in the ground. Such construction includes, but is not limited to, objects such as buildings, towers, smokestacks, overhead transmission lines, carports and walls.

SWALE. Surface-type conveyance for stormwater usually designated to carry incidental, localized runoff.

TMDL. Total Maximum Daily Load. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the source(s) of the pollutant.

TRANSPORTING. Any moving of earth materials from one place to another, other than such movement incidental to grading, as authorized on an approved plan.

VEGETATIVE BUFFER. A use-restricted vegetated area that is located along the perimeter of Streams, Ponds, Lakes or Wetlands, containing natural vegetation and grasses, or enhanced or restored vegetation.

WASTEWATER. Any water or other liquid, other than uncontaminated stormwater, discharged from a facility.

WATER QUALITY CONTROL STRUCTURE. The structures (e.g. grass swales, filter strips, infiltration basins, detention ponds, stormwater wetlands, natural filtration areas, sand filters, and rain gardens, etc.), used to slow runoff, promote infiltration, and reduce sediments and other pollutants in stormwater runoff.

WATER QUALITY MANAGEMENT FACILITIES. Structures and constructed features designed to prevent or reduce the discharge of pollution in Storm Water runoff from a Development or Redevelopment. Water Quality Management Facilities can often be referred to as BMPs.

WATER QUALITY MANAGEMENT PLAN. An engineering plan for the design of Water Quality Management Facilities and Best Management Practices within a proposed Development or Redevelopment. The Water Quality Management Plan includes a map showing the extent of the land development activity and location of Water Quality Management Facilities and BMPs, design calculations for Water Quality Management Facilities and BMPs, and may contain record drawings/certifications and covenants for permanent maintenance of Water Quality Facilities and Best Management Practices.

WATER QUALITY RUNOFF STANDARDS. The stormwater volume to be treated through a water quality control structure based on the surface runoff produced by an 80^{th} percentile rainfall event

WATER QUALITY STANDARDS. Administrative regulation promulgated by the State of Kentucky establishing the designated use of a surface water and the water quality criteria necessary to maintain and protect that designated use (4041 KAR 5:002; 401 KAR 5:031 as amended).

WETLAND. An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetland determination shall be made by the United States Army Corps of Engineers, and/or the Kentucky Division of Water, and/or the Natural Resources Conservation Service.

C. STORMWATER CONVEYANCE, MANAGEMENT, AND WATER QUALITY FACILITIES REQUIRED

All development occurring within the city and its area of extraterritorial jurisdiction for subdivision regulations shall provide for properly sized stormwater conveyance facilities and shall contain on-site, or provide off-site stormwater management facilities capable of controlling increased runoff relative to its pre-developed condition, and water quality control structures capable of managing the stormwater runoff quality produced from an

80^{th} percentile rainfall event under post-construction conditions (See Section E.4). Unless included in exemptions listed in Section E, no application for preliminary or final plan of subdivision shall be approved unless it includes either a plan describing the manner in which stormwater erosion and sediment resulting from the development will be controlled or managed or a documented request for a waiver thereof. Similarly, unless exempt, no building permit shall be issued for any parcel or lot until either an adequate stormwater management plan addressing erosion, sediment and stormwater, or a documented request for a waiver thereof, has been approved.

D. STORMWATER CONVEYANCE FACILITIES AND WATER QUALITY DESIGN CRITERIA

The following criteria shall control when designing stormwater conveyance facilities and water quality control structures:

1. Open channels and roadside ditches. The design storm for the design of open channels and roadside ditches shall be a storm with a recurrence frequency of ten year/24-hour duration. The time of concentration for open channel and roadside ditch design should be 15 minutes.

2. Storm sewers and inlets. The design storm for the design of storm sewers and inlets shall be the 25 year storm/24-hour duration (TR-55 Method and Rational Method) loading conditions for ponding limits. The ponding limit for streets with curb and gutter shall be an eight-foot spread measured from gutter to driving lane. Spread calculations shall be based upon an intensity of four inches per hour. Pipes should be sized based upon the actual time of concentration. The minimum time of concentration should be assumed to be eight minutes.

3. Entrance pipes and cross drains. The design storm for the design of entrance pipes and cross drains shall be the 25 year storm/24-hour duration (TR-55 Method and National Method). The duration of the peak rainfall event shall be assumed to be equal to the calculated time of concentration. The minimum time of concentration shall be assumed to be eight minutes. Entrance pipes and cross drains shall be checked for overtopping of roadways and flood damage to affected areas. Situation requiring pipes larger than 36 inches shall be designed using the culvert criteria located in Part D.4 of this section.

4. Culverts and cross drains. The design storm for the calculation of runoff for culvert design shall be the 25-year storm. The duration of the peak rainfall event shall be assumed to be equal to the calculated time of concentration. The recommended check storm is the 100-year storm. The maximum headwater under 100-year storm conditions should not be allowed to overtop roads or increase the flooding potential.

5. Erosion control. Plans for stormwater conveyance systems shall include appropriately designed temporary and permanent erosion-control measures both

for the open channel conduits and all disturbed land draining to both open and closed conduits within the system. (*Best Management Practices for Construction Activities* prepared by the Kentucky Natural Resources and Environmental Protection Cabinet and section F of this ordinance should be used as design guides for erosion and sediment control).

6. Water Quality Control Structures. The design rainfall event for the design of all stormwater quality control structures shall be the surface depth of runoff produced from an 80^{th} percentile precipitation event. Stormwater quality control structures shall be designed, built, and maintained to treat, filter, flocculate, infiltrate, screen, evapo-transpire, harvest, and reuse stormwater runoff, or otherwise manage the stormwater runoff quality for the 80^{th} percentile precipitation event. Green Infrastructure devices may be used as water quality control structures if it meets the design criteria.

7. Design certification. Design of all stormwater conveyance and water quality facilities shall be prepared and stamped by a licensed professional engineer (Kentucky registration required). Design methods shall be in accordance with the Kentucky Department of Highways' *Manual of Instructions for Drainage Design*, latest edition.

E. STORMWATER MANAGEMENT FACILITIES DESIGN CRITERIA

As a minimum, the following criteria shall be followed when designing a stormwater management facility:

1. The rainfall events shall be analyzed using the Soil Conservation Service TR-55 method, Rational Method or other methods only as pre-approved by the City.

2. The stormwater discharge point onto adjoining property may not be relocated without the permission of the affected adjoining landowner and the City of Murray.

3. If the stormwater discharge onto adjoining property is of a sheet flow nature before development, the stormwater discharge onto adjoining property after development of the property may not be changed to a concentrated discharge point without the written agreement of the affected adjoining landowner.

4. The initial reference conditions for an undeveloped site shall be the conditions that existed on that site as of April 1, 1998. This date refers to the aerial photography on file at the City Engineering Department and available on request.

5. When a property to be developed experiences stormwater runoff from upstream, the effects of that runoff under current conditions shall be included in the stormwater analysis. If the off-site runoff is not isolated from the detention

system, the effects of routing the off-site runoff through the detention facilities shall be included in the analysis (routed through design).

6. Design storm. Stormwater management facilities shall be designed to retain the difference in the pre-development and post-development 5-year, 10-year, and 25-year, 24- hour storm event. Stormwater management facilities that discharge to High Quality Waters shall be designed to retain the difference in the pre-development and post-development 2-year, 24-hour storm event. High Quality Waters are categorized by the Kentucky Division of Water as high quality pursuant to the requirements of 401 KAR 10:030, Section 1(3).

7. Emergency spillways. Emergency spillways shall be designed to pass the 100-year storm. The effect of the 100-year storm must be accommodated and documented in the design of all stormwater management facilities.

8. Design calculations. Design calculations submitted must include, but not be limited to, the following:

   A. Contributing drainage area in acres. Indicate if pre-development and post-development areas differ.

   B. A breakdown of surface type for pre-development and post-development conditions (such as grassed, paved, roofed, and the like).

   C. Stage-storage curve for the proposed stormwater management facility.

   D. Stage-discharge curve for the outlet structure of the proposed stormwater management facility.

   E. Inflow and outflow hydrographs for pre-development and post-development conditions.

   F. Emergency spillway design calculations.

   G. Embankment design criteria as it relates to slope stability and compaction requirements during construction.

9. Stormwater Management and Water Quality Plan. The final stormwater management and water quality plan shall include, but not be limited to, the following:

   A. All calculations, assumptions and criteria used in the design of the stormwater management facilities and water quality control structures.

B. All plans and profiles of proposed storm sewers and open channels including horizontal and vertical controls, elevations, sizes, slopes and materials.

C. All plans will depict all contributing areas on the plans.

D. Locations, dimensions, and design details required for the construction of all facilities.

E. A description of the operation and maintenance needs for the stormwater management facilities and water quality control structures.

F. All information relative to the design and operation of emergency spillways.

G. Project specifications relative to erosion and sedimentation control. (Refer to *Best Management Practice for Construction Activities* prepared by the Kentucky Natural Resources and Environmental Protection Cabinet for design guidelines associated with erosion and sediment control.)

H. All deed restrictions, easements and rights-of-way.

I. The ownership and maintenance responsibilities for all stormwater management and water quality control structures during and after development. The identity of the responsible individual, corporation, association or other specific entity and the specific maintenance must be outlined on the plan.

1. Stormwater detention facilities and water quality control structures that are not maintained in proper working condition will be subject to corrective action by the authorized enforcement agency along with appropriate fees and fines as referred to in Part I of this ordinance.

2. The property owner shall be responsible for maintaining the stormwater detention facilities and water quality control structures on the property unless a maintenance agreement exists with multiple property owners for a regional detention facility.

10. Exemptions. Exemptions from the stormwater management requirements contained herein shall be granted to the following:

A. All existing residentially subdivided property developments excluding sites to be used or developed as a residential planned development project.

B. Residential subdivisions or residential planned development projects where minimum lot size is greater than five acres.

C. Any nonresidential development for which the area paved and under roof is less than 7,500 square feet.

D. Waivers may also be granted if, in other cases, the developer can provide sufficient documentation that the proposed development will not result in an adverse impact either upstream or downstream of the proposed site. Waivers shall be granted solely at the discretion of the city plan review staff, based upon interpretation of the documentation presented by the developer in conjunction with staff knowledge of the relationship of the proposed development to the adjacent property.

11. Design certification. Design of all stormwater management and conveyance facilities and water quality control structures shall be prepared and stamped by a licensed professional engineer (Kentucky registration required).

12. Construction certification. Prior to final approval of the development or issuance of certificate of occupancy, the licensed professional engineer must submit certification that the stormwater management and conveyance facilities were constructed in accordance with the approved plan. Final approval shall also provide evidence of the recording of all stormwater conveyance, ~~and~~ management, and water quality facilities deed restrictions, easements and rights-of-way. Any request for deviation from the approved plan during construction shall be submitted to the city plan review staff in writing for approval.

13. Ownership, operation and maintenance of detention systems and water quality management facilities:

A. For commercial, industrial and multifamily residential developments, ownership and maintenance responsibilities remain with the property owner/developer.

B. For single family residential subdivisions, the city may at its discretion accept ownership and maintenance responsibilities provided that:

1. Construction and certification is in accordance to the approved plan; and

2. Appropriate land dedication and easements are provided, including adequate public ingress and egress from the facility to a public street.

14. Additional treatment and monitoring may be required. The City reserves the right to require for new and redeveloped properties superseding or additional treatment

criteria or objectives for specific pollutant(s) as necessary to meet overall stormwater quality management program objectives or directives under a watershed improvement or Total Maximum Daily Load (TMDL) program or KPDES/NPDES permit program as administered by the USEPA or Commonwealth of Kentucky.

15. Self-Inspection Required. The property owner shall provide self-inspection documentation for water quality management facilities. Stormwater Management staff will periodically inspect water quality management facilities for the purpose of identifying maintenance and structural deficiencies and if required proof of monitoring. If additional treatment and or monitoring is required, the property owner shall be fully responsible for monitoring their stormwater management and water quality facilities in accordance with the most recent directives under a watershed improvement or Total Maximum Daily Load Program or KPDES/NPDES permit program as administered by the USEPA or Commonwealth of Kentucky,

16. In lieu of fee, an off-site mitigation program may be established. The City of Murray Stormwater Management Department may develop a payment-in-lieu program to allow property owners/developers make payment to the City in lieu of constructing stormwater quality management structures. The in lieu of fee funds shall be applied to public stormwater projects. Another option is to allow the property owner/developer to provide off site mitigation in the same watershed. Both of these options may be developed by the City of Murray Stormwater Management Department following the permit requirements of the KPDES Permit for Small Municipal Separate Storm Sewer Systems.

F. EROSION CONTROL

1. *Permit required.* Prior to any person engaging in a land disturbance activity within the corporate boundaries of Murray they shall possess a City issued permit for the land disturbance activity. A Land Disturbance/Development permit will be issued by the City once all requirements and criteria of this chapter have been fully complied with.

2. Land disturbance activity within the corporate boundaries of the City of Murray subject to NPDES permit coverage within the Provisions of this Ordinance shall include but not limited to:

   A. Land disturbing activities including development and re-development activities that disturb an area greater than or equal to one (1) acre. Sites that are smaller than one (1) acre are also covered by this ordinance if they are part of a larger common plan of development or sale.

   B. Land disturbing activities of less than 1 acre that have the potential to negatively impact local water quality or sensitive areas. This

determination will be made at the sole discretion of the Director of Planning and Engineering or his designee.

3. *Permit coverage requirements.* Prior to any person engaging in construction and or land disturbance activity subject to permit coverage within the corporate boundaries of Murray must comply with the following requirements to achieve and maintain coverage under the "National Pollutant Discharge Elimination System" (NPDES) General Permit for construction activity:

   A. Develop and submit an Erosion and Sediment Control Plan to the City of Murray Planning and Engineering Department.

   B. Develop and submit a "Stormwater Pollution Prevention Plan." (SWPPP) to the City of Murray Planning and Engineering Department.

   C. Submit an electronic Notice of Intent (NOI) form to the Kentucky Division of Water at least 7 days before construction begins.

   D. Submit a copy of the (NOI) to the City of Murray Planning and Engineering Department.

   E. All design, testing, installation, and maintenance of erosion protection and sediment control operations and facilities shall adhere to the criteria, standards and specifications as set forth in the most recent version of the Kentucky Erosion Prevention and Sediment Control Field Guide

   F. Continue to implement all plans and procedures during construction activity, including inspections every 7 days, or every 14 days and after each rainfall event of one-half inch or more.

   G. Submit a signed Notice of Termination (NOT) form to the Kentucky Division of Water, and the City of Murray Planning and Engineering Department after the site has been stabilized.

4. *Contents of Erosion and Sediment Control Plan.* Plans shall be prepared by a licensed professional engineer, drawn to an appropriate scale and shall include sufficient information to evaluate the environmental characteristics of the affected areas, the potential impacts of the proposed grading on water resources, and show measures proposed to minimize soil erosion and off-site sedimentation. The permitee shall assure that all clearing, grading, drainage, construction, and development are performed in strict accordance with the approved plan and this Ordinance. The ESCP Plan shall include the following:

   A. A project narrative.

B. The location of the site in relationship to the surrounding area's watercourses, water bodies, sinkholes, roads, structures, and other significant geographic features vulnerable to erosion from the disturbed site.

C. An indication of the scale used.

D. The name, address, and telephone number of the owner and/or developer of the property where the land disturbing activity is proposed.

E. Contours with a minimum 2 foot interval for the existing and proposed topography.

F. The proposed grading or land disturbance activity including: the surface area involved, excess spoil material, use of borrow material, and specific limits of disturbance.

G. A clear and definite delineation of any areas of vegetation or trees to be saved.

H. A clear and definite delineation of any wetlands, sinkholes, natural or artificial water storage detention areas, and drainage ditches on the site.

I. A clear and definite delineation of any one hundred (100) year floodplain on or near the site.

J. Existing and proposed storm drainage systems.

K. Standard details for storm water facilities and erosion and sediment control measures.

L. Erosion and sediment control provisions to minimize on-site erosion and prevent off-site sedimentation, including provisions to preserve topsoil and limit disturbance.

M. Design details for both temporary and permanent erosion control structures.

N. Details of temporary and permanent stabilization measures.

5. *Review of plan.* The City Engineer shall review the erosion and sediment control plan. The plan will be approved and a permit issued if found compliant with the following land disturbance activity standards:

A. Land disturbance activities shall be done in a manner to ensure minimal soil erosion:

1. The extent of the disturbed area and the duration of its exposure shall be kept within reasonable limits.

2. Cut and fill operations shall be minimized. Developments calling for excessive cutting and filling may be refused a permit if it is determined that the land use proposed for the site can be reasonably constructed with less alteration of the natural terrain.

B. Land shall be developed in increments of workable size which can be completed during a single construction season. Erosion and sedimentation control measures shall be coordinated with the sequence of grading, development and construction operations.

C. When feasible, natural vegetation shall be retained, protected and supplemented.

D. Topsoil shall be saved where practical and reapplied to the site after grading has been finished.

E. Provisions shall be provided which minimize the damage from surface water to the cut face of excavations or the sloping surface of fills.

F. Disturbed soils shall be stabilized as quickly as possible; however, no area shall be left disturbed for more than fourteen (14) days.

G. Temporary seeding, mulching or other suitable methods of stabilization shall be used to protect exposed areas which have been disturbed longer than thirty (14) days.

H. Water runoff shall be minimized and retained on-site, wherever possible, to facilitate groundwater recharge and reduce erosion.

I. Measures shall be taken to contain as much sedimentation as practical on-site:

1. Sedimentation shall be trapped by the use of debris, basins, sediment basins, silt traps or similar measures approved by the City Engineer until the area has been stabilized.

2. All required sedimentation and erosion reduction measures and structures shall be in place prior to any land disturbance.

3. Sedimentation shall be kept out of sinkhole throats/outlets.

4. All necessary soil erosion and sedimentation control measures installed shall be adequately maintained by the developer until the land has been completely stabilized as verified by the City Engineer.

5. Techniques shall be employed to prevent the blowing of dust or sediment from the site.

6. No mud, gravel, debris, etc., shall be allowed to accumulate or collect, or be deposited onto public streets or washed into storm drains.

J. The type of stabilization or revegetation shall be appropriate for the slope and soil type of the site.

K. Provisions shall be made for reseeding areas which do not vegetate the first time.

L. Difficult areas, such as ditch lines and other slopes may have to be sodded or stabilized in some other approved manner.

The City Engineer shall review the plan within thirty (30) days of its receipt and notify the applicant of his action. In the case of a denial, the reasons for the denial shall also be given. An applicant may appeal a denial of a permit to the Planning Commission. All appeals shall be made in writing within ten (10) days of the denial and the applicant shall be entitled to a hearing before the Planning Commission within thirty (30) days of the date of appeal.

A land disturbance/development permit will be issued on the basis of approved plans. No fee will be charged for the permit.

6. Exemptions from this permit.

The following land disturbance activities are specifically exempt from this article:

A. Land disturbance associated with existing one and two family dwellings.

B. Use of land for home gardening.

C. Agricultural landuse which is in accordance with a farm conservation plan approved by the local soil conservation service or which has been determined by said service that such use will not cause excessive erosion or sedimentation.

D. Land disturbance activities covered under an approved subdivisions sedimentation and erosion control plan. (NOTE: Often these plans will cover only the land disturbance associated with lot arrangement and street development and not the individual lot development.)

7. Existing unvegetated and eroded areas.

All existing unvegetated areas within the city shall submit and have approved an erosion and sediment control plan, a SWPPP, and a NOI from the Division of Water as per Part F.2 and 3 of this ordinance. All areas of the city shall be vegetated or stabilized in accordance with this article. The existing unvegetated areas shall institute measures to keep their sedimentation on-site and out of sinkhole outlet areas while the erosion control and revegetation measures are in progress.

G. ISSUANCE OF CERTIFICATE OF OCCUPANCY

No certificate of occupancy shall be issued for any development which is subject to the regulations of this chapter until all requirements and criteria of this chapter are fully met.

H. STORMWATER POLLUTION PREVENTION

1. **Purpose Intent.** The purpose and intent of this article is to ensure the health, safety and general welfare of the inhabitants within the corporate limits of the City of Murray and protect and enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the National Pollutant Discharge Elimination System (NPDES) permit process by reducing pollutants in stormwater discharges and by prohibiting non-stormwater discharges to the storm drain system.

2. **Applicability.** This ordinance shall apply to all water entering the storm drainage system and/or receiving waters generated on any developed or undeveloped lands unless explicitly exempted by the authorized enforcement agency.

3. **Ultimate Responsibility.** The standards set forth herein and promulgated pursuant to this Ordinance are minimum standards; therefore this Ordinance does not intend nor imply that compliance by any person will ensure that there will be no contamination, pollution, nor unauthorized discharge of pollutants into waters of the State caused by said person. This Ordinance shall not create liability on the City of Murray, or any agent or employee thereof for any damages that result from any discharger's reliance on this Ordinance or any administrative decision lawfully made hereunder.

4. **Severability.** The provisions of this ordinance are hereby declared to be severable. If any provision, clause, sentence, or paragraph of ordinance or the application thereof to any person, establishment, or circumstances shall be

held invalid, such invalidity shall not affect the other provisions or application of this ordinance.

5. **Prohibition of Illegal Discharges**. No person shall discharge or cause to be discharge into the storm drainage system and or receiving waters of the Commonwealth, any materials, including but not limited to pollutants or waters containing any pollutants that cause or contribute to a violation of applicable water quality standard, other than stormwater.

   The commencement, conduct, or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:

   A. Waterline flushing or other potable water sources,

   B. Landscape irrigation or lawn watering.

   C. Diverted steam flows,

   D. Rising ground water or ground water infiltration to storm drains,

   E. Uncontaminated pumped ground water,

   F. Foundation or footing drains (not including active ground water dewatering systems), and crawl space pumps,

   G. Air conditioning condensation,

   H. Springs,

   I. Non-commercial washing of vehicles,

   J. Natural riparian habitat or wetland flows,

   K. Fire fighting activities,

   L. And any other water source not containing pollutants.

   M. Dye testing discharge upon verbal notification to the authorized enforcement agency prior to the time of the test.

   N. Any non-storm water discharge permitted under NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the Federal Environmental Protection Agency, provided that the discharge is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations, and provided

that written approval has been granted for any discharge to the storm drain system.

O. Discharges specified in writing to the authorized enforcement agency as being necessary to protect public health and safety.

6. **Prohibition of Illicit Connections.** The construction, use, maintenance or continued existence of illicit connections to the storm drainage system is prohibited.

This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

A person is considered to be in violation of this ordinance if the person connects a line conveying sewage, effluent, or biologically contaminated water to the storm drainage system, or allows such a connection to continue.

A person is considered to be in violation to this ordinance if the person reinstates a suspended connection to the storm drainage system without prior approval of the authorized enforcement agency.

7. **Waste Disposal Prohibitions.** No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposit, left, or maintained, in or upon any public or private property, driveway, parking area, street, alley, sidewalk, component of the storm drain system, or water of the State, any refuse, rubbish, garbage, litter, or other discarded or abandoned objects, articles, and accumulations, so that the same may cause or contribute to pollution. Wastes deposited adjacent to streets in proper waste receptacles for the purposes of collection are exempted from this prohibition.

8. **Industrial or Construction Activity Discharges.** Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the authorized enforcement agency prior to allowing discharges to the MS4.

9. **Monitoring of Discharges.** The authorized enforcement agency shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as necessary to determine compliance with this ordinance.

Persons shall allow the authorized enforcement agency ready access to all parts of the premises for the purpose of inspection, sampling, examination and copying of records that must be kept under the condition of an NPDES permit to discharge stormwater, and the performance of any additional duties as defined by State law.

The authorized enforcement agency shall have the right to set up on any permitted facility such devices as necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's stormwater discharge.

The authorized enforcement agency has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to their accuracy.

Any temporary or permanent obstruction to the facility being inspected and/or sampled shall be promptly removed by the facility operator at the written or oral request of the authorized enforcement agency and shall not be replaced. The costs of clearing such access shall be borne by the facility operator.

Unreasonable delay and/or denial of access to a permitted facility are violations of a stormwater discharge permit and this ordinance. The authorized enforcement agency is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry.

10. **Requirements to Prevent, Control, and Reduce Stormwater Pollutants.** The owner and/or facility operator shall provide, at their own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the storm drainage system of watercourses through the use of these structural and non-structural BMPs. Any person responsible for a property or premise, which is, or may be, the source of an illicit discharge, may be required to implement, at said person's expense, additional structural and non-structural BMPs to prevent the further discharge of pollutants to the storm drainage system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity to the extent practicable shall be deemed compliant with the provisions of this section. These BMPs shall be part of a storm water pollution prevention plan (SWPPP) as necessary for compliance with requirements of the NPDES permit.

11. **Watercourse Protection.** Every person owning property within a watershed, through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse.

12. **Notifications of Spills.** Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drainage system, or water of the

State said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, said person shall notify the authorized enforcement agency in person, by phone, or by facsimile no later than the next business day and written notice given no later than three business days of initial notification. The owner or facility operator shall also retain an onsite written record, for three years, of the discharge and the actions taken to prevent its recurrence.

13. **Program Enforcement.**

A. Suspension of MS4 Access

I. In the event of an emergency, the authorized enforcement agency may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to public health, the environment, the MS4, or the waters of the State. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize the danger to the public, damage to the MS4 or waters of the State

II. Any person discharging to the MS4 in violation of this ordinance may have their MS4 access terminated if such termination would abate or reduce an illicit discharge. The authorized enforcement agency will notify a violator so they may petition the authorized enforcement agency for a reconsideration and hearing.

B. Notice of Violation

I. Whenever the authorized enforcement agency finds that a person has violated any prohibition or failed to meet any requirements of this ordinance the authorized enforcement agency may order compliance by written notice of violation to the responsible person. Such notice may require without limitation:

a. The performance of monitoring, analyses, and reporting,

b. The elimination of illicit connections or discharges,

c. That violating discharges, practices, or operations shall cease and desist,

d. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property,

e. Payment of penalty to cover administrative and remediation costs, or

f. The implementation of source control or treatment BMPs.

II. If abatement of violation and/or restoration of affected property are required, the notices shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall advise that should the violator fail to remediate or restore within the established deadline, the work will be done by a contractor and all expense shall be charged to the violator.

C. Appeal of Notice of Violation

I. Any person receiving a notice of violation may appeal, in writing, the determination of the authorized enforcement agency. The notice of appeal must be received by the office of Planning and Engineering, within 15 days from the date of the notice of violation.

D. Enforcement Measures after Appeal

I. If the violation has not been corrected pursuant to the requirements set forth in the violation or deadline, the enforcement agency shall enter upon the subject private property and is authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the authorized enforcement agency or its designated contractor to enter upon the premises for the purposes set forth above.

E. Cost of Abatement

I. Within 30 days after the abatement of the violation, the owner of the property will be notified of the cost of the abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment with 15 days of notification. If the amount due is not paid within 30 days or by the date expressed by the authorized enforcement agency, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.

A copy of the resolution shall be turned over the County Auditor so that the auditor may enter the amounts of the assessment against the parcel as it appears on the current assessment roll, and the tax collector shall include the amount of the assessment on the bill for taxes levied against the parcel of land.

F. Injunctive Relief

I. It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this Ordinance. If a person has violated or continues to violate the provisions of this ordinance, the authorized enforcement agency may petition the courts for a preliminary of permanent injunction restraining the person from activities which would create further violation or compelling the person to perform abatement or remediation of the violation.

G. Compensatory Action

I. In lieu of enforcement proceedings, penalties, and remedies authorized by this ordinance, the authorized enforcement agency may impose upon a violator alternative compensatory action, such as storm drain stenciling, attendance at compliance workshops, creek cleanup, and etc.

H. Violations Deemed a Public Nuisance

I. In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this ordinance, is a threat to public's health, safety, and welfare, and is deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.

I. Remedies Not Exclusive

I. The remedies listed in this ordinance are not exclusive of any other remedies available under any applicable federal, state or local law and it is within the discretion of the authorized enforcement agency to see cumulative remedies.

I. PENALTY

Any person who is subject to the regulations of this chapter shall be liable to the city for a civil penalty of $250 per violation per day for as long as the violation

continues. In addition to such penalty, the city may recover from person reasonable attorney fees, court costs and other expensed incurred in any enforcement proceedings.