

**DIRECT TESTIMONY
OF
JAMES W. FRAZELL, P.E.**

CAUSE NO. 45274

I. BACKGROUND

1

2 **Q. Please state your name, occupation and business address.**

3 A. My name is James Frazell. I am a Senior Project Engineer with Triad Associates, Inc.
4 My business address is 5835 Lawton Loop East Drive, Indianapolis, Indiana 46216.

5 **Q. Please describe Triad Associates and its areas of expertise.**

6 A. Triad Associates has been in business for over 40 years providing engineering
7 consulting, planning, design, project administration, and inspection of water projects
8 throughout Indiana. This would entail all facets of water including water source
9 options such as ground water wells and surface water, various methods of water
10 treatment depending on the constituents found in the raw water and disinfection,
11 water distribution, and water storage.

12 **Q. Please summarize your educational and professional qualifications.**

13 A. I am a 1972 graduate of Purdue University with a B.S. in Interdisciplinary
14 Engineering and an emphasis in environmental engineering. I was one of the
15 founders of Triad Associates in 1977 and have been continuously employed there
16 since.

17 **Q. Please describe your business experience.**

18 A. I have been a design engineer throughout my career for utility development,
19 including water and wastewater projects of various sizes and magnitudes primarily

1 for cities and towns throughout Indiana, in addition to being a founder and owner of
2 Triad.

3 **Q. Are you a registered professional engineer in the State of Indiana?**

4 A. Yes. I have been a registered professional engineer in the State of Indiana
5 continuously since 1977.

6 **Q. What are your current responsibilities?**

7 A. I oversee the design of water and wastewater projects for Triad Associates.

II. SCOPE OF TESTIMONY

8 **Q. Was your firm retained by the Town of Lizton (“Lizton” or “Town” or
9 “Petitioner”) acting through its Town Council in connection with these
10 proceedings?**

11 A. Yes. Triad Associates was engaged by the Town to prepare a Water System
12 Management Plan (the “WSMP”), which is required to be submitted to the Indiana
13 Department of Environmental Management (“IDEM”) prior to a community
14 developing a new community water supply system. Since the Town made the decision
15 in November 2017 to establish its own water utility, Triad Associates has been
16 involved in the planning, coordination and design, as well as the subsequent
17 permitting, bidding, construction engineering and inspection of the project.

18 **Q. What is the purpose of your testimony in this proceeding?**

19 A. The purpose of my testimony is to discuss pertinent portions of the WSMP and to
20 describe the permit process for the project.

1 **Q. Please describe the Water System Management Plan.**

2 A. The Water System Management Plan is a plan required by IDEM to show that a
3 community proposing to establish a new water system has the necessary technical,
4 managerial and financial capacity to do so. The Lizton WSMP is attached to my
5 testimony as Attachment JF-1. Our firm prepared the Lizton WSMP in concert with
6 O.W. Krohn staff, and it is a very thorough water system plan which demonstrates
7 that Lizton has the adequate technical, financial, and managerial capacity to construct,
8 maintain, and operate a public drinking water system that is capable of meeting
9 national Safe Drinking Water Act standards.

10 **Q. Did the Town consider any other alternatives besides establishing a new water**
11 **utility to meet its needs?**

12 A. Yes, and this is a requirement of IDEM as part of the WSMP submission. As
13 described in the WSMP, Lizton explored alternatives to developing a new community
14 water system including its own source and treatment, extension of service and
15 purchasing water from an existing utility. While potential consolidation or
16 interconnection with all water systems within a 10 mile radius of the Town were
17 assessed, the only system within reasonable proximity to Lizton that can provide the
18 needed volume of water is Citizens Energy Group (“Citizens”) and Citizens is the
19 only entity that could extend service to the Town. However, with respect to
20 consolidation, the terms and requirements of an extension of service from Citizens is
21 not financially and politically acceptable to the Town, as described in more detail in
22 Witness Krohn’s testimony. Ultimately, constructing a water distribution system and
23 interconnecting with Citizens to purchase water at a wholesale rate is the most cost

1 effective option for the Town, as demonstrated in the cost benefit analysis provided
2 on Table III of the WSMP. Further, this arrangement is consistent with the
3 arrangement Citizens has with other towns in the same service area.

4 **Q. Are there any benefits to Citizens for providing wholesale water service to the**
5 **Town?**

6 A. Yes. Citizens has a 1 million gallon storage tank located at the edge of Town which
7 primarily serves Tri-West High School and Middle School and the Town of Pittsboro.
8 At the present time, the tank volume is too large for the area and the customers being
9 served. As a result, Citizens must periodically “waste” a portion of the water in order
10 to prevent the water stored from becoming stagnant. Adding Lizton as a customer
11 will increase demand and should prevent Citizens from having to waste water to
12 prevent stagnation in the future.

13 **Q. Did IDEM approve the Town’s Water System Management Plan?**

14 A. IDEM does not approve water system management plans *per se*. IDEM reviews the
15 plan to ensure that the community seeking to develop a new public water supply
16 system has demonstrated it has the requisite technical, financial, and managerial
17 capacity to do so. IDEM then certifies the community’s demonstration of compliance
18 with these requirements. IDEM notified the Town by letter on June 14, 2019, that the
19 proposed Lizton Water Utility does meet the necessary technical, managerial, and
20 financial requirements to operate a new public water supply system. See IDEM
21 Certification Letter attached as Attachment JF-2. IDEM then issues permits for the
22 construction and operation of the new water system.

1 **Q. Has the Town received all necessary permits from IDEM to construct and**
2 **operate the new system?**

3 A. Not yet. We are currently awaiting a needed signature from Citizens Water on the
4 Construction Permit Application (a requirement from the water source provider). The
5 plans and specifications are complete. Once we get the needed signature from
6 Citizens, the permit application and supporting documents will be submitted to IDEM
7 immediately. We are confident that the ultimate timing should work out. We will get
8 permits in hand prior to the anticipated SRF finance closing scheduled for mid-
9 December.

10 **Q. Please describe the water distribution system the Town proposes to construct.**

11 A. The Town is proposing to install a distribution system to serve both the Town and the
12 Indiana Department of Transportation (“INDOT”) rest area and garage for which
13 INDOT has requested service, as further described in Witness Krohn’s testimony.
14 The Town is proposing to connect the distribution system to the existing Citizens’
15 transmission line to facilitate wholesale water purchase from Citizens to the Town.
16 The main transmission lines from the point of connection with Citizens along SR 39
17 both north and south, and across US 136 and up through I-74 will be 12 inches in
18 diameter and will act as the main core of the system. The INDOT portion begins at
19 the I-74 bore and ends at their facilities. The distribution fingers connected to the 12-
20 inch main are 6-inch diameter mains that will provide adequate system pressures and
21 fire protection for those areas. The water lines will be installed in accordance with 10
22 States Standards and the layout of the distribution system will take into consideration
23 the terrain, construction limitations due to roadway conditions and the availability of

1 rights of way. Existing homes and businesses that do not connect to the system now
2 will have an opportunity to connect in the future as lines are extended or as requests
3 for service are made.

4 **Q. You testified that installing a new distribution system is the most cost effective**
5 **option for the Town. Has the Town developed cost estimates for the project?**

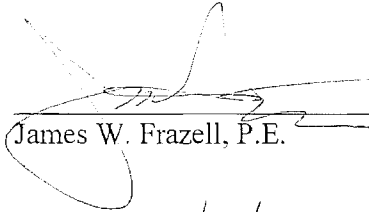
6 A. Yes. Preliminary cost estimates for the project were developed and included on Table
7 II of the WSMP. These cost estimates have since been refined and the updated cost
8 estimates are included as an attachment to Witness Krohn's testimony. The total
9 estimated costs for the project including construction costs (\$2,693,700), non-
10 construction costs (\$937,800) and contingencies (\$468,500) are estimated to be
11 \$4,100,000. Bids for construction of the new water system are to be received by the
12 Town on August 29, 2019.

13 **Q. Does this conclude your testimony?**

14 A. Yes.

VERIFICATION

I, James W. Frazell, P.E., affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.



James W. Frazell, P.E.

Date: 5/5/2019



TOWN OF LIZTON

WATER SYSTEM MANAGEMENT PLAN

Prepared May 2018

Revised November 2018

Revised May 2019

Prepared by

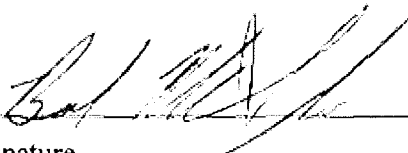
Triad Associates, Inc.
5835 Lawton Loop East Drive
Indianapolis, Indiana 46216
(317) 377-5230 ♦ (317) 377-5241 fax
triad@triadassoc.net



TOWN OF LIZTON
106 N. Lebanon Street
Lizton, IN 46149
317.994.5500

TOWN OF LIZTON
WATER SYSTEM MANAGEMENT PLAN CERTIFICATION

I certify, under penalty of law, that I or persons under my direction or supervision have completed a Water System Management Plan (WSMP) in accordance with Indiana Administrative Code, 327 IAC 8-3.6. Based on my evaluation of the plan, or my inquiry of the person or persons directly responsible for preparing the WSMP, the information contained in the WSMP is, to the best of my knowledge and belief, true, accurate and complete.



Signature

Bob Uhrick

Print

Title: Council President

Date: MAY 24, 2018

Project Name: Town of Lizton

**TOWN OF LIZTON
WATER SYSTEM MANAGEMENT PLAN
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TOWN OF LIZTON WATER SYSTEM MANAGEMENT PLAN

I. PROJECT OVERVIEW

At the present time, the municipality does not have a waterworks utility. Residences and businesses rely on private individual wells for water. The Town is establishing a water utility in order to provide clean, safe, potable water to the community. In addition, the Indiana Department of Transportation operates a rest area that is located west of Town along I-74. The facility has been plagued by chronic well problems which have affected its ability to operate reliably. INDOT would like to pipe water to the rest area as well as a highway garage that is also located within the vicinity.

The project scope is to install a distribution system that will serve the Town residents and businesses, the INDOT rest area, and the INDOT garage. The system will connect to an existing transmission line in order to purchase water from Citizen's Water Authority (CWA) at a wholesale rate for re-sale. The proposed project will assure that clean water can be reliably and consistently provided. Alternatives evaluated included no action, construct a new waterworks system including wells, storage, and treatment, or install a distribution system and purchase water from another entity.

Prior to developing a new community water supply system, a Water System Management Plan (WSMP) is required to be submitted to the Indiana Department of Environmental Management (IDEM). The objective of this study is to demonstrate that the proposed utility will have adequate technical, financial, and managerial capacity to construct, maintain, and operate a public drinking water system that is capable of meeting national Safe Drinking Water Act (SDWA) standards. The WSMP will allow the community to make strategic decisions to assure compliance with all appropriate regulations. A general location map is provided as **Exhibit 1**. The proposed service area is shown on **Exhibit 2**.

The SDWA addresses the need for developing the technical, managerial, and financial capacity of public water supply systems in order to consistently produce water that meets accepted health standards. The 1996 Act empowered EPA to address the problems faced by small water systems through capacity development strategies. The goal is to prevent violations and noncompliance with essential drinking water standards that protect public health.

Capacity development refers to the ability of a water system to produce and deliver safe drinking water that meets state and federal health standards. Capacity development consists of three key components: technical capacity, financial capacity, and managerial capacity. Technical capacity refers to the physical and operational ability of a public water supply system to meet state and federal requirements. An evaluation of the physical infrastructure should include source water adequacy, infrastructure adequacy, and technical knowledge.

Financial capacity refers to the ability of a public water supply system to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with state and federal regulations. The financial resources of the water system include but are not limited to the revenue sufficiency, credit worthiness, and fiscal controls.

Managerial capacity refers to the ability of a public water utility to conduct its affairs in a manner that allows compliance with state and federal regulations. The management structure of the water utility includes ownership accountability, staffing and organization.

As required by the Management Plan, alternatives to developing a new community water system have been explored. Included were options such as extension of service from an existing system and purchasing water from another entity. Federal, state and local regulations have been reviewed as well as requirements of the Safe Drinking Water Act. The total cost of water service has been calculated. The cost estimates are considered reliable and include contingencies for unknowns. Projected rates have been set to recover costs. The utility will comply with applicable accounting, financing, and rate making requirements.

The following sections include a comprehensive discussion of the technical, financial and managerial aspects of the proposed water system and will demonstrate adequate capability in each of these areas. A Professional Engineer (PE), legal counsel, and a Certified Public Accountant (CPA) have been retained to help prepare this plan and other required documents. Certified professionals have been employed to run the existing system.

II. TECHNICAL CAPACITY

This section will examine the physical and operational abilities of the public water system in order to determine the technical capacity.

A. System Description

At the present time, neither the Town nor the INDOT facilities have a waterworks system. Residences and businesses rely on private individual wells for water. The Town is establishing a water utility in order to provide clean, safe, potable water to the community. In addition the Indiana Department of Transportation (INDOT) operates a rest area west of Town along I-74. The facility has been plagued by chronic well problems which have affected its ability to operate reliably. INDOT would like to extend a water supply to the rest area as well as a highway garage that is also located within the vicinity.

The project scope is to install a distribution system that will serve the Town residents and businesses, the INDOT rest areas, and the INDOT garage. The system will connect to an existing transmission line to purchase water from Citizen's Water Authority (CWA) at a wholesale rate for re-sale. Work activities related to construction will occur within previously disturbed rights of way and easements, under and immediately adjacent to roadways. The service area, which includes the Town, the INDOT rest areas, and the INDOT garage are shown on **Exhibit 2**. The proposed system layout is shown on **Exhibit 3**. The utility will be managed as a municipal department of the Town of Lizton. The legal entity and address is:

The Incorporated Town of Lizton
106 N. Lebanon Street; PO Box 136
Lizton, IN 46149
(317) 994-5500
Contact: Robert Uhrick, Council President

B. Project Boundaries

The project boundaries include the corporate limits of the Town of Lizton, the 2 INDOT rest areas, and the INDOT garage. The project is located in Union Township, Hendricks County, Indiana, in Sections 20, 21, 28, and 29 of Township 17 North, Range 1 West and can be found on the Lizton Quadrangle. A general location map is provided as **Exhibit 1**. **Exhibit 2** shows the service area.

C. Population

The 2010 U.S. Census records the Lizton population as 488 which is a 19% increase from 1990 but only a 2% increase from the previous decade. Over the past 100 years the population increased by an average of 9% every 10 years. Wastewater records indicate there are 171 single family residences, 8 doubles (16 units), one 26 unit multi-family building and 25 non-residential users. The non-residential users are domestic in nature and mostly serve the local community. Included are 4 churches, 1 gas station, 3 take-out restaurants, 10 small commercial establishments, 1 party center primarily for summer use, and 6 institutions (Town Hall, Lions Club, an administration building, post office, fire department, and the wastewater plant). This results in a preliminary user base of 238 units in Town plus the INDOT facilities which are equivalent to 15 units for a total of 253 equivalent dwelling units (EDUs). The breakdown is shown on **Table I**.

Future population projections are not available for the Town. Past census records show there are wide fluctuations in population. Development records indicate an average of only one building permit issued annually. There are no known significant commercial or industrial users who are locating to the area and the Town is surrounded by agricultural land use. There are 2 schools located on the outskirts of Town that are already served by CWA. The population growth over the past 50 years averages 5.7%. For purposes of this report a modest 5% population increase will be assumed. The growth rate for non-residential users will mirror residential growth since they mostly provide service to the local community.

D. Water Usage

Water usage is anticipated to be domestic in nature and equivalent to typical residential usage. Generally, peaks will occur in the early morning and early evenings. Monthly and seasonal variance is not expected to be significant as all residences will be occupied all year and most non-residential users primarily serve the local community.

E. Water Requirements

Existing and short term future water requirements were developed based on the number of properties in the planned development, the property owners who are interested in water service at this time, and the remaining property owners who are located in the service area. Users within the Town will be a mix of residential, institutional, and commercial uses. Since the Town does not have a water system, demand will be derived from typical industry averages and guidelines established in 10 State Standards and Indiana Code. The customer and EDU breakdown is shown on **Table 1**. A monthly volume of 5,750 will be used for each EDU (2.5 persons per household x 70 gallons per day x 30 days plus a factor for water loss).

Existing Potential Users

Single Family Residential Users (171 x 5,750 gal/mo)	983,250 gal/mo	32,775 gpd
Multi-family (42 units x 5,750 gal/mo)	241,500 gal/mo	8,050 gpd
Non-residential (25 Users x 5,750 gal/mo)	<u>143,750 gal/mo</u>	<u>4,790 gpd</u>
Subtotal	1,368,450 gal/mo	45,615 gpd
INDOT Garage [3] (1 EDU)	5,750 gal/mo	190 gpd
INDOT Rest Area [3] (15 EDU's)	<u>120,000 gal/mo</u>	<u>4,000 gpd</u>
Subtotal	125,750 gal/mo	4,190 gpd
Total	1,494,200 gal/mo	49,805 gpd

<u>Peak Demand</u> (Peaking Factor of 2.5)	124,510 gal;	86 gpm
<u>Future Demand</u> [1]	59,270 gpd	
<u>Future Peak Demand</u> (Peaking factor 2.5)	148,175 gpd;	103 gpm
<u>Fire Flow</u> [2]	192,360 gallons	

[1] Since no population projections are available for the Town, a 19% increase will be assumed excluding the INDOT facility. The population growth over the past 100 years averaged 9% every 10 years or 18.8% over 20 years. The growth rate for non-residential users is expected to coincide with residential growth as most primarily serve the local community. There are no known plans for expansion of the INDOT facilities and reportedly this is one of the least used rest areas in the State.

[2] See Section F, Part 5 for fire flow requirements and breakdown.

[3] Demand was obtained from the Statewide Facilities Manager at INDOT.

F. System Requirements and Design

The Town evaluated the option of installing a complete new system with wells, a storage tank and treatment plant. It was determined that this alternative is costly, impractical and not the most environmentally sound choice. In addition, locating a reliable well field would be difficult as the historically low well yields in the vicinity are not adequate for the existing and future needs of the Town. A substantial amount of geo-technical work would need to be undertaken in order to find a suitable water bearing aquifer to support at least two wells.

The project scope is therefore to install a distribution system to serve both the Town and INDOT sites. The system will connect to an existing transmission line to facilitate wholesale water purchase from Citizen's Water Authority (CWA). This will satisfy the primary need of the project which is to provide an adequate water system to alleviate demand and supply issues. The CWA agreement is provided in **Appendix F**.

1. Supply

The source of the water supply will be CWA which has a 16" line that terminates just outside of the Town limits. The line was installed to serve the Tri-west High and Middle Schools. The CWA agreement commits to an allocation of 250,000 gallons per day for the Town of Lizton and INDOT. The initial demand is estimated at 49,805 gpd which allows for significant growth before additional volume would be needed. Generally, a water supply is considered adequate if a backup water system is available. CWA has a 1 million gallon water tower located adjacent to the schools which is oversized for the present demand. See **Appendix S**.

2. Distribution System

It is proposed to install a minimum sized line of 6" along the streets in Town in order to provide adequate system pressures and fire protection. The main transmission lines along SR 39, US 136 and across I-74 will be 12 inches. The INDOT portion begins at the I-74 bore and ends at their facilities. The water lines will be installed in accordance with 10 States Standards and the Town's Utility Standards which are included in **Appendix K**. Valves and hydrants will be placed at minimum intervals where needed. **Appendix P** contains a hydraulic analysis to assure that water can be delivered to all parts of the system at the required pressure. The improvements are shown on **Exhibits 3, 3A, 3B, and 3C**. The components are listed below.

Town Project

6" Water Line	11,550 lf
6" Valves	46 ea
12" Water Line	8,100 lf
12" Valves	23 ea
Hydrants	37 ea
Bored Crossings	480 lf
Services	200 ea
Meters	1 ea
Analyzer and Chemical Feed	1 ea

INDOT Project

6" Water Line	7,080 lf
12" Valves	2 ea
Hydrants	3 ea
Bored Crossings	980 lf
Meters	2 ea

Existing homes and businesses that do not connect now may connect in the future as lines are extended or as requests for service are made. The schedule and rate of extending lines will depend upon the availability of funds and the desire for such extension. The layout of the distribution system will take into consideration the terrain, construction limitations due to roadway conditions, and the availability of rights of way. Distribution lines will be sized at a minimum of 6" in order to furnish the proper flow and pressure for daily use and future fire protection. Mains will be installed in rights of way and adjacent to roadways where possible.

3. Treatment

Treated water will be purchased at a wholesale rate from CWA who already satisfies the public water system requirements of IDEM. Lizton will perform all required daily testing and operations using an IDEM certified operator. CWA uses chlorine to disinfect the water prior to distribution and per the agreement guarantees a chlorine residual of 0.50 to 1.0 mg/l at the connection point. Ammonia is added to the finished water to minimize byproducts and enable chlorine to persist longer. The INDOT facility is at the extreme end of the proposed water system and has an estimated 4,000 gpd demand. At this rate, a complete changeover will occur in the line every 1.9 days. The operator will conduct sampling at the connection point and within the system to assure adequate residual levels are maintained. As an added measure, a chlorine analyzer and chemical feed will be installed prior to the I-74 crossing to the INDOT facilities. Additional chlorine will be fed at this point if the level should ever drop below the required minimum. **Appendix O** contains additional discussion on the treated water.

4. Storage

Storage requirements are typically based upon daily demand, fire protection and available well yields. CWA has a 1,000,000 gallon storage tank located at the edge of Town which primarily serves the 2 schools and the Town of Pittsboro. At the present time, the tank volume is too large for the area being served. As such, CWA must periodically “waste” a portion of the water in order to prevent the water stored from becoming stagnant.

According to CWA this area is served by 2 tanks, one of which is adjacent to Lizton and the other of which is located at Brownsburg. **Appendix S** provides a breakdown of the usage and an exhibit of the service area. The current draw from the tanks is as follows:

Capacity

Brownsburg Tank Capacity	2,000,000 Gallons
Lizton Tank Capacity	1,000,000 Gallons

Demand

Pittsboro	0.22 MGD
Brownsburg	0.24 MGD
Tri-West Schools	0.006 MGD
Various Residential & Non-residential	0.28 MGD
Non-revenue	<u>0.17 MGD</u>
Total Current Demand	0.92 MGD
Proposed Lizton Allocation	0.25 MGD
Available for Future Demand	1.46 MGD

5. Fire Protection

Fire flow is the quantity of water in gallons per minute needed to control an anticipated fire in a building or group of buildings. Population, water supply, storage volume, and system pressure are all taken into account when determining fire flow requirements. Generally, flows are considered adequate if the needed quantity can be delivered for a duration of two hours during peak demand periods. Typical fire flow requirements for smaller towns like Lizton with no large commercial or industrial establishments are 1,500 gpm for a 2 hour duration. This rate could be decreased if the volume is not practical or financially feasible. Fire protection capabilities will not be provided to the INDOT facilities.

	Needed Rate	Supply Over 2 Hrs.
Future Peak Demand	103 gpm	12,360 gallons
Fire Flow Requirement	<u>1,500 gpm</u>	<u>180,000 gallons</u>
Total Demand	1,603 gpm	192,360 gallons

The existing one million gallon CWA storage tank is adequate to provide fire protection for the Town. The present demand from the Tri-West schools and Pittsboro is approximately 226,000 gpd. The initial demand from the Lizton area is 50,000 gpd which leaves 724,000 gallons of water volume that could be used for emergency purposes. In accordance with Ten States Standards lines will be sized at a minimum of 6" to assure proper fire flows and pressures.

6. Metering

The Town will be purchasing water from CWA at a wholesale rate. A master meter will be installed by CWA at the connection point. Individual automatic read water meters will be installed by the Town for customers within Lizton. Two additional meters will measure water usage by the INDOT facilities. Single meters sized appropriately for the expected volume will be installed for multi-unit buildings/apartments.

G. Water Supply Source Assessment

The proposed source of the water supply is regionalization with CWA so a water supply source assessment does not apply.

1. Wellhead Protection

Wellhead protection is the responsibility of CWA. The Town will not own any community wells so wellhead protection does not apply for this utility.

2. Daily and Peak Water Usage

Daily and peak water rates were determined using the Indiana Administrative Code, Ten State Standards and State Board of Health Requirements. Average demand was estimated using 100 gpd per person. Peak demand was derived by applying a peaking factor of 2.5 in accordance with 327 IAC 8-3.3-2.

3. Water Supply Characterization

The CWA water supply is existing so geological characterization of the water source was conducted by that entity.

4. Water Quality

CWA assures that the water quality meets all applicable primary and secondary drinking water standards at the connection point. The Town will conduct the required testing at the point of entry and within the distribution system.

H. Indiana Public Drinking Water Rules

Included in this section will be a description of the methods that will be used to satisfy the requirements of the public drinking water rules that will apply to the Town of Lizton's Utility. A summary of the Local, State and Federal Regulations is provided in **Appendix L**.

1. Public Water Supply Construction Permits (327 IAC 8-3)

The Utility will apply for a construction permit for a water distribution system in accordance with 327 IAC 8-3. Prior to submittal, a Water System Management Plan will be submitted to IDEM for review as proof of the utilities technical, financial, and managerial capacity. The system will be built according to the approved plans and specifications unless changes have been approved. Revisions will require that the construction permit be amended.

The facility will be designed, constructed, modified, installed and operated in such a manner that no sanitary, health, local, state or federal regulations or requirements are violated. The design criteria shall be based upon Ten State Standards, Recommended Standards for Waterworks and the American Water Works Association (AWWA) Standards.

2. Disinfection (327 IAC 8-2-8.6)

By agreement, CWA will guarantee a chlorine residual of 0.50 mg/l to 1.0 mg/l at the connection point with Lizton. The operator will perform daily tests and collect system samples to assure that adequate disinfection residuals are maintained across the distribution system. Testing will be done by an IDEM certified operator who is qualified to perform the testing and recordkeeping requirements related to disinfection. Samples will be taken at the point of entry and from various sites within the system. The operator will employ the analytical and monitoring requirements, methods, and procedures as specified in 327 IAC 8-2-8.7 to demonstrate compliance with all applicable sections of this rule. Measurements for residual disinfection concentrations will be conducted using allowable methods as stated in item (7) of this rule. All sampling will be recorded on bench sheets and MROs which will be submitted to IDEM monthly.

3. *Cross Connection Control (327 IAC 8-10)*

The Design Standards (Appendix L) contains requirements to install a backflow prevention device for any connection designated as having a potential cross connection. Language has been added to specify that any service connection to a facility designated to be a cross connection hazard by 327 IAC 8-10-4(c) shall be equipped with either an air gap or a reduced pressure principle backflow preventer in accordance with 327 IAC 8-10-7. When applicable, necessary steps shall be taken to eliminate and/or reduce potential cross connection hazards. At the present time, the community only contains one customer facility that can be designated as a cross connection hazard, which is the sewage treatment plant. Appropriate air gaps, backflow preventer or double check valve assembly will be installed where needed. Installations will be in accordance with 327 IAC 8-10.

4. *Consumer Confidence Reporting (327 IAC 8-2.1-1)*

As a wholesale customer, the Lizton Water Utility will receive a Consumer Confidence Report (CCR) from CWA. In accordance with 327 IAC 8.2.1-1, the report will include information on the source and quality of the water risks from contaminants and violations. Once this information is received from CWA, the Town will prepare a CCR which will be distributed to all customers, IDEM, and the Hendricks County Health Department annually. All requirements of 327 IAC 8.2.1-1 through 17 will be followed.

5. *Vulnerability (Security) Assessment*

At this time, the Town will not conduct a Vulnerability Assessment due to the small size of its customer base. The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 requires each community water system that serves a population greater than 3,300 persons to conduct an assessment of the vulnerability of its system to a terrorist attack or other intentional act intended to substantially disrupt the ability of the system to provide a safe and reliable supply of drinking water. Upon request, small community water systems serving a population of 3,300 or less are to be provided guidance by the US EPA on how to conduct a vulnerability assessment. However, small systems are not required to prepare a vulnerability assessment or submit it to EPA.

I. INFRASTRUCTURE AND EQUIPMENT ASSESSMENT

This section will describe planned methods and processes for the operation, maintenance, inspection, testing, repair, replacement, and associated record keeping of the infrastructure and equipment needs of the proposed water system which will only consist of a distribution system. The following equipment and facilities must be assessed according to these parameters:

1. *Water Meters*

- a. Operation Self-Operating
- b. Maintenance As-needed
- c. Inspection Annually
- d. Testing & Calibrating As recommended by the manufacturer or
As-needed if indicated by inconsistent readings
- e. Repair As needed
- f. Replacement Every 10 years
- g. Record Keeping Meter reading records will be electronically input and interfaced
with the computerized billing system. Meters will be read
monthly. System will be in place at system start-up.

Water meters will be in compliance with applicable areas of Section C700 of the AWWA Standards and Section 8.12 of the Recommended Standards for Water Works.

2. *Water Mains (Valves/Hydrants)*

- a. Operation Per Manufacturer's Specifications
- b. Maintenance Flush mains quarterly, Exercise valves and hydrants bi-annually
- c. Inspection During maintenance
- d. Testing During maintenance
- e. Repair As needed
- f. Replacement 20 years for valves; As needed for water mains and hydrants
- g. Record Keeping Distribution system testing results, bench sheets, MROs, residual
levels, calibration, and backflow testing records will be kept on file
at the Town Hall/Utility office in properly labeled folders and/or an
electronic filing system. Manual files will also be created to record
preventative maintenance, inspections, testing, work orders and
repairs related to the distribution system until a computerized
Facilities Management Program is installed.

Water mains, valves and hydrants will be in compliance with applicable areas of Section C500, C600 and C650 of the AWWA Standards and Section 8.0 of the Recommended Standards for Water Works.

3. *Cross Connection Control Devices*

The need and requirements for installation of Cross Connection Control Devices are detailed in the Chapter 2 of the Towns Rules, Regulations and Charges (**Appendix J**). A device will be required for the proposed supply line to the wastewater treatment plant and some non-residential users. Residential users must install a back flow device only if the property has an automatic sprinkler system.

- | | |
|-------------------|--|
| a. Operation | N/A |
| b. Maintenance | Responsibility of customer on an as-needed basis |
| c. Inspection | Annually as required by Utility |
| d. Testing | Initial installation and annually |
| e. Repair | As needed |
| f. Replacement | As needed |
| g. Record Keeping | Utility will conduct or require annual testing to be performed by customer with the results submitted. Results will be kept on file at the Town Hall/Utility office. |

The above components will follow the current American Water Works Association Standards, Section A100 through Section F100 and the Recommended Standards for Water Works, Great Lakes-Upper Mississippi River Board of State Public Health and Environmental Managers. As funds become available a computerized Facilities Management (FM) System will be implemented. The FM system will be interfaced with a future planned Geographic Information System (GIS). This will assist in scheduling and maintaining records related to maintenance, repairs, inspection and testing activities.

J. Infrastructure Replacement Plan

Table II provides the estimated life expectancy and the estimated cost to replace equipment with useful lives less than 20 years. Manufacturer's data and EPA literature were used as sources for the expected life of typical components. Excerpts are provided in **Appendix R**. Schedule 5 of the Financial Plan in **Appendix C** contains the annual operation, maintenance and repair (OM&R) costs including replacement costs over the 20 year planning period. The replacement cost will be amortized over the estimated useful life of each piece of equipment. A replacement fund will be established using collected funds from the monthly water rates and connection fees. The initial commitment fees will serve as beginning working funds which is in excess of what is actually needed at this time. Major capital improvements for unforeseen conditions will be handled as needed and may result in an increase in user fees.

K. Operator Certification

An operator with a minimum DSS Certification will maintain and run the distribution system. The operator will be in charge of the distribution system and will be responsible for complying with applicable state and federal requirements concerning certified operators, including 327 IAC 8-12. Operator requirements are provided in **Appendix H**.

L. WSMP Certification

The technical capacity section of the Water System Management Plan was prepared under the direction of a registered Professional Engineer. A signed certification is provided in **Appendix A** and will serve as documentation that the proposed public water supply system will produce drinking water that meets the public water supply requirements.

III. FINANCIAL CAPACITY

This section of the WSMP provides an analysis of the financial capacity of the system. Included will be a five year budget plan with a detailed accounting of all operating revenues and expenses. In addition, a twenty year financial plan will be included that describes the projected growth, infrastructure replacement plan, and account for funding repairs.

A. Five Year Budget Plan

The five year budget plan includes a pro forma income statement, a balance sheet, a statement of retained earnings, and a statement of cash flows for each of the next five years. The budget is consistent with accepted accounting practices for regulated systems and was prepared in accordance with IURC requirements. The five year financial report was prepared by a Certified Public Accountant (CPA) and is contained in **Appendix C**. Included are operating revenues, operation and maintenance expenses, and administrative expenses.

B. Twenty Year Budget Plan

A twenty year financial plan is also provided in **Appendix C** and includes the following:

1. Projected growth and a description of the ability to meet expected growth.
2. An infrastructure replacement plan.
3. An account for funding necessary repairs to the waterworks system.

C. Preparation of Financial Reports

The financial reports verifying the financial capacity of the new community water system were prepared by a Certified Public Accounting Firm. The firm is registered in Indiana as indicated by letterhead and signature contained in **Appendix B**.

IV. MANAGERIAL CAPACITY

This section of the WSMP includes detailed information on various aspects of management of the proposed water system. Included are detailed descriptions of the organization, its ability to respond to emergencies, authorities and responsibilities, and staff qualifications.

A. Organization

The waterworks system will be operated as a municipality under the authority of IC 8-1.5-2-3. Under this statute, the Town of Lizton has the legal authority to provide water service to the proposed Service Area. A Town Council oversees management of the Town and its operations. The address of the Town Hall is 106 N. Lebanon Street, Lizton, Indiana 46149. Mr. Robert Uhrick is the Town Council President and serves as the primary representative and signatory. An organizational chart with names is provided as **Exhibit 4**. At the present time there are three (3) members on the Council. The positions are elected for four year terms with rotating elections.

As shown on the organizational chart, the Town Council will oversee the activities of the Utility Clerk and Certified Operator. The Operator, Mike McKinney, is already employed part time by the Town as the wastewater operator. In this function he operates the wastewater plant and is in charge of maintaining the collection system. He is in the process of obtaining the necessary DSS Certification so he can also operate the water distribution system at which time he will become full time. This position will answer directly to the Council. The wastewater department has 2 maintenance persons who will also be used as needed for the water system under the direct supervision of the Certified Operator.

Operator duties will be split between the water and sewer utilities with approximately 10 to 15 hours per week devoted to the water utility portion. Responsibilities and needed qualifications of the Operator position are provided in **Appendix H** and include day to day maintenance and repair of the distribution system, associated record keeping, system inspection and testing, and submittal of required forms to the State.

The existing Clerk Treasurer, Tonya Perry, also serves as the Utility Clerk for the wastewater utility. This position will be expanded to include the water utility at which time it will become full time. Approximately 15 hours per week will be devoted to the water utility. The primary responsibilities include meter reading, data compilation, record keeping and billing. The Clerk Treasurer is presently a part time elected position and carries a 4 year term. Tonya has been the Town's Clerk Treasurer for nearly 14 years and provides various services including vendor and business licensing, building and zoning permits, sewer billing, and accounts payables and receivables. She also serves as secretary to the Council as well as other Town Boards. The job requirements of the Utility Clerk are contained in **Appendix I**.

B. Emergency Situations

Appendix E contains an Emergency Management Plan for the water works utility. Included is a description of security measures that will be taken to protect the water system from vandalism, terrorism, and other human-caused or natural vulnerabilities or emergencies. Staff members, by job position, and responsibilities are also provided as well as public notification procedures and alternate water supplies.

The Town maintains casualty insurance with limits up to \$1,000,000 per occurrence and \$2,000,000 aggregate. See **Appendix D** for the certificate of liability limits.

C. Consolidation or Interconnection Assessment

The assessment of consolidation or interconnection to another public water system included a look at available facilities within close proximity to the Service Area. Connecting to an existing system is dependent on the proximity, operational circumstances and willingness of the utility to serve the area. Water systems located within a 10 mile radius of the Town includes CWA and the Towns of Advance, Brownsburg, Danville, Jamestown, and Pittsboro. Written notice was sent to each of these Towns. Copies of the certified letters and responses are contained in **Appendix M**. Response were not received from Jamestown and Pittsboro.

Interconnection with the Towns of Advance, Danville, and Jamestown would require the installation of multiple miles of water mains which would be costly and unnecessary. For illustration purposes, cost estimates and layouts were developed for interconnection with each of these Towns. **Appendix N** contains a summary of the preliminary breakdowns and exhibits.

Brownsburg and Pittsboro already purchase water from CWA and their systems are interconnected. An exhibit in **Appendix S** displays the CWA system interconnection between the 1.0 MG storage tank located adjacent to Lizton and the 2.0 MG storage tank at Brownsburg.

The only system within reasonable proximity to Lizton that can provide the needed volume of water is CWA. The utility has an existing line and water tower at the edge of Town and they have expressed their willingness to provide water at a wholesale rate. The water tower could also serve as a backup supply should the CWA system be temporarily interrupted in an emergency situation.

The advantages of this alternative include eliminating the cost and management requirements associated with construction, operation, and maintenance of treatment and supply facilities while still providing a sound choice for water service. Further, the CWA system will be capable of providing adequate flows and pressures to satisfy the needs of the Town and INDOT. The main disadvantage is the loss of control associated with water service provided by another entity.

It is generally believed that, if the Town is unable to install a distribution system and connect to CWA, the project will have to be abandoned due to cost. INDOT would then pursue a project on its own and not contribute to the Town's project. As such, connection to a facility other than CWA was not, and is still not, an option. There are no providers within proximity to the service area that can financially provide better water service.

With regards to consolidation, CWA is the only entity that could extend service to the Town. CWA's water terms and conditions for expansion of their system require a prior written agreement between them and the prospective customers. Users desiring service would need to formally apply in writing to request a main extension. Construction would be scheduled in the order in which the Utility receives the total required deposit under the terms of the agreement. The cost of the main may be either the actual cost of a developer installed extension or the estimated cost of the extension which must be designed to meet CWA's standards.

In addition to the main extension, applicants must pay the full gross-up of any applicable state and federal taxes associated with the project. The revenue allowance to offset the cost of the extension must be equal to three times the estimated annual revenue to be received by CWA from the proposed customers. Individual customers would be responsible for installing the service line on their property and the cost to connect to the main which is based on the size of the tap and meter.

If the overall project cost is lower than the revenue allocation there is no charge to the customer. If the project cost exceeds the revenue allocation, the cost is distributed among the benefitting users. Arrangements must be made by each user with CWA for payment of the distributed cost prior to construction of the extension.

After installation, the lines would belong to CWA even though the costs were paid by the initial users. CWA could extend these lines upon their discretion without reimbursement to those who paid for the lines to be installed originally. CWA would determine the size of the main. The consumption cost for the water would be based on higher rates than the wholesale rate that the Town is being offered under the interconnection option.

While this alternative is feasible, the terms and requirements of installation are not financially and politically acceptable to the Town. In addition, the Town would have no control over future rate increases proposed by CWA. Further, the cost for construction would be higher since CWA would not be eligible for grants which would reduce the actual debt service. Interconnection with CWA to purchase water at a wholesale rate is consistent with the arrangement CWA has with the Towns of Pittsboro and Brownsburg who are in the same service area as defined by CWA.

A cost benefit analysis comparing development of a new public water supply, consolidation with an existing supply, and interconnection with an existing water supply is provided on **Table III**. A copy of the agreement with CWA is provided in **Appendix F**. **Appendix G** contains the agreement between the Town and INDOT.

D. Authority and Responsibility

This section provides an assessment of the water system's authority and responsibility to make and execute decisions related to the provision of water service. The Town is established as a municipal corporation. As such, in accordance with IC 8-1.5-2-3 the Town has the authority to obtain permits and establish the required rates, charges, rules and regulations for utility services to be rendered. Included is the entitlement to use public roads and property to render such utility services to the extent permitted by law. Through established law, the Town possesses the lawful power and authority to provide sewage disposal and water utility service in the service area. The Town is currently providing sanitary sewer and storm water services to its citizens as well as being subject to audit by the Indiana State Board of Accounts.

In accordance with IC 8-1-1.9 as amended by SEA 362, a water utility organized as a legal entity after June 30, 2018 is subject to jurisdiction of the Indiana Utility Regulatory Commission (IURC) for a period of 10 years. As such participation in the IURC will be pursued by the Town. Authority and responsibility for the utility ultimately lies with the members of the Town Council who are all elected positions. Consequently, the Council makes up the legal authority that controls and manages the operation of the utility.

Pursuant to Indiana code, Lizton is a municipal corporation formed to provide and render service to and for the benefit of its residents. The Town has been in the business of providing wastewater utility services since the 1970s. As such, they have the capability of providing customer service, billing, accounting, maintenance, and management for both the water and sewer services at very little additional cost to its existing customers.

Decisions will be made in accordance with their current practices which have proven their ability to operate utility services successfully over the past decades. Written rules and regulations are in place to govern and manage the water and sewer utilities. The document is in compliance with all applicable local, state, federal and other rules and requirements that pertain to a public water system. The documents will be kept on file at the Town Hall and Utility Office and are included in **Appendix J**. Included are the following:

1. Conditions required for providing water service to existing and new connections.
2. Responsibilities of the public water supply system to the customer.
3. Responsibilities of the customer to the public water supply system.
4. Charges, fees, rates, and billing requirements.

E. Qualifications

As noted previously, the proposed Operator, Mike McKinney, is already employed part time by the Town as the wastewater operator. He is in the process of obtaining an IDEM certified DSS license so he could also operate the water system. At that time, he will become full time with an estimated 15 hours weekly devoted to the water utility portion. Responsibilities and qualifications of the Operator, including continuing education requirements, are provided in **Appendix H** and include day to day maintenance and repair of the distribution system, associated record keeping, system inspection and testing, and submittal of required forms to the State.

The existing Clerk Treasurer, Tonya Perry, also serves part time as the Utility Clerk for the wastewater utility. Her duties will be expanded to include the water utility at which time the position will be full time. Approximately 10 to 15 hours per week will be dedicated to the Water Utility. The primary responsibilities include meter reading, data compilation, record keeping and billing. Tonya is currently responsible for the administration and finance duties of the Town and the wastewater system and has nearly 14 years of experience. The job requirements and needed qualifications of the Water Utility Clerk are contained in **Appendix I**.

The Council members and water utility staff will participate in local and national utility and water organizations such as the Indiana Water Environmental Association (IWEA) to the extent necessary and practical. Staff and management will be appropriately trained through ongoing programs and seminars in order to keep up to date on industry changes. Council members presently attend the Association of Indiana Municipalities (AIM) which was previously the Indiana Association of Cities and Towns (IACT).

TABLES

Nov 2018

TABLE I
Customer Breakdown
Town of Lizton Water Utility

Name	Service Address	Services	Approx # Employees	EDUs
Residential			171	171
Multi-family				
Keers Properties	601-616 Kody (8 Duplexes)		8	16
Paino Property Group	407 Lebanon (Apartments)		<u>1</u>	<u>26</u>
	Subtotal		9	42
Non-residential				
Lizton Town Hall	106 Lebanon		1 < 5	1
Lizton Union Twn Fire Dept	101 E. Main		1 < 5	1
Lizton Lions Club	100 S. Cherry		1 < 5	1
Lizton WWTP	1056 W CR		1 < 5	1
Lizton Post office	407 N. church		1 < 5	1
Lizton Christian Church	202 N. Church		1 Sun, Wed	1
United Methodist	120 W. Brumfield		1 Sunday	1
United Methodist (Parsonage)	646 N. lebanon		1	1
First Baptist	309 W. Main		1 Sun, Wed	1
Dollar General	101 N. State		1 < 5	1
JR Bev Mart	111 N. State		1 < 5	1
Sunoco gas Station	201 N. State		1 < 5	1
Myers Garage	526 2nd Street		1 < 5	1
Myers Garage (Arbor Terra)	526 2nd Street		1 < 5	1
W&G Machine & Tool	317 W. Main		1 < 5	1
Tri-West School Adm Blding	104 N. Church		1 < 10	1
Dairy Bar	102 W. Main		1 < 5	1
Brasher Construction	500 Lebanon		1 < 5	1
State Bank of Lizton	8414 N. SR 39		1 < 5	1
Commercial (formerly J's Tacolnn	503 S. State		1 Vacant	1
Lizton Pizza (Take-out & Self Storage)	401 N. State		1 < 5	1
Rusted Silo BBQ (Take-out)	411 N. State		1 < 5	1
Barn at Kennedy Farms	511 N. State		1 Fri, Sat	1
Smithville Telephone	200 N. Cherry		1 < 5	1
Rods Roadrunners Used Cars	501 N. State		<u>1</u> < 5	<u>1</u>
	Subtotal		25	25
INDOT				
Garage			1	1
Rest Areas			<u>1</u>	<u>14</u>
	Subtotal		2	15
	Total		207	253

Note: Non-residential entities with less than 10 employees or limited daily usage (e.g. churches) considered as one Equivalent Dwelling Unit (EDU).

TAI		Table II				Mar 2019	
Cost Estimate - Interconnection with Citizens Energy Water Town of Lizton Waterworks							
	Unit	Qty	Unit Cost	Total Cost	Expected Life [1][2]	Annual Replacement	20 Yr Salvage Value [3]
Town Distribution System							
6" PVC Waterline	lf	11550	\$50	\$577,500	100		\$462,000
6" Valves	ea	46	\$1,200	\$55,200	40		\$27,600
12" PVC Waterline	lf	8020	\$85	\$681,700	100		\$545,360
12" Valves	ea	23	\$4,000	\$92,000	40		\$46,000
Water Hydrants on 6" Line	ea	19	\$4,800	\$91,200	50		\$54,720
Water Hydrants on 12" Line	ea	18	\$5,000	\$90,000	50		\$54,000
Highway Crossing (Bore)	lf	300	\$250	\$75,000	50		\$45,000
Railroad Crossing (Bore)	lf	180	\$300	\$54,000	50		\$32,400
Water Services	ea	200	\$900	\$180,000	40		\$90,000
Water Meters	ea	200	\$500	\$100,000	10	\$10,000	\$0
Analyzer & Chemical Feed	ea	1	\$24,000	\$24,000	20	\$0	\$0
			Subtotal	\$2,020,600			
INDOT Distribution System							
6" PVC Waterline	lf	6940	\$50	\$347,000	100		\$277,600
On-site PVC Waterline	lf	140	\$40	\$5,600	100		\$4,480
12" Valves	ea	2	\$4,000	\$8,000	40		\$4,000
Water Hydrants on 6" Line	ea	3	\$4,800	\$14,400	50		\$8,640
Highway Crossing (Bore)	lf	980	\$300	\$294,000	50		\$176,400
Meter	ea	2	\$2,000	\$4,000	10	\$400	\$0
			Subtotal	\$673,000			
			Subtotal Construction	\$2,693,600			
			Contingencies	\$230,000			
			Non-Construction	\$846,400			
			Total Project	\$3,770,000		\$10,400	\$1,828,200
[1] Expected life based on manufacturer's report; PPCA 2014 for Plastic Pipe..							
[2] EPA's Asset Management Handbook for Small Water Systems							
[3] Straight line depreciation							

TAJ

TABLE III

**Cost Benefit / Present Worth Comparison
Feasible Waterworks System Alternatives
Town of Lizton, Indiana**

	<u>Construct New Waterworks Facility</u>	<u>Consolidate With Existing Water Facility Citizen's Energy</u>	<u>Interconnect to Existing Water Facility Citizen's Energy</u>
	OPTION 2 (Table IV)	OPTION 3	OPTION 1 (Table II)
Distribution	\$2,693,600	\$2,693,600	\$2,693,600
Treatment and Supply	<u>\$1,578,000</u>	<u>\$0</u>	<u>\$0</u>
Total Capital Costs	\$4,271,600	\$2,693,600	\$2,693,600
Non-construction Costs	\$1,281,480	\$846,400	\$846,400
Contingencies	\$363,086	\$230,000	\$230,000
Financial Assistance and Grants [8]	-\$2,700,000	\$0	-\$2,700,000
Availability/Capacity Fee	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
Total Project Cost	\$3,216,166	\$3,770,000	\$1,070,000
Annual OM&R	\$87,000	\$0	\$58,000
Present Worth OMR & Replace [1]	\$2,650,816	\$0	\$1,767,211
Annual Treatment or Treated Water [5]	\$0	\$104,512	\$85,844
Present Worth Treatment [1]	\$0	\$3,184,392	\$2,615,594
Salvage Value (Tables II, IV)	\$1,995,600	\$0	\$1,828,200
Present Worth of Salvage Value [2][3]	\$1,144,341	\$0	\$1,048,348
Net Present Value (NPV) [4]	\$4,722,642	\$6,954,392	\$4,404,457

[1] Present worth of annuity based on interest rate of 1.2% and 20 years. Uniform Series Present Worth (USPW)

[2] Present worth based on PW Factor = $(1/(1+i)^t)$ using interest rate (i) of 1.2% and 20 yrs (t) as obtained from Appendix C - OMB, Circular A-94.

[3] Salvage value was determined based on the life expectancy, converted to present day dollars, and subtracted.

[4] NPV = Capital cost (C) - USPW (O&M) - SPPW (PW of salvage value)

[5] Based on 59,270 gpd & CEG Water Rate 1 for Consolidation; Water Rate 8 for Interconnection (Wholesale purchase for resale)

[6] Under Consolidation with CEG, project costs exceeding 3 years of water usage would be distributed among benefitting users and must be paid up front prior to construction. This would equate to \$9,686 per initial user after deducting 3 years of user fees, INDOT EDUs, & the \$2M in contribution and dividing by 164 users. (179 initial users - 15 EDUs for INDOT = 164 users)

[7] While the Consolidation option results in slightly lower NPV, the Interconnection option would result in lower user fees due to the availability of Grants (which would not be available under the Consolidation option) which would reduce debt service.

[8] The Town has been awarded a \$700,000 grant from the Indiana Office of Community and Rural Affairs (OCRA) and has a \$2 Million Dollar commitment from INDOT as part of this project. This financial assistance is not possible under Option 3, if CWA extends their line and owns the system. In addition, the Town is eligible for subsidized funding from SRF in the form of a forgivable loan in an amount to be determined.

TAI		Table IV					Mar 2019	
Cost Estimate - Distribution System and New Treatment Plant								
Town of Lizton Waterworks								
	Unit	Qty	Unit Cost	Total Cost	Expected Life [1][2]	Annual Replacement	10 Yr Salvage Value [3]	
Town Distribution System								
6" PVC Waterline	lf	11550	\$50	\$577,500	100		\$462,000	
6" Valves	ea	46	\$1,200	\$55,200	40		\$27,600	
12" PVC Waterline	lf	8020	\$85	\$681,700	100		\$545,360	
12" Valves	ea	23	\$4,000	\$92,000	40		\$46,000	
Water Hydrants on 6" Line	ea	19	\$4,800	\$91,200	50		\$54,720	
Water Hydrants on 12" Line	ea	18	\$5,000	\$90,000	50		\$54,000	
Highway Crossing (Bore)	lf	300	\$250	\$75,000	50		\$45,000	
Railroad Crossing (Bore)	lf	180	\$300	\$54,000	50		\$32,400	
Water Services	ea	200	\$900	\$180,000	40		\$90,000	
Water Meters	ea	200	\$500	\$100,000	10	\$10,000	\$0	
Analyzer & Chem Feed	ea	1	\$24,000	\$24,000	20		\$0	
			Subtotal	\$2,020,600				
INDOT Distribution System								
6" PVC Waterline	lf	6940	\$50	\$347,000	100		\$277,600	
On-site PVC Waterline	lf	140	\$40	\$5,600	100		\$4,480	
12" Valves	ea	2	\$4,000	\$8,000	40		\$4,000	
Water Hydrants on 6" Line	ea	3	\$4,800	\$14,400	50		\$8,640	
Highway Crossing (Bore)	lf	980	\$300	\$294,000	50		\$176,400	
Meter	ea	2	\$2,000	\$4,000	10	\$400	\$0	
			Subtotal	\$673,000				
Water Supply, Treatment, Storage								
Geotechnical Work	ls	1	\$25,000	\$25,000	N/A		N/A	
Land	acre	3	\$10,000	\$30,000	N/A		N/A	
Install New Wells	ea	2	\$40,000	\$80,000	50		\$48,000	
Well Pumps	ea	2	\$20,000	\$40,000	20		\$0	
Raw Water Line PVC	lf	400	\$30	\$12,000	100		\$9,600	
Valves	ea	5	\$1,000	\$5,000	20		\$0	
Finished Water Line PVC	lf	400	\$40	\$16,000	100		\$12,800	
Iron Removal Filter(Aerolator)	ls	1	\$250,000	\$250,000	20		\$0	
High Service Pumps	ea	2	\$10,000	\$20,000	20		\$0	
Backwash Holding Tank	ea	1	\$50,000	\$50,000	20		\$0	
Backwash Pumps&Discharge	ls	1	\$35,000	\$35,000	20		\$0	
CL2 Disinfection	ls	1	\$20,000	\$20,000	20		\$0	
Piping & Valves	ls	1	\$20,000	\$20,000	40		\$10,000	
Building	ea	1	\$90,000	\$90,000	50		\$54,000	
Sitework & Fence	ls	1	\$25,000	\$25,000	50		\$15,000	
Electrical & Controls	ls	1	\$60,000	\$60,000	20		\$0	
Storage Tank (100,000 gal)	ea	1	\$60,000	\$800,000	50		\$480,000	
			Subtotal	\$1,578,000		\$10,400	\$1,995,600	
			Total Construction	\$4,271,600				
			Contingencies	\$363,086				
			Non-construction	\$1,281,480				
			Total Project	\$5,916,166	Sub-total			

EXHIBITS



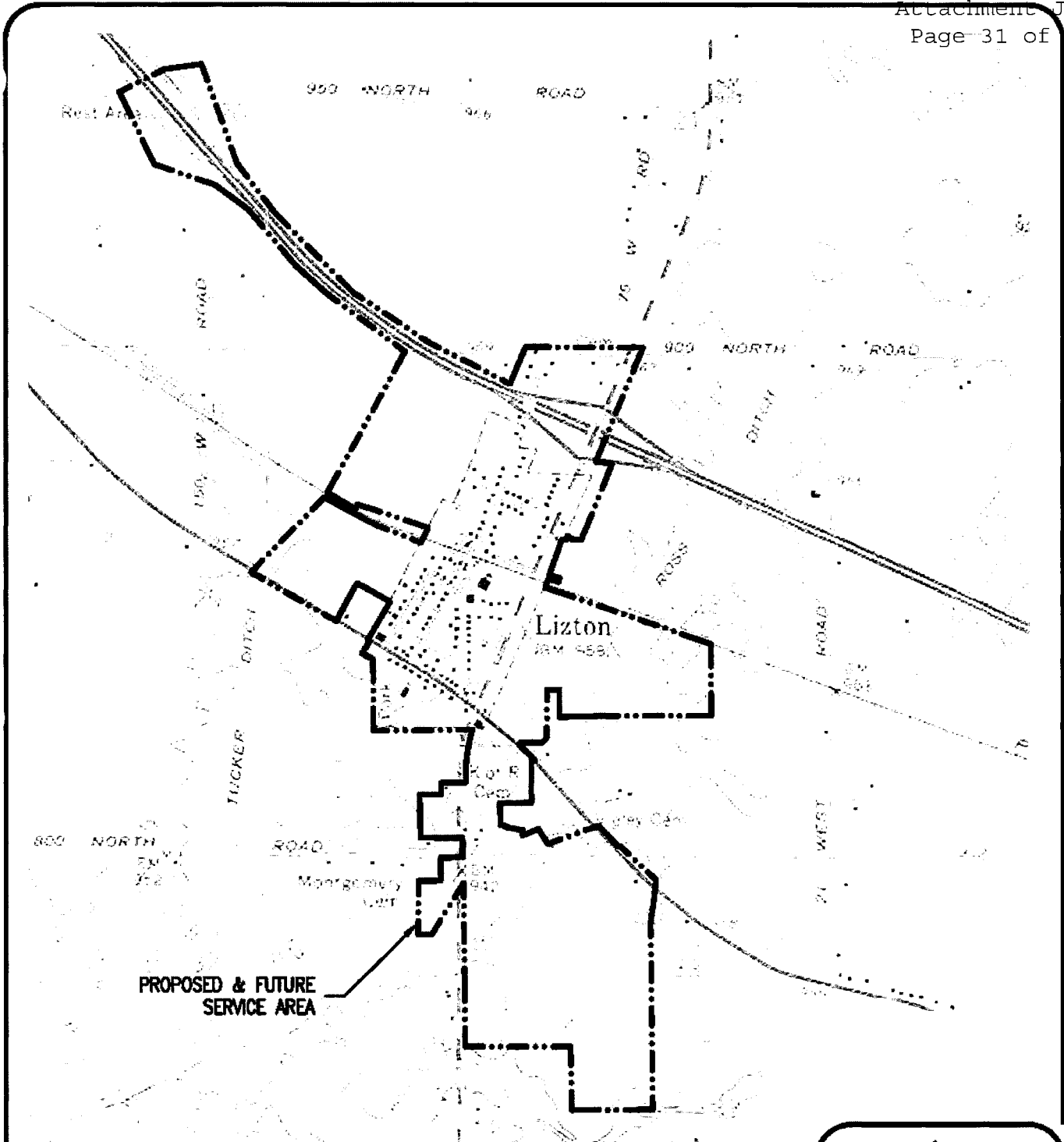
**TOWN OF LIZTON
PROJECT LOCATION**

SCALE: NONE

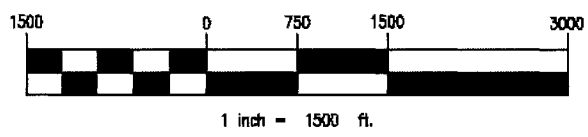


**WATER PER
EXHIBIT 1**

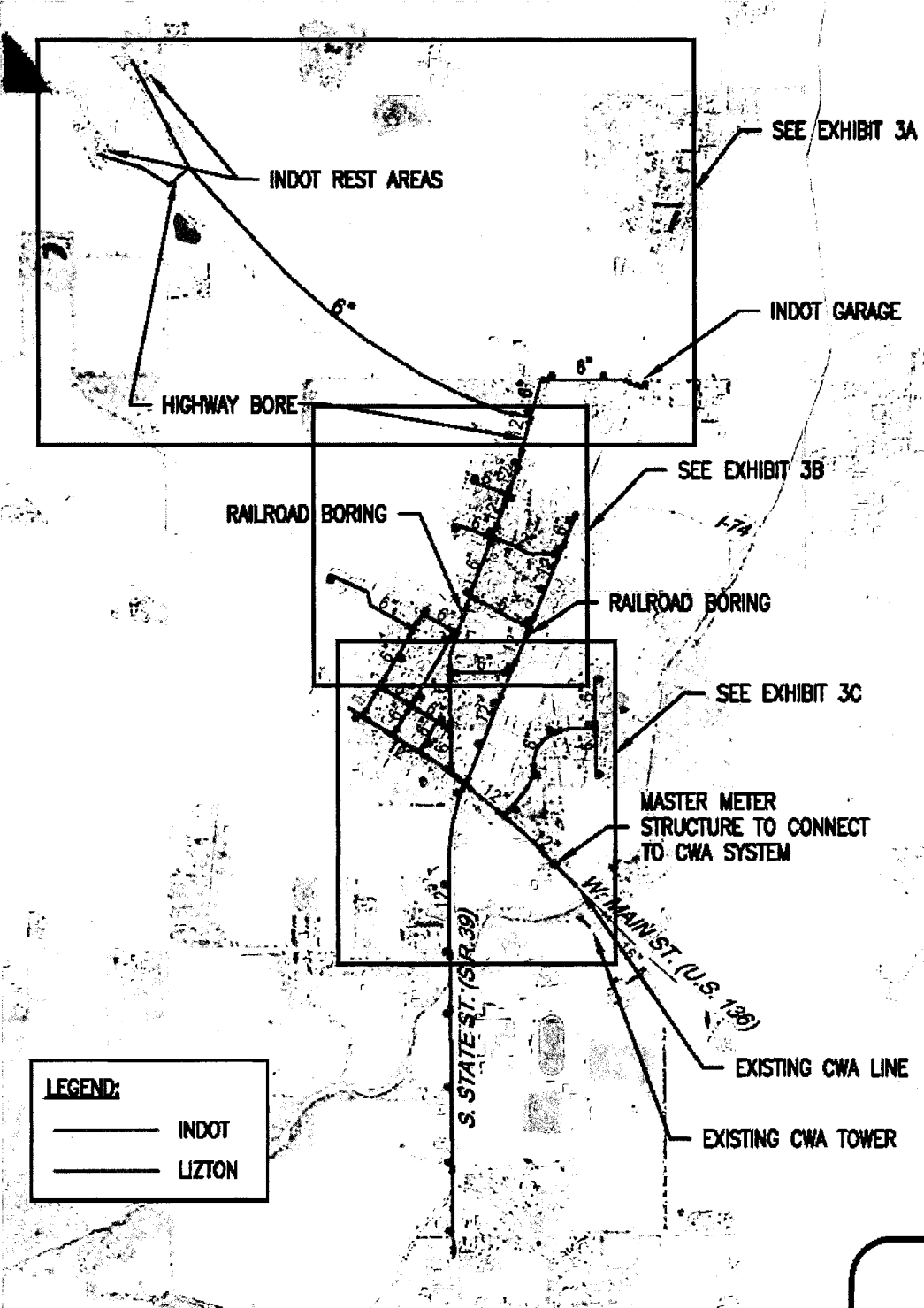
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**TOWN OF LIZTON
PROPOSED & FUTURE SERVICE AREA**



**WATER PER
EXHIBIT 2**



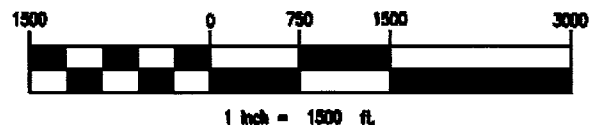
LEGEND:

—— INDOT

—— LIZTON

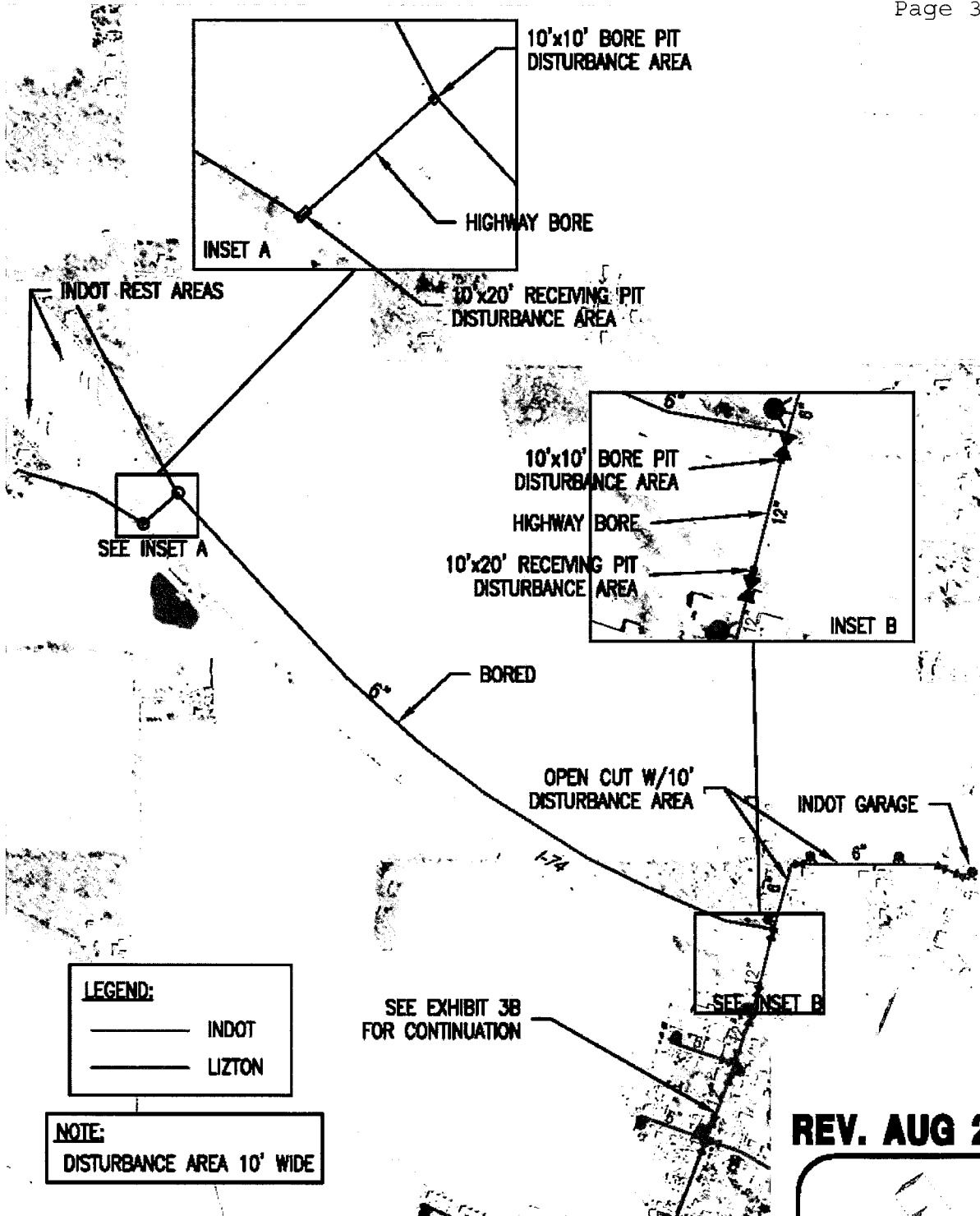
TOWN OF LIZTON

PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS



WATER PER
EXHIBIT 3

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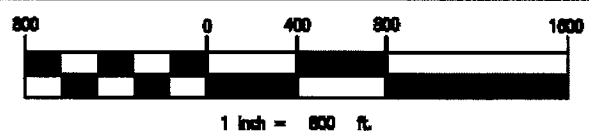


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TOWN OF LIZTON PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS

LEGEND:
—— INDOT
- - - LIZTON

NOTE:
DISTURBANCE AREA 10' WIDE



REV. AUG 2018



**WATER PER
EXHIBIT 3A**

SEE EXHIBIT 3A FOR CONTINUATION

10'x10' BORE PIT
DISTURBANCE AREA

RAILROAD BORING

10'x20' RECEIVING PIT
DISTURBANCE AREA

10'x10' BORE PIT
DISTURBANCE AREA

RAILROAD BORING

10'x20' RECEIVING PIT
DISTURBANCE AREA

NOTE:

DISTURBANCE AREA 10' WIDE

LEGEND:

INDOT

LIZTON

SEE EXHIBIT 3C
FOR CONTINUATION

TOWN OF LIZTON

PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS



1 inch = 400 ft.



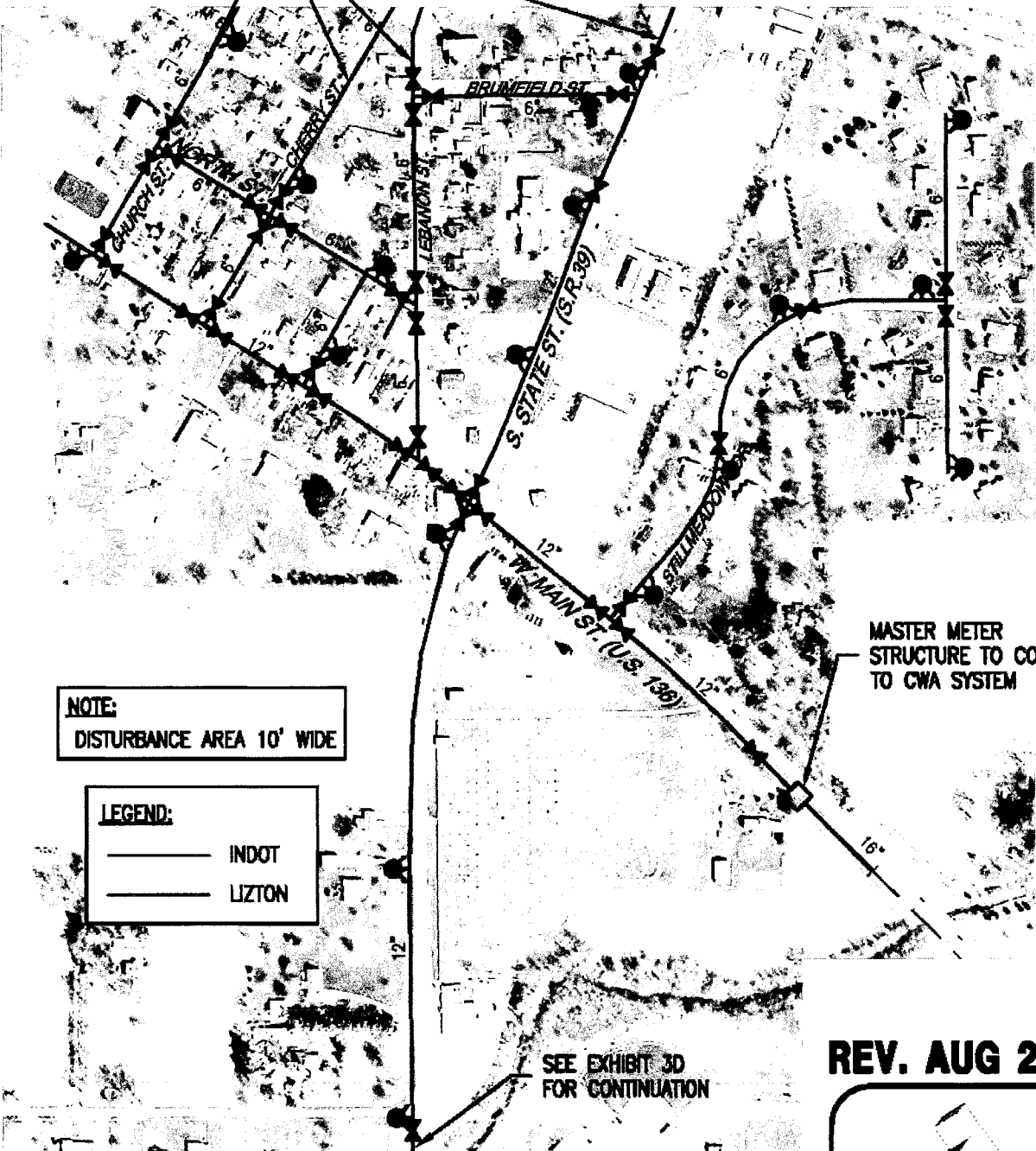
REV. AUG 2018



WATER PER
EXHIBIT 3B

08/15/2018 1' S:\2018\LIZTON\201815A - WATER PER ANDI-EXHIBIT 3 - PRO MP-REV2.DWG

SEE EXHIBIT 3B
FOR CONTINUATION



NOTE:
DISTURBANCE AREA 10' WIDE

LEGEND:

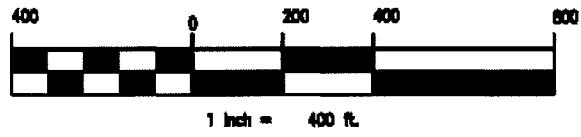
	INDOT
	LIZTON

SEE EXHIBIT 3D
FOR CONTINUATION

REV. AUG 2018

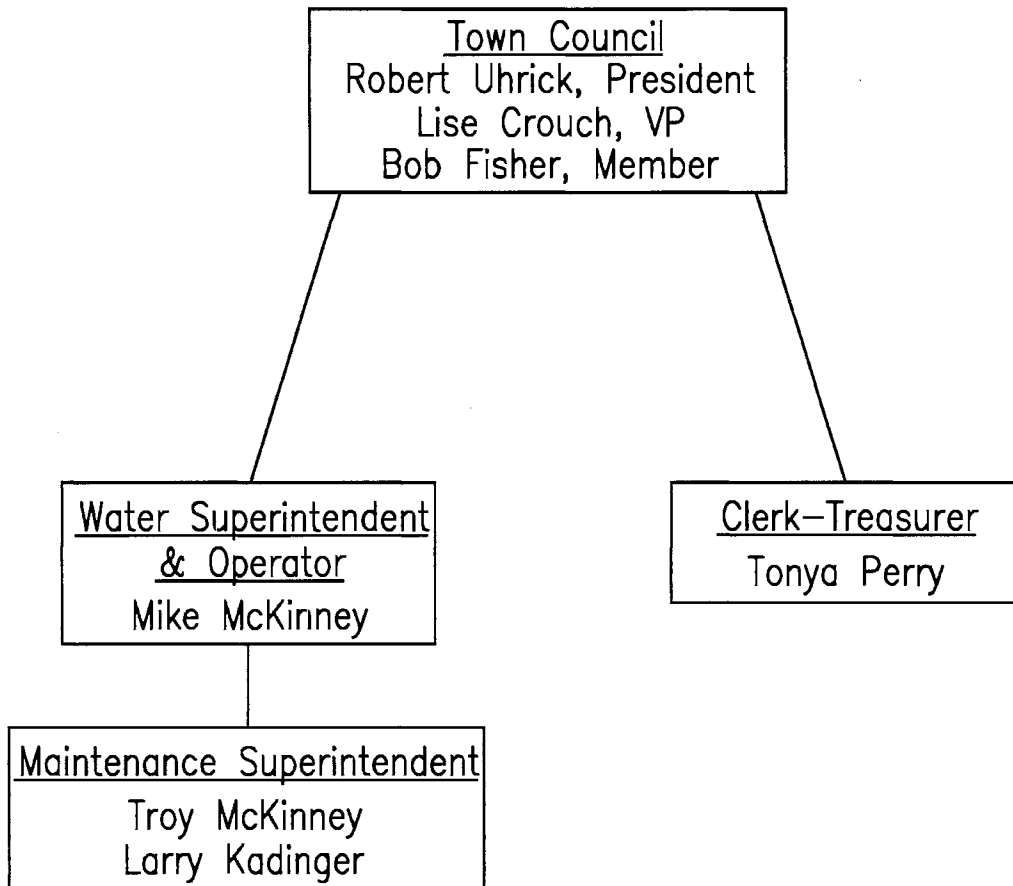


**TOWN OF LIZTON
PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS**



**WATER PER
EXHIBIT 3C**

08/15/2018 1' S:\2018\LIZTON\201815A - WATER PER\M01-EXHIBIT 3 - PRO MP-REV2.DWG



**TOWN OF LIZTON, IN
ORGANIZATIONAL CHART**



TRIAD ASSOCIATES INC.

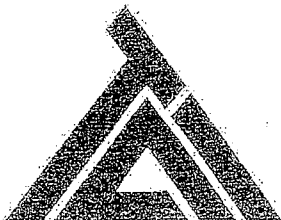


MGMT PLAN
EXHIBIT 4

APPENDIX A

Professional Engineer

Certifications



TRIAD ASSOCIATES, INC.

ENGINEERING • ARCHITECTURE

5835 LAWTON LOOP EAST DRIVE, INDIANAPOLIS, IN 46216-1064

TELEPHONE: (317) 377-5230

FAX: (317) 377-5241

WEBSITE: www.triadassoc.net • E-MAIL: triad@triadassoc.net

TOWN OF LIZTON WATER SYSTEM MANAGEMENT PLAN

TECHNICAL CERTIFICATION

I certify, under penalty of law, that I, or personnel under my direction or supervision, have prepared the Technical Capacity Section of the Town of Lizton's Water System Management Plan (WSMP) in accordance with Indiana Administration Code 327 IAC 8-3.6. Based on my evaluation of the Technical Capacity Section of the WSMP, or my inquiry of the person or persons directly responsible for preparing this portion of the WSMP, the information contained in the section is, to the best of my knowledge and belief, true, accurate and complete.

Signature: _____

Date: _____

5-30-18

Name (print): James W. Frazell P.E.

Title: _____

PROJECT ENGINEER

Project Name: Town of Lizton, Indiana

TRIAD ASSOCIATES, INC.
*Engineering * Architecture*

APPENDIX B
Financial Consultant
Certifications

W. Krohn & Associates, LLP
CPA's and Consultants

Otto W. Krohn, CPA, CGMA
James W. Treat, CPA, CGMA

231 E. Main Street, Westfield, Indiana 46074

American Institute of CPAs
Indiana CPA Society

**TOWN OF LIZTON CONNECT
WATER SYSTEM MANAGEMENT PLAN
FINANCIAL CERTIFICATION**

I certify, under penalty of law, that I, or personnel under my direction or supervision, have prepared the Financial Capacity Section of the Town of Lizton's Water System Management Plan (WSMP) in accordance with Indiana Administration Code 327 IAC 8-3.6. Based on my evaluation of the Financial Capacity Section of the WSMP, or my inquiry of the person or persons directly responsible for preparing this portion of the WSMP, the information contained in the section is, to the best of my knowledge and belief, true, accurate and complete.

Signature: *Sarrod Hall* Date: 5/29/2018
Name (print): Sarrod Hall Title: Partner
Project Name: Town of Lizton

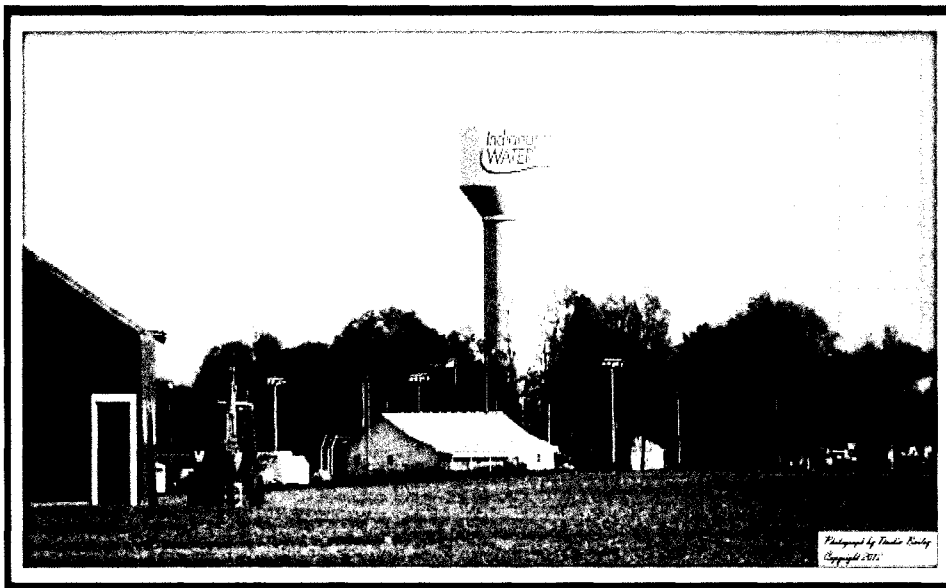
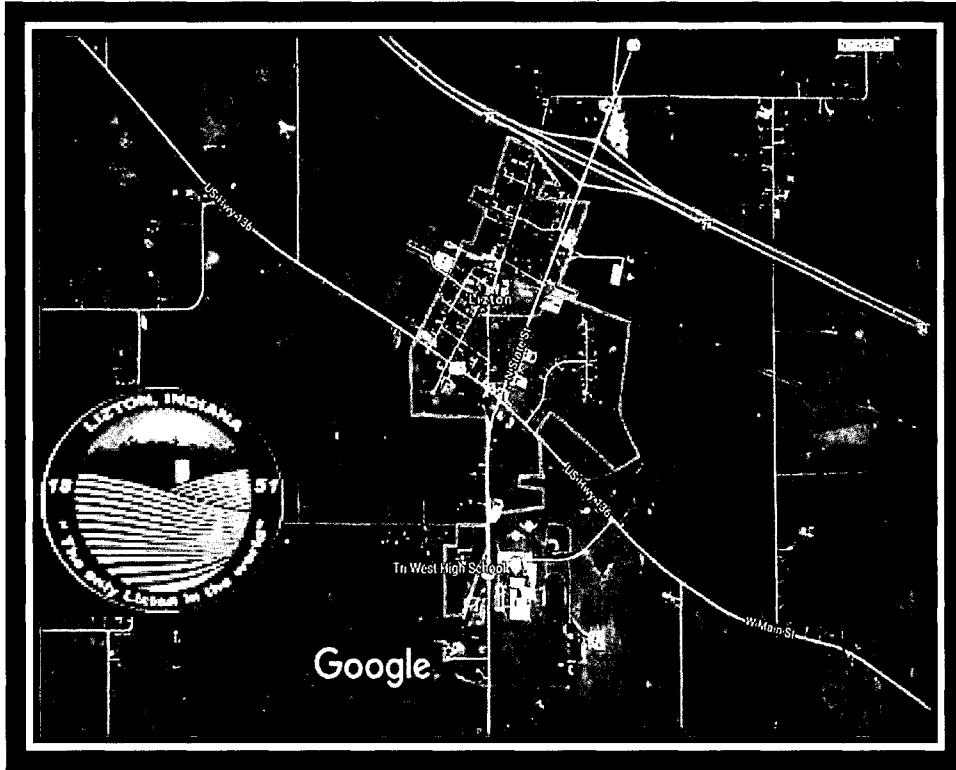
APPENDIX C

Financial Plan

TOWN OF LIZTON, INDIANA

INFORMATION CONCERNING PROPOSED MUNICIPAL WATER UTILITY

REVISED - MAY 15, 2019



O.W. Krohn & Associates, LLP
CPA's and Consultants

PRELIMINARY - FOR DELIBERATIVE PURPOSES

O.W. Krohn & Associates, LLP
CPA's and Consultants

Otto W. Krohn, CPA, CGMA, MA
James W. Treat, CPA, CGMA, MA
Jarrod S. Hall, CPA, CGMA, MA

231 E. Main Street, Westfield, Indiana 46074
(317) 867-5888
www.owkcpa.com

American Institute of CPA's
Indiana CPA Society
SEC Registered MA

ACCOUNTANTS' SPECIAL PURPOSE COMPILATION REPORT

May 15, 2019

Town Council
Town of Lizton
106 Lebanon Street
Lizton, IN 46149

Re: Proposed Water Utility Financial Capability Analysis
IDEM Financial

In connection with the establishment of the proposed Lizton Municipal Water Utility, we have, at your request, compiled this special purpose report. The report includes projected balance sheets as of December 31st, 2020 to 2039, along with the related projected income statements and projected statements of cash flows for the years then ending. The key assumptions underlying the projections are also included in the accompanying comments, and also noted on Schedule 1. The projected financial statements are presented on Schedule 2.

This report has been compiled by us in accordance with the Statement on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants for the limited purpose of demonstrating the Town's financial and managerial capacity to own and operate a proposed municipal water utility, as required by the Indiana Dept. of Environmental Management. We have not audited or reviewed the projected financial information and, accordingly, do not express an opinion or provide any assurances thereon. There are usually differences between projected financial statements and actual results; and, the variations may be material.

Management is responsible for the assumptions underlying the projection which includes information provided by the Town's consulting engineers and other sources.

Our responsibility is to compile the projection in accordance with Statements on Standards for Accounting and Review Services issued by the American Institute of Certified Public Accountants. The objective of a compilation is to assist management in presenting financial information, including projected financial information, in the form of financial statements without undertaking to obtain or provide any assurance that there are no material modifications that should be made to the projected financial information.

This report is intended solely for the information and internal use by management of the proposed Lizton Municipal Water Utility and to comply with specific regulatory requirements of the Indiana Department of Environmental Management and should not be used for any other purpose. This restriction is not intended to limit distribution of this report, which is a matter of public record.

O.W. Krohn & Associates, LLP

TOWN OF LIZTON, INDIANA
PROPOSED MUNICIPAL WATER UTILITY

Cause No. 45274
Attachment JF-1
Page 44 of 341

SUMMARY OF SIGNIFICANT ASSUMPTIONS – 20 YEAR PROJECTION

Project Costs & Funding:

The Town has negotiated an arrangement with the Indiana Department of Transportation (INDOT) and Citizens Energy Group's Water Division to establish a municipally owned water utility that would serve the residents of the Town and INDOT's Rest Area on I-74, located just northwest of Lizton. INDOT has agreed to put up to \$2M of the proposed \$3.8M estimated project costs; and, the Town has been awarded a \$700,000 Community Focus Fund Grant. The Town has also applied for funding through the Indiana Finance Authority's State Revolving Fund (SRF) Loan Program and hopes to be able to take advantage of SRF's subsidized funding programs. In order to maintain a rate of approximately \$60 per month for a typical residential user, **the Town anticipates approximately \$900,000 to \$1.1M of funding in the form of a "Forgivable Bond Anticipation Note" (BAN) and a below market rate bond / loan payable over 20 years.** For purposes of this illustration, the projection assumes a 2.5% annual interest rate on the SRF 20 year loan (Bond Issue).

Customer Base:

While the Town has approximately 270 potential equivalent users (Equivalent Dwelling Units or EDUs), in addition to INDOT, the projection assumes an initial customer base of 179 EDUs with what are believed to be modest growth assumptions over the 20 year projection as noted in Schedule 1. **(Note: As of May 15, 2020, commitments from more than 210 EDUs have already realized.) The Town believes that the availability of potable drinking water will stimulate commercial development around the I-74 interstate and the IN-39 corridor. The Town also believes that there will be increased demand for housing projects once a reliable water source is made available.**

Cost of Purchased Water for Resale:

The projection assumes that the Town would pay CEG its normal retail volume charges which begin at \$4.93 per 1,000 gallons that gradually decrease to less than \$3.00 per 1,000 gallons after passing a 750,000 gallon per month usage threshold. It is understood that changes in the cost of purchasing water for resale may be passed onto the Town's retail users under an established Water Cost Adjustment Tracking procedure.

Other O&M Costs:

Pursuant to discussions with the Town and the Town's consulting engineers, we have prepared an annual budget for other operating expenses anticipated for the Utility. Such other expenses include a part-time utility manager and a cost sharing arrangement for administration and billing costs with the Town's existing Wastewater and Storm Water Utilities. **(Pursuant to meetings with IDEM, O&M projections have been increased from prior reports.)**

Commitment / Connection Fees:

In order to establish up-front commitments from potential users, the Town is collecting a \$250 per EDU commitment fee that will provide the utility with some initial working capital. **Distribution of the projected Fund Balances are displayed at the bottom of Schedule 2.** Subsequent connectors will be subject to a proposed \$1,100 per EDU Connection Fee, as well as potential future System Development Charges (SDCs) and/or main extension contributions that are not presented in this illustration.

Financial Capability:

Based upon the assumptions noted above and identified in the 20 year projection, the Town has demonstrated its financial capacity and capability of sustainability of the proposed new municipal water utility. Said assumptions drive the 20 year projected balance sheets, income statements and statement of cash flows. The initial commitment fees will provide some working capital for the proposed new utility. The availability of a potable water system, along with the Town's existing Wastewater and Storm Water Utilities, is expected to drive future development for the Town and its surrounding areas. **While we have included capital replacement costs beginning in year five, 90% of the project costs relate to underground pipe. The only replacement costs anticipated include meters (10-15yr life), valves & hydrants (20-40yr life).**

Rates & Charges:

The Town's proposed initial Tariff Sheet is presented as supplementary information.

LIZTON (INDIANA) PROPOSED MUNICIPAL WATER UTILITY
 KEY ASSUMPTIONS AND 20 YR PROJECTED FINANCIAL STATEMENTS

TOWN OF LIZTON, INDIANA - PROPOSED MUNICIPAL WATER UTILITY											TOWN OF LIZTON, INDIANA - PROPOSED MUNICIPAL WATER UTILITY										
20 YEAR PROJECTED CUSTOMER BASE, OPERATING BUDGET & REVENUE REQUIREMENTS PER TOWN OFFICIALS											20 YEAR PROJECTED CUSTOMER BASE, OPERATING BUDGET & REVENUE REQUIREMENTS PER TOWN OFFICIALS										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
INITIAL CUSTOMER BASE (EDUs)	0	179	181	184	188	193	199	206	214	223	233	243	253	263	273	283	293	303	313	323	
ASSUMED GROWTH (EDUs)	179	2	3	4	5	6	7	8	9	10	10	10	10	10	10	10	10	10	10	10	
TOTAL CUSTOMER BASE (EDUs)	179	181	184	188	193	199	206	214	223	233	243	253	263	273	283	293	303	313	323	333	
ASSUMED MONTHLY USAGE (GALLONS) / EDU	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	
LINE LOSS - ESTIMATED / EDU	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	
TOTAL WATER PURCHASES / EDU	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	5,750	
TOTAL WATER PURCHASES / MO.	1,029,250	1,040,750	1,058,000	1,081,000	1,109,750	1,144,250	1,184,500	1,230,500	1,282,250	1,339,750	1,397,250	1,454,750	1,512,250	1,569,750	1,627,250	1,684,750	1,742,250	1,799,750	1,857,250	1,914,750	
TOTAL WATER PURCHASES / YR.	12,351,000	12,489,000	12,696,000	12,972,000	13,317,000	13,731,000	14,214,000	14,766,000	15,387,000	16,077,000	16,767,000	17,457,000	18,147,000	18,837,000	19,527,000	20,217,000	20,907,000	21,597,000	22,287,000	22,977,000	
ANNUAL CASH OPERATING EXPENSES:																					
ANNUAL COST OF PURCHASED WATER	\$ 54,807	\$ 55,212	\$ 55,820	\$ 56,630	\$ 57,642	\$ 58,857	\$ 60,274	\$ 61,894	\$ 63,716	\$ 65,741	\$ 67,966	\$ 70,390	\$ 72,915	\$ 75,540	\$ 78,265	\$ 81,090	\$ 83,915	\$ 86,840	\$ 89,865	\$ 92,990	
DISTRIBUTION EXPENSES	20,000	20,500	21,000	21,500	22,000	22,500	23,000	23,500	24,000	24,500	25,000	25,500	26,000	26,500	27,000	27,500	28,000	28,500	29,000	29,500	
CUSTOMER ACCOUNTS (SPR w/ WWTP)	15,000	15,000	16,000	16,500	17,000	17,500	18,000	18,500	19,000	19,500	20,000	20,500	21,000	21,500	22,000	22,500	23,000	23,500	24,000	24,500	
ADMINISTRATIVE & GENERAL	15,000	15,000	16,000	16,500	17,000	17,500	18,000	18,500	19,000	19,500	20,000	20,500	21,000	21,500	22,000	22,500	23,000	23,500	24,000	24,500	
TOTAL ANNUAL CASH OPERATING EXPENSES	112,807	114,712	116,820	119,130	121,642	124,357	127,274	131,394	135,216	139,241	143,266	147,290	151,315	155,340	159,365	163,390	167,415	171,440	175,465	179,490	
DEBT SERVICE REQUIREMENTS:																					
BOND PRINCIPAL & INTEREST	\$250,000	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	15,290	
DEBT RESERVE - ASSUMED FROM PREVIOUS YEAR	4,000	4,000	4,000	4,000	4,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
REPLACEMENTS & COVERAGE ALLOWANCE																					
TOTAL REVENUE REQUIREMENTS	\$ 132,097	\$ 134,002	\$ 136,109	\$ 138,419	\$ 140,934	\$ 144,046	\$ 148,064	\$ 151,683	\$ 155,506	\$ 159,530	\$ 163,554	\$ 167,578	\$ 171,602	\$ 175,626	\$ 179,650	\$ 183,674	\$ 187,698	\$ 191,722	\$ 195,746	\$ 199,770	
AVERAGE MONTHLY COST / EDU:	\$ 61.50	\$ 61.70	\$ 61.64	\$ 61.36	\$ 60.85	\$ 60.57	\$ 59.70	\$ 59.07	\$ 58.11	\$ 57.06	\$ 56.05	\$ 55.02	\$ 54.17	\$ 53.44	\$ 52.95	\$ 52.31	\$ 51.71	\$ 51.15	\$ 50.62	\$ 50.12	
CUMULATIVE FUNDS FOR REPLACEMENTS, CAPITAL IMPROVEMENTS & RESERVES																					
CASH FLOW FROM RATES	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	
SUBSEQUENT CONNECTOR FEES	\$750																				
SUBSEQUENT CONNECTOR FEES TO INDOT																					
CASH FLOW FROM COMMIT / CONN. FEES	\$1,100	44,750	2,200	3,300	4,400	5,500	6,600	7,700	8,800	9,900	11,000	12,100	13,200	14,300	15,400	16,500	17,600	18,700	19,800	20,900	
TOTAL ANNUAL CASH FLOW	\$ 48,750	\$ 6,200	\$ 7,300	\$ 8,400	\$ 9,500	\$ 11,000	\$ 12,700	\$ 14,500	\$ 16,400	\$ 18,300	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	\$ 18,500	
CUMULATIVE CASH FLOW	\$ 48,750	\$ 54,950	\$ 62,250	\$ 70,650	\$ 80,150	\$ 91,750	\$ 104,450	\$ 118,250	\$ 133,150	\$ 149,150	\$ 167,650	\$ 186,150	\$ 204,650	\$ 223,150	\$ 241,650	\$ 260,150	\$ 278,650	\$ 297,150	\$ 315,650	\$ 334,150	

Assumes 53MM Project Costs with \$150,000, 20yr SRF Loan @ 2.0% - Remaining Project Costs are anticipated to be funded with S2M from INDOT, S 7M CFF Grant and S 95M SRF Forgivable B.A.N.
 SRF = State Revolving Fund Program CFF = Community Focus Fund INDOT = Indiana Department of Transportation (INDOT declines water service for Rest Area on I-70)
 Note: The Town anticipates receiving a Subsequent Connector Fee to reimburse INDOT a portion of their initial contribution over 15 yrs.

Assumes that Billing & Administrative Costs to be Shared between Existing Wastewater & Stormwater Utilities.

Assumes Lizton purchases 100% of its Water Supply from Citizen's Energy Group (CEG) at CEG's Present Rate Schedule.
 Assumes that any change in the cost of purchasing water from CEG would be recouped through a Wholesale Water Cost Tracking Factor

Assumes Pre-funded Debt Service Reserve from Prepaid Commitment Fees

Annual Purchased Water Cost 179 EDUs 201 EDUs 276 EDUs
 WATER COST \$54,807 \$55,145 \$60,730 Assumes current CEG Water Rates for estimated number of customers / EDUs.

O.W. Krohn & Associates, LLC
 P.E. and Consultant

LIZTON (INDIANA) MUNICIPAL WATER UTILITY

SCHEDULE 3

PROJECTED ANNUAL OPERATION AND MAINTENANCE COSTS

(PER CONSULTING ENGINEERS)

ANNUAL OPERATION & MAINTENANCE COSTS:

DISTRIBUTION SYSTEM	Includes increases per IDEM Review Comments	
LABOR		\$10,000
SAMPLING / TESTING		10,000
MATERIALS & SUPPLIES		5,000
REPAIRS & MAINTENANCE		3,000
		<hr/>
TOTAL COLLECTION SYSTEM		28,000
		<hr/>
PURCHASED WATER COST		
RATE PER 1,000 GALLONS	179 EDUs	54,807
		<hr/>
TOTAL PURCHASED WATER COST		54,807
		<hr/>
GENERAL AND ADMINISTRATIVE:	Shared Overhead with Storm & Sanitary	
CUSTOMER ACCTS./BILLING	Includes allocation of wages, benefits & supplies	15,000
LEGAL & PROFESSIONAL	Includes allocation of existing overhead	5,000
INSURANCE	Includes allocation of existing overhead	5,000
OTHER	Includes allocation of existing overhead	5,000
		<hr/>
TOTAL GENERAL AND ADMINISTRATIVE		30,000
		<hr/>
TOTAL PROJECTED OPERATION AND MAINTENANCE COSTS		\$112,807
		<hr/>

LIZTON (INDIANA) MUNICIPAL WATER UTILITY**SUMMARY OF NUMBER OF POTENTIAL INITIAL USERS & EQUIVALENT USERS**

BASED UPON CURRENT NUMBER OF LIZTON'S MUNICIPAL WASTEWATER CUSTOMER BASE PER UTILITY BILLING DEPARTMENT

<u>CUSTOMER TYPE</u>	<u>CURRENT AREA RATIO</u>	<u>CURRENT NO. OF USERS</u>	<u>CURRENT # EQUIVALENT CUSTOMERS</u>
RESIDENTIAL			
SINGLE FAMILY DWELLING UNITS	1.0000	171	171.0
DUPLEX UNITS	2.0000	8	16.0
APARTMENTS	26.0000	1	26.0
COMMERCIAL			-
SMALL BUSINESSES	1.0000	25	25.0
INDIANA DEPARTMENT OF TRANSPORTATION			
GARAGE	1.0000	1	1.0
REST AREA	14.0000	1	14.0
TOTAL NUMBER OF USERS & EQUIVALENT USERS (EDU'S)		<u>207</u>	<u>253.0</u>
EDU COMMITMENTS TO DATE - RESIDENTIAL / SMALL BUSINESSES			164.0
EDU COMMITMENTS TO DATE - INDOT			15.0
TOTAL PROJECTED INITIAL USER BASE			179.0

PROJECTED INITIAL WATER PURCHASES (4,000 GAL / MO / EDU IN SALES)

ESTIMATED WATER PURCHASES / MO / EDU (GALLONS)		5,750
TIMES ASSUMED CUSTOMER BASE TARGET		179
TIMES TWELVE MONTHS		<u>12</u>
ESTIMATED ANNUAL WATER PURCHASES (IN GALLONS)	100.0%	<u>12,351,000</u>
ESTIMATED ANNUAL WATER SALES (IN GALLONS)	91.3%	<u>11,277,000</u>

Cause No. 45274
 Revised 11-15-2018
 Attachment JF-1
 Page 49 of 341

LIZTON (INDIANA) PROPOSED MUNICIPAL WATER UTILITY
KEY ASSUMPTIONS AND 20 YR PROJECTED FINANCIAL STATEMENTS

LIZTON (INDIANA) MUNICIPAL WATER UTILITY

SCHEDULE 5

ESTIMATED PROJECT COSTS & POTENTIAL RANGE OF FUNDING OPTIONS

ASSUMES 175 EDUs AS INITIAL CUSTOMER BASE - 4,000 GALLONS / MO / EDU

<u>PROJECT COSTS & FUNDING:</u>	<u>OPTION 1</u>	<u>OPTION 2</u>	<u>OPTION 3</u>
<i>CONNECTION FEE / EDU -- AFTER JUNE 30, 2019</i>	\$ -	\$ 1,100.00	\$ 1,500.00
TOTAL ESTIMATED PROJECT COSTS	\$3,770,000	\$3,770,000	\$3,770,000
PROJECT CONTINGENCIES	230,000	230,000	230,000
LESS POTENTIAL GRANTS / CONN. FEES:			
INDOT CONTRIBUTION	(2,000,000)	(2,000,000)	(2,000,000)
OCRA GRANT	(700,000)	(700,000)	(700,000)
SRF FORGIVABLE BAN	(950,000)	(950,000)	(1,150,000)
SRF BOND ISSUE	<u>\$1,300,000</u>	<u>\$350,000</u>	<u>\$150,000</u>

MUNICIPAL WATER UTILITY

AVERAGE MONTHLY RATE PER EDU

ASSUMES INITIAL CUSTOMER BASE AS NOTED - 5,250 GALLONS / MO / EDU (70 GPD / CAPITA)

	EDUs	179	179	200
<u>ANNUAL REVENUE REQUIREMENTS:</u>	<u>OPTION 1</u>	<u>OPTION 2</u>	<u>OPTION 3</u>	<u>OPTION 3</u>
PRO FORMA CASH OPERATING EXPENSES SRF Bond	\$1,300,000	\$350,000	\$250,000	\$150,000
PURCHASED WATER - INCLUDES ESTIMATED WATER LOSS RATIO OF 8.7%	\$ 54,807	\$ 54,807	\$ 54,807	\$ 58,135
OTHER OPERATING COSTS	58,000	58,000	58,000	58,000
ANNUAL DEBT SERVICE				
PROPOSED DEBT SERVICE	79,504	21,405	\$ 15,290	9,174
DEPRECIATION / REPLACEMENT ALLOWANCE	23,851	11,000		11,000
ADDITIONAL REVENUE REQUIREMENT ALLOWANCE				
MINIMUM REVENUE REQUIREMENTS	<u>\$ 216,163</u>	<u>\$ 145,212</u>		<u>\$ 136,309</u>
	<u>TOTAL EDUs</u>	<u>NO SRF GRANT</u>	<u>WITH SRF GRANT</u>	<u>WITH SRF GRANT</u>
AVERAGE MONTHLY BILL:	180	\$100.10	\$67.24	\$ 60.00 \$56.80
	205		\$20,172	\$17,040
IMPACT OF ADDITIONAL USERS	230		\$40,344	\$34,080
	255		\$60,516	\$51,120
HOMEOWNER COST TO CONNECT TO SYSTEM - Estimated		\$1,500	\$1,500	\$1,500
FUTURE CONNECTIONS WILL PAY SUBSEQUENT CONNECTOR FEES		\$750	\$750	\$750
HOMEOWNER CONNECTION FEE / EDU - Illustration Only		\$0	\$1,100	\$1,100

*NOTE: CONNECTION FEES FOR INITIAL USERS WILL BE LIMITED TO THE PREPAID COMMITMENT FEE ALREADY COLLECTED BY THE TOWN OF LIZTON

**LIZTON (INDIANA) MUNICIPAL WATER UTILITY
 WATER TARIFF SHEET**

Town Hall
 Lizton, Indiana

Page 1 of 2

SCHEDULE OF RATES AND CHARGES

For use of and service rendered by the waterworks system of the Town based on the use of water supplied by said waterworks system.

				Rate Per 1,000 Gallons
(a) <u>Metered Usage Per Month</u>				
First	5,000 gallons			\$ 15.00
Next	5,000 gallons			8.50
Next	20,000 gallons			6.75
Over	30,000 gallons			5.50
(b) <u>Minimum Monthly Charge</u>				
		<u>Ratio</u>	<u>Gallons</u>	<u>Per Month</u>
<u>Size of Meter:</u>				
5/8	inch meter	1.0	4,000	\$ 60.00
3/4	inch meter	1.0	4,000	60.00
1	inch meter	2.5	10,000	117.50
1 1/2	inch meter	5.8	23,200	206.60
2	inch meter	10.0	40,000	307.50
3	inch meter	23.0	92,000	593.50
4	inch meter	40.0	160,000	967.50
6	inch meter	91.0	364,000	2,089.50
(c) <u>Fire Hydrants</u>				
Municipal Fire Hydrants - per hydrant				N/A
Private Fire Hydrant - per hydrant - per annum for all users with private hydrants				\$ 750.00
(d) <u>Private Fire Protection</u>				
2 inch connection and under - per annum				\$ 85.00
3 inch connection				187.50
4 inch connection				335.00
6 inch connection				750.00
8 inch connection				1,335.00

**LIZTON (INDIANA) MUNICIPAL WATER UTILITY
WATER TARIFF SHEET**

Town Hall
Lizton, Indiana

Page 2 of 2

NON-RECURRING CHARGES

<u>Description of Charges</u>	<u>Charge</u>
System Development Charge - INDOT Main Extention Reimbursement (Per EDU)	\$ 750.00
Connection charges:	
5/8 inch meter	\$ 1,100.00
Greater than 5/8 inch meter	Cost of materials, labor and equipment, but not less than \$582.00
Service Call / Reconnection during working hours	\$ 25.00
Service Call after working hours	\$ 50.00
Bad check charge	\$ 25.00
Late payment charge	10% of first \$3.00 and 3% of balance, incur 10 days after billing
Customer Deposit	\$ 90.00

APPENDIX D

Casualty Insurance Documentation



1 OVERS MUTUAL CASUALTY COMPANY PRIOR POLICY: 2D3-69-33

GENERAL LIABILITY DECLARATIONS

POLICY PERIOD: FROM 11/16/18 TO 11/16/19

* POLICY NUMBER *
* 2 D 3 - 6 9 - 3 3 ---19 *

NAMED INSURED:

PRODUCER:

TOWN OF LIZTON
PO BOX 136
LIZTON IN 46149-0136

PUBLIC RISK UNDERWRITERS OF
INDIANA, LLC
PO BOX 1247
KOKOMO IN 46903-1247

AGENCY BILL

AGENT: AT 6939
AGENT PHONE: (765)457-9161
CLAIM REPORTING: (888)362-2255
SERVICING CARRIER: (513)221-6010

INSURED IS: MUNICIPALITY BUSINESS DESC: MUNICIPALITY

LIMITS OF INSURANCE

EACH OCCURRENCE LIMIT	\$	1,000,000	
DAMAGE TO PREMISES RENTED TO YOU LIMIT	\$	500,000	ANY ONE PREMISES
MEDICAL EXPENSE LIMIT	\$	10,000	ANY ONE PERSON
PERSONAL AND ADVERTISING INJURY LIMIT	\$	1,000,000	ANY ONE PERSON OR ORGANIZATION
GENERAL AGGREGATE LIMIT	\$	2,000,000	
PRODUCTS/COMPLETED OPERATIONS AGGREGATE LIMIT	\$	2,000,000	

COVERAGES PROVIDED PREMIUM

OTHER THAN PRODUCTS/COMPLETED OPERATIONS	\$	1,113.00
TOTAL ESTIMATED POLICY PREMIUM	\$	1,113.00

SEE ATTACHED SCHEDULE FOR LOCATION
OF ALL PREMISES OWNED, RENTED OR OCCUPIED.

FORMS APPLICABLE:

CG0001(04/13)*, CG2106(05/14)*, CG2147(12/07)*, CG2167(12/04)*,
CG2170(01/15)*, CG2176(01/15)*, CG2250(04/13)*, CG7001A(10/12)*,
CG7003(10/13)*, CG7117.3(01/06)*, CG7605(10/14)*, CG7626(03/09)*,
CG7641(12/10)*, CG7698(10/16)*, IL0021(09/08)*, IL0117(12/10)*,
IL0158(09/08)*, IL0272(09/07)*, IL7028(05/15)*, IL7131A(C4/01)*,
IL7137(01/18)*, IL7623(11/16)*, IL8383.2A(01/15)*, IL8384A(C1/08)*,
IL8576(09/09)*

DATE OF ISSUE: 10/04/18 BPP

FORM CG7000A ED. 08-99 BPP 08/17/18 020 DP 2D36933 1901

Automobile

Inland Marine



EMPLOYERS MUTUAL CASUALTY COMPANY

POLICY NUMBER: 2D3-69-33---19

TOWN OF LIZTON

EFF DATE: 11/16/18

EXP DATE: 11/16/19

GENERAL LIABILITY POLICY
DECLARATIONS

ENDORSEMENT SCHEDULE

FORM	EDITION DATE	DESCRIPTION/ADDITIONAL INFORMATION	PREMIUM
*CG0001	04-13	COMMERCIAL GEN LIABILITY COV FORM	
*CG2106	05-14	EXCL-ACCESS/DISCL OF CONFID/PERSONAL	
*CG2147	12-07	EXCL-EMPLOYMENT RELATED PRACTICES	
*CG2167	12-04	FUNGI OR BACTERIA EXCLUSION	
*CG2170	01-15	CAP/LOSSES FROM CERT ACTS/TERRORISM	
*CG2176	01-15	EXCL PUNITIVE DMGS ACTS OF TERRORISM	
*CG2250	04-13	EXCL-FAILURE TO SUPPLY	
*CG7001A	10-12	GENERAL LIABILITY SCHEDULE	
*CG7003	10-13	GL QUICK REFERENCE (OCCURRENCE)	
*CG7117.3	01-06	TORT CLAIMS-GOVNT'L ENTITIES-INDIANA	
*CG7605	10-14	EXCLUSION-LAW ENFORCEMENT ACTIVITIES	
*CG7626	03-09	EMPLOYEE BENEFITS LIABILITY COVERAGE	
		EACH EMPLOYEE \$ 1,000,000	
		AGGREGATE \$ 2,000,000	
		DEDUCTIBLE EACH EMPLOYEE \$ 1,000	
*CG7641	12-10	MUNICIPAL LIABILITY ENDORSEMENT	
*CG7698	10-16	GENERAL LIAB ELITE EXT/MUNICIPAL	
0021	09-08	NUCLEAR ENERGY LIAB EXCL/BROAD FORM	
IL0117	12-10	IN CHANGES-WORKERS' COMP EXCLUSION	
*IL0158	09-08	INDIANA CHANGES	
*IL0272	09-07	IN CHANGES - CANCELLATION/NONRENEWAL	
*IL7028	05-15	ASBESTOS EXCLUSION	
*IL7131A	04-01	COMM'L POLICY ENDORSEMENT SCHEDULE	
*IL7137	01-18	EXCL MIXED DUST PNEUMOCONIOSIS	
*IL7623	11-16	INDIANA CHANGES-POLLUTION EXCLUSION	
*IL8383.2A	01-15	DISCL PURSUANT TERRSM RISK INS. ACT	\$ 9
*IL8384A	01-08	TERRORISM NOTICE	
*IL8576	09-09	MEDICARE IMPT NOTICE TO POLICYHOLDER	

DATE OF ISSUE: 10/04/18

FORM: IL7131A (ED. 04-01)

020

DP

2D36933 1901

EMILY DURANT

APPENDIX E

Emergency Management Plan

TOWN OF LIZTON
WATERWORKS SYSTEM
EMERGENCY OPERATING AND
RESPONSE PROGRAM

April 2018

Prepared By

TRIAD Associates, Inc.
5835 Lawton Loop E. Drive
Indianapolis, Indiana 46216
(317) 377-5230 (317) 377-5241 (fax)

Town of Lizton
Water Utility
Basic Information

Facility Name & Address:	Town of Lizton 106 N. Lebanon Street; PO Box 136 Lizton, Indiana 46149
Contact:	
System ID:	
Directions:	West of Marion County in Hendricks County
Population Served:	488
No. of Service Connections:	202
Map & Site Plan:	Appendix A
Water Supply:	Citizens Water Authority (CWA)
Storage:	Citizens Water Authority (CWA)
Treatment:	Citizens Water Authority (CWA)

WATER EMERGENCY RESPONSE PLAN
FOR
Emergency Operation and Disaster Planning

TOWN OF LIZTON
Hendricks County, Indiana

DATE: August 2018

Plan Distribution

Copies of the emergency plan have been distributed to the following officials and entities. In addition, a copy of this plan is kept at the Town Hall so that it can be easily accessed in the event of an emergency. All employees will be trained on implementation of the plan.

PLAN NO.	Distributed by	Received by	DATE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Plan Updates

The emergency plan is updated as changed occur such as dictated by personnel, phone numbers, technology, system additions or modifications. A record of plan updates follows:

CHANGE NO.	SUBJECT	DATE	Entered by
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

GENERAL INFORMATION

PWSID: IN 5232026
WATER SYSTEM NAME: Town of Lizton
LOCATION: Hendricks County
MAILING ADDRESS: 106 N. Lebanon Street; PO Box 136, Lebanon, IN 46149

RESPONSIBLE CHARGE INFORMATION

CONTACT NAME: Robert Uhrick
TITLE: Town Council President
DAYTIME PHONE: (317) 994-5500
EMERGENCY PHONE: (317) _____
CELL PHONE: (317) _____
EMAIL: bobuhrick@yahoo.com

EMERGENCY BACKUPS CONTACT

CONTACT NAME: Mike McKinney
TITLE: Operator
DAYTIME PHONE: (317) 994-5500
EMERGENCY PHONE: (317) 994-5500
CELL PHONE: _____
EMAIL: mikemckinney67@att.net

CONTACT NAME: Tonya Perry
TITLE: Clerk Treasurer/Utility Clerk
DAYTIME PHONE: (317) 994-5500
EMERGENCY PHONE: (317) 994-5500
CELL PHONE: _____
EMAIL: ltownhall@gmail.com

PERSON RESPONSIBLE FOR MAINTAINING EMERGENCY CONTACT LIST

CONTACT NAME: Tonya Perry
TITLE: Utility Clerk
TELEPHONE: (317) 994-5500

EMERGENCY RESPONSE PLAN

A copy of this Emergency Response Plan (ERP) is kept on file at the Lizton Town Hall which is located at:

Town of Lizton
106 N. Lebanon Street
Lizton, IN 46149

All employees are aware of its location.

All employees have been instructed to implement this plan in the event of a disaster beginning with notification of all parties concerned. A list of emergency phone numbers is located in the back of this Emergency Contingency document. The next step is to follow the emergency notification procedures contained in this Emergency Response Plan (ERP). After contacts have been made, appropriate action will be taken according to specific guidelines in the ERP.

The purpose of an ERP is to provide guidance to management and employees when faced with handling an emergency or disaster which jeopardizes the maintenance of safe drinking water standards of the public water supply. The Water utility is to evaluate all areas of the water supply system that could be vulnerable to contamination and result in a loss of safe drinking water. Based upon this review, the utility is to make recommendations that could reduce or eliminate the effects that the loss of safe drinking water due to contamination of the water/source/well field would have on the operations of the water system. This plan cannot predict exactly what will happen in an emergency or disaster situation but provides a planned approach for handling such situations. As the general awareness of water safety issues continues to evolve, this document must be updated to maintain adequate response measures.

POLICY SUMMARY

The responsibility of the Town Council President during an emergency or disaster situation induced from the temporary loss of safe potable water will be public relations. This person is responsible for handling phone calls and questions about the water supply emergency or disaster and will be the spokesperson for all news media questions and any public news releases. The Council President will supervise and direct all work crews and volunteer help to see that corrective action is completed in an organized and timely manner. All persons will work directly under the Council President who will direct work crew activities. This responsibility may be delegated to another Council member, the Operator, or the Clerk Treasurer/Utility Clerk who will then consult with the President in decision-making as required.

GENERAL UTILITY MANAGEMENT INFORMATION

Name: Town of Lizton Water Utility PWSID 5232026

Certified Water Operator Name: Michael (Mike) Mckinney

WATER SYSTEM DESCRIPTION

GENERAL

Population served: 488 (estimated)

Service Connections: 200 (estimated)

WELLS

Well ID	Location	Depth	Year	Yield
	N/A – Water supplied by CWA			

SOURCE PUMP INFORMATION

Well ID	Manufacturer	Model	H.P.	RPM	Capacity (GPM)	Power
	N/A					

A. Disinfection

Chemical(s) Used: Chlorine, Fluoride, Ammonia (CWA)

Location of Municipal Disinfection System: N/A

Location of Chemical Storage: N/A

B. Other Treatment

Other Treatment Method(s) N/A

Chemical(s) used: N/A

Type of Chemical Feed: N/A

Location of Chemical Storage: N/A

FINISHED WATER STORAGE (Not Town owned)

Name of Storage Unit	Location	Type	Capacity	Overflow Elevation
CWA Brownsburg Tank	Brownsburg	Elevated	2.0 Million Gals	Unknown
CWA Lizton Tank	East of Town on US 136	Elevated	1.0 Million Gals	Unknown

Average daily demand is the system's average daily usage based upon operational records maintained during the past several years. Maximum daily demand is typically the highest daily demand experienced in recent years based upon operational records. System capacity is the maximum daily amount of water that the system is capable of treating or producing and distributing. Peak water demand is the maximum hourly demand that the system can sustain provided by storage or by production capability plus storage.

Average Daily Demand: 0.92 MGD Maximum Daily Demand: 1.89 MGD

System Capacity: 3.0 MG Peak Demand: N/A

POWER

Primary Power: N/A

Backup Power: N/A

TELEMETRY SYSTEM: N/A

DISTRIBUTION SYSTEM: The distribution system consists of approximately 8,100 lf of 12" line and 11,550 lf of 6" water mains. The distribution system has approximately 200 connections and serves a population of 488. There are 200 meters.

TOWN OF LIZTON, INDIANA
EMERGENCY OPERATING AND RESPONSE PLAN

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EXHIBITS		
	Site Plan	

1.1 OBJECTIVES

Emergency conditions can be imposed on a water management system by natural disasters, strikes, civil disorders, equipment failures and human caused emergencies. Development of a program for handling emergencies is essential to insure the continued effective operation of the water treatment facilities. The objectives of this portion of the manual are:

- (1) To eliminate or minimize adverse effects from emergency situations that affect the water management system;
- (2) To develop procedures for properly responding to emergencies;
- (3) To provide instructions for system personnel to insure they understand their responsibilities during emergency situations;
- (4) To provide an inventory of available emergency equipment; and
- (5) To outline existing mutual aid agreements and contracts with outside organizations for specialized assistance.

1.2 GENERAL RESPONSE PATTERN TO EMERGENCIES

These emergency response procedures have been established and will be followed by all associated staff. These procedures include methods to identify an emergency, investigate the extent of the emergency, decide on the proper course of action, determine corrective actions to resolve the situation, and follow up with a post-emergency investigation.

1.2.1 Emergency Identification

Basically this step entails becoming aware that an emergency exists. Equipment breakdowns, power failures, injuries, and natural disasters will usually be evident immediately. Sometimes, the operator may have prior warning. For example, an impending weather related emergency could be identified through weather reports or a reduction in performance could indicate an impending equipment breakdown. In other cases, such as with human caused emergencies, the operator may have no prior warning.

Some emergency situations begin long before an emergency happens. These cases usually result in larger disasters by the time the situation is identified. Unattended equipment may have minor breakdowns which go unnoticed. Continued operation then leads to complete breakdown of the equipment, possibly with injury to an unwary bystander.

1.2.2 Initial Investigation

Once the Operator is aware that an emergency situation exists, or that a disaster is impending, an initial investigation will be made and the Clerk Treasurer and the Council President will be contacted. The purpose of the investigation is to collect enough information to assess the severity of the situation, so an initial course of action could be developed. At a minimum, emergency assessment consists of the following:

- Identify injured or affected persons (if any)
- Evaluate damage to buildings and equipment
- Note possible damage which could occur if corrective action is not taken quickly
- Identify available resources to correct the situation.

1.2.3 Initial Action

Once the extent of the emergency is known, the Operator will decide who needs to be contacted and what steps are to be taken initially to correct the situation. In the case of large scale emergencies, this includes notifying appropriate authorities and requesting the necessary assistance in order of the established priority. The Emergency Information and Affected Parties lists will be critical during the initial stages of the emergency (**Appendix A and B**).

After all calls have been made, the Operator will begin taking corrective actions, if possible and/or practical. Personnel will not endanger themselves or others by attempting tasks they are not familiar with. This is especially critical in the case of injury. No attempts will be made to administer unnecessary or unfamiliar first aid techniques. The prime goal is to keep the injured or affected party from further danger. No unnecessary attempts will be made to move a person.

1.2.4 Corrective Action

When help arrives, the Operator will inform those involved of the pertinent details related to the situation. If the type of emergency is beyond their capabilities, a person will be appointed by the Council President to supervise the corrective action. After corrective measures are underway, the operator will notify other parties that need to be informed of the emergency. **(Appendix B)** Corrective action will continue until the situation is under control or resolved. If resolution of the situation will take considerable time, the Operator will coordinate and outline a long term plan to complete the necessary tasks.

1.2.5 Follow-through

After the situation is corrected, the operator will make every effort to determine what caused the emergency. This entails reviewing the corrective action taken and taking the appropriate steps to minimize the chance of recurrence. In the case of equipment failure, a revision to the maintenance procedures may be necessary, unless the failure was caused by negligence. In the case of natural disasters, while they cannot be prevented from reoccurring, the procedures established to handle the situations will be reviewed to assess their effectiveness. In the case of a human caused emergency, security measures will be reviewed and revised, if necessary.

1.2.6 Notification

If water quality was adversely affected, the Indiana Department of Environmental Management (IDEM) will be notified. A follow-up report will be sent detailing what happened and how the situation was corrected. If warranted, the operator will request assistance from applicable agencies. Governmental agencies have been established not only to regulate water operations, but also to assist in meeting requirements. If a malevolent act is suspected, local law enforcement will immediately be notified, who will notify the FBI, if required. The FBI is the primary agency for investigating sabotage to water systems or terrorist incidents.

1.2.7 Summary

This section outlines general emergency response procedures. The following steps will automatically be taken for most emergencies.

- (1) Identify emergency (be aware);
- (2) Investigate quickly (know what happened);
- (3) Take initial action (notify affected parties - **Appendices A and B**);
- (4) Take corrective action (remedy, implement action plans); and
- (5) Follow-through (prevent future similar disasters).
- (6) Final Notification

1.3 SYSTEM VULNERABILITY ANALYSIS

This section details the necessary steps that will be taken in emergency situations. Included are methods to identify the emergency, procedures for the initial investigation, steps to determine the initial action to be taken, and steps to implement the necessary corrective action. Development of protective measures to prevent the situation from occurring in the future will also be discussed. Contingency have been set up for different types of emergencies:

- (1) Power Failure;
- (2) Flood;
- (3) Fire;
- (4) Windstorm and Tornadoes;
- (5) Explosions;
- (6) Equipment Breakdowns and Process Failures;
- (7) Accidental Discharges into Water Facilities or Treatment Components;
- (8) Prolonged Loss of Water Supply; Contaminated Source
- (9) Personnel Injury;
- (10) Civil Disorder; and
- (11) Human Caused Emergencies Including Vandalism and Terrorism

1.3.1 POWER FAILURE

Identification: The chemical feed system, if installed, is the only part of the Town's system that is dependent upon electric power. In the event of a power failure, all or part of the equipment will cease to function.

Initial Investigation:

- The Operator will try to determine the cause of the power failure by checking for fires, or smoking or shorted wires.
- Generally if other equipment is still operating or shorted wires have been found, the power failure has occurred within the unit itself.
- If all equipment is inoperable and there is no power to any nearby facilities, the power failure is most likely the result of a power company failure.

Initial Action:

- If its an electrical fire, extinguish using a fire suppressant specifically approved for such.
- If wires are shorting or smoking, switch off the main disconnect.
- If power cannot be shut off at the main distribution panel or control center, the operator will immediately contact the local power company to have the incoming power shut off.

Corrective Action:

After the emergency is under control, the operator will contact either a qualified electrician or the local power company if the power failure is the result of an overall service failure. If the power is determined to be out for an extended time, the Town's standby generator will be used on critical equipment. It will also be determined how long the power outage is expected to last, so steps could be taken to minimize the impact.

Methods to Reduce System Vulnerability:

- If the electrical failure is the result of the local power company, little can be done to reduce system vulnerability other than maintaining close contact with the company so the plant could receive direct notification when there is a power failure.
- If the power failure is the result of a malfunction in the unit, an electrician will be contacted to see if a repair could be made to prevent future problems.

1.3.2 FLOOD

Identification: Flooded components could be caused by excessive rains, pump or equipment failures, or waterline or associated structure failure.

Initial Investigation:

Upon initial discovery of a flood, the operator will determine the extent of the flooding, what components were affected, and why the flooding occurred, if possible.

Initial Action:

- If a building or equipment room is flooded immediately shut off the power supply.
- Erect warning signs and traffic barriers where needed.
- If extensive flooding occurs, contact the state and federal agencies for assistance.
- Protect critical areas that are not flooded.

Corrective Action:

- Pump out flooded units and restore to original operating capacity if possible.
- Initially, check any controls, valves, and piping if applicable
- Attempt to remedy the problem. A leaky pipe, high groundwater, or failure may be the cause.
- Repair any mechanical equipment and contact outside help if necessary.
- In case of a natural flood, place sandbags around all vulnerable equipment and structures for protection. Pump out flooded equipment if possible.

Methods to Reduce System Vulnerability:

During high groundwater periods or heavy rains, request frequent updates from the local weather service to keep informed of changing weather patterns and flooding situations.

1.3.3 FIRE

Identification: The water system will not have a treatment facility. The utility will be operated out of the Town Hall so this is the only likely place that a fire of any significance would occur.

Initial Investigation:

Upon discovery of the fire, determine the exact location and evaluate whether or not it could be handled without assistance.

Initial Action:

- If possible control the using an approved fire extinguisher.
- If assistance is needed, notify the nearest fire department immediately.

Corrective Action:

- Assess the damage as soon as possible after the fire is extinguished.
- Take steps to provide interim operations to the highest degree possible until complete repairs have been made and operations are returned to their original efficiency.
- Contact an electrician or mechanic to make the necessary repairs, if needed.

Methods to Reduce System Vulnerability:

- Inspect equipment regularly, paying particular attention to the wiring to locate potential issues that could cause short circuiting.
- Properly maintain and service motors and electrical equipment to reduce the likelihood of a fire.

1.3.4 WINDSTORM AND TORNADOS

Identification: Windstorms or tornados can cause structural damage to aboveground equipment, buildings, or components.

Initial Investigation:

Immediately assess the damage and determine if all equipment is operable.

Initial Action:

- Turn off the power supply if there are downed power lines or poles.
- Isolate damaged areas, power poles, etc. using traffic barriers or warning signs.
- Contact the power company if necessary.

Corrective Action:

- Repair damages to the extent possible to return the utility to full operations.
- Repair broken windows, get downed power lines and poles restored
- Remove all debris.

Methods to Reduce System Vulnerability:

- Keep informed about current weather condition and maintain close contact with the local weather service regarding changes in weather patterns.
- At the approach of a windstorm move any portable equipment or tools to an indoor location until the storm passes.
- When weather conditions are favorable for a tornado, the local weather bureau will issue a "*tornado watch*". If a tornado watch has been issued, move all portable equipment and tools indoors and open windows and/or doors in all buildings.
- If a tornado has actually been sighted, the weather bureau will issue a "*tornado warning*". When a tornado warning is issued, alert all personnel immediately, open doors and windows and direct personnel to take shelter in a safe place.

1.3.5 EXPLOSIONS

Identification: Explosions in a water system are possible if there is flammable gas or materials present such as fuel oil, wood, plastic, rubber, etc. that were ignited in the explosion. Fuel oil stored in an equipment building could also cause an explosion. An explosion could result in a fire and may cause damage to equipment or buildings.

Initial Investigation:

- Check for any injured persons, fires, or damage to structures or equipment.
- Evaluate the type of fire and determine if the fire department should be notified.

Initial Action:

- Immediately obtain aid for any injured persons.
- If necessary, contact the fire department.
- Erect barriers and warning signs around damaged or unsafe structures, roadways, etc.
- In the case of extensive damage, notify state and federal agencies.

Corrective Action:

- Locate the source of the gas or explosion and make any practical corrections.
- Repair any damaged structures.
- If necessary, re-route water flow around the damaged area.

Methods to Reduce System Vulnerability:

- All personnel will be trained on the hazards of smoking, or using a flame or sparking tool in potentially flammable areas. Without a source of ignition, gases and fuel oil cannot cause explosions.
- Determine if additional ventilation, blowers, or vents are needed in certain areas.

1.3.6 EQUIPMENT BREAKDOWNS

Identification: Equipment failures may stop, smoke, vibrate, overheat, leak, burn, etc.

Initial Investigation:

Determine which piece of equipment failed and what is necessary to repair or replace it.

Initial Action:

- Depending on what equipment failed, shut off the equipment and re-route the flow, etc.
- Review specific equipment information and operational plans.
- Check electrical supply, motor and pump bearings, couplings etc.

Corrective Action:

- Repair the equipment or contact appropriate repair person in a timely manner in order to restore equipment and operations to full capacity.
- Review the troubleshooting procedures for equipment.

Methods to Reduce System Vulnerability:

- Provide regular and thorough maintenance and inspection.
- Replace lower quality equipment with units with higher ratings and easier maintenance.
- Keep information and operational plans readily available for emergencies and equipment breakdowns.

1.3.7 ACCIDENTAL SPILLS

Identification: Oil, gasoline, liquid chlorine, or chemicals could be sources for accidental spills.

Initial Investigation:

- If a spill occurs, report it.
- Attempt to determine what has been spilled and the risk it imposes.

Initial Action:

- Implement emergency spill procedures for the specific type of spill.
- Report all accidental discharges to other operations staff
- Report spill to the Fire Department, if necessary.
- Notify the proper authorities.
- Estimate the quantity of the spill.

Corrective Action:

- Take all necessary steps to correct or eliminate the problem in accordance with spill containment standards.
- When necessary, immediately notify State and Federal agencies and the local fire department to be on hand during the cleanup.
- Extinguish any open flames
- Shut down any units that could ignite the substance.

Methods to Reduce System Vulnerability:

- Periodically review rules and procedures for maintenance, general housekeeping, and emergency response to reduce or eliminate occurrences or potentially unsafe conditions.

1.3.8 PROLONGED WATER LOSS

Identification: Contaminated supply, power failure, severe weather could cause the loss of water for a prolonged period.

Initial Investigation:

- Attempt to identify the cause of the water loss by contacting the water supplier (CWA).
- Make an initial determination on whether or not it will be quickly restored.

Initial Action:

- Locate and close the nearest shut-off valve.
- Take measures to provide a temporary supply such as bottled water for immediate short term needs.
- Set up temporary distribution center.
- Notify applicable customers and affected parties.
- Notify the proper authorities.
- Estimate the length of time that the water supply will not be available.
- Request that customers use existing wells for non-potable uses.

Corrective Action:

- Take necessary steps to assist in correcting or eliminating the problem.
- Implement contingency or backup plans to provide a long term alternate water supply. This would include contacting CWA, bulk water suppliers, and alternate water sources (Appendix A) to arrange for a continued supply until the emergency situation is resolved and water service has been restored.
- Request assistance from State and Federal agencies if needed.

Methods to Reduce System Vulnerability:

- Periodically review procedures for emergency response.
- Set up Mutual Aid Agreements with the Towns of Pittsboro and Brownsburg.
- Request documentation from CWA on measures in place to provide an emergency water supply to wholesale customers.
- Regularly confirm contact information for alternative and backup supply to assure continued availability.

1.3.9 PERSONNEL INJURY

Identification: Potential personnel or visitor injury is an ever-present danger, especially in the presence of mechanical and electrical equipment.

Initial Investigation:

- Examine injury to determine the severity
- Determine if professional medical attention is needed.

Initial Action:

- Immediately treat scratches or cuts using supplies from a first aid kit.
- Contact EMT to handle major wounds.
- Prepare a report for possible workmen's compensation.

Methods to Reduce System Vulnerability:

- Require workers to be inoculated with tetanus and typhoid shots on a regular schedule to protect against infection complications.
- Provide first aid instruction classes to all personnel.
- As a preventive measure, train all personnel with safety procedures.
- Keep basic first aid procedures on site for reference.

1.3.10 CIVIL DISORDERS

Identification: Civil disorders will most likely be the result of labor disputes or demonstrations. These situations could escalate and interfere with operations.

Initial Investigation:

- Determine the extent to which operations will be hindered
- Estimate the time that proper operation can continue under the circumstances.

Initial Action:

- In case of a labor dispute, if unionized, prepare a plan using non-union (supervisory) personnel to maintain essential treatment operations.
- Notify the police and sheriff's department so adequate measures can be taken to avoid property damage that would result in interruption of service.

Method to Reduce System Vulnerability:

- Keep supervisory personnel abreast of activity
- Respond appropriately to any grievances.
- Renegotiate contracts prior to expiration.
- Train supervisory personnel to operate essential treatment functions.
- Educate the public on controversial matters and respond to their questions.
- Practice good public relations and participate in community development.

1.3.11 HUMAN CAUSED EMERGENCIES, VANDALISM, TERRORISM

Identification: Human caused emergencies can be the result of vandalism, terrorism or an act of war. These situations could escalate uncontrollably and interfere with operations.

Initial Investigation:

- Determine the extent to which operations are or will be hindered.
- Determine if operations can continue.
- Estimate the amount of time that proper operation can continue under the circumstance.

Initial Action:

- Assess the extent of any damage as soon as possible.
- If necessary and possible, take steps to provide interim service to the highest degree possible until the system is returned to its original efficiency.
- Notify the local law enforcement and applicable State and Federal agencies so appropriate measures can be taken to reduce injury and damage.
- Obtain aid for any injured or affected persons.
- Erect barriers and warning around damaged or unsafe structures, roadways, etc.
- In extreme cases, shut down affected parts of the system.

Methods to Reduce System Vulnerability:

- Review security measures and update procedures regularly.
- Properly secure the facility to reduce the likelihood of access by vandals or terrorists.
- Instruct all personnel regarding proper security steps.
- Keep pertinent system information confidential.

1.4 VULNERABILITY ANALYSIS OF COMMON EMERGENCY SITUATIONS

It is possible that any of the incidents outline in this plan could occur at one time or another. The magnitude of the situation will determine the appropriate immediate response. Damage to components from such incidents range from minor to extensive. In some cases, repair or replacement of a component may be required, resulting in substantial disruption of operations. More often though, the damage to a component will be indirect. In this case, the component itself may be undamaged, but is made inoperable because of damage to other elements that are necessary for its operation, such as in a power failure.

A brief analysis of the most common types of situation and methods to reduce the vulnerability is outlined in **Table 1**. This analysis will assist personnel in quickly formulating a response to an emergency. Situations that will be of concern on a daily basis are faulty maintenance, negligent operations, and security. The operator is responsible for assuring that all equipment is properly maintained, operated and secured.

TABLE 1
EMERGENCY RESPONSE SUMMARY

<u>Cause of Emergency</u>	<u>Response to Emergency</u>
Obstruction	1) Implement preventive measures, Mutual Aid Agreements. 2) Dispatch trained crews with proper equipment 3) Pump flow around obstruction with portable pumps 4) Restore system integrity as soon as possible. 5) Clean up spillage.
Water Line Break	1) Dispatch trained crews to locate source of problem. 2) Locate and close nearest shutoff valve 3) Notify applicable customers 4) Make repairs as needed 5) Order boil water alert if applicable
Equipment Failure	1) Shut off equipment & re-route flow using portable pumps 2) Establish manual operations if needed until repaired 3) See manual for trouble shooting 4) Check electrical supply to motors, bearings, couplings5) If
unable to locate problem call serviceman	
Loss of Power	1) Turn off main disconnect 2) Use portable generator as temporary power source 3) Determine problem area by circuit checking. 4) Check motor for short or phase grounding 5) Call in electrician or power company.
Explosion or Fire	1) Isolate electrical power supply breaker. 2) Use fire extinguisher if needed and if possible 3) Notify police and fire depart of emergency condition. 4) Erect barriers and warning signs 5) Pump flow around trouble area with portable pumps.
Contaminated Supply Prolonged Water Loss	1) Implement preventive measures, Mutual Aid Agreements 2) Locate and close nearest shutoff valve 3) Contact water supplier 4) Notify applicable customers and affected parties 5) Notify appropriate local, state and federal agencies 6) Set up distribution center for bottled water 7) Implement backup water contingency supply

Severe Weather Natural Disaster	<ol style="list-style-type: none">1) Turn off power supply2) Isolate damaged areas and set up barriers & warnings3) Contact power company if necessary4) Establish manual operations if possible
Vandalism, Terrorism	<ol style="list-style-type: none">1) Assess extent of damage2) Determine if operations can continue3) Shut down affected parts if needed4) Take appropriate steps to provide interim service5) Notify enforcement agencies and affected parties
Flood	<ol style="list-style-type: none">1) Turn off power2) Erect barriers and warning signs3) Protect areas not flooded to extent possible4) Set up distribution center if supply is affected
Accidental Spills	<ol style="list-style-type: none">1) Determine substance spilled if possible2) Implement appropriate containment & cleanup procedures3) Notify affected parties
Personnel Injury	<ol style="list-style-type: none">1) Examine injury to determine severity2) Determine if emergency medical care is needed3) Contact local EMT if needed4) Treat less severe wounds using first aid kit

END OF TABLE 1

1.5 FORMAL ACTION PLANS AND EMERGENCY PREPAREDNESS

It is important that an Emergency Response Center be designated and a plan of action be established in the event of an emergency. All utility personnel will be trained to assure they are familiar with the plan. The emergency preparedness program will be reviewed annually so it is up-to-date. Included in this section are actions and plans that will be made prior to an emergency to assist in handling emergencies should they occur. The program includes:

- (1) Mutual Aid Agreements;
- (2) Emergency Information List;
- (3) Emergency Equipment Inventory;
- (4) System for Preserving Facility Records;
- (5) Coordination with Local Emergency Response Teams, Police, and Fire Department;
- (6) Outline of Personnel Responsibilities; and
- (7) Public Notification Procedures.

1.5.1 Mutual Aid Agreements

The intent of Mutual Aid Agreements is to establish who will provide aid during times of emergency. There are many entities within the community that can help during emergencies. At a minimum, mutual aid or cooperative agreements are needed with the following:

- (1) Electric, gas, water, and telephone utilities;
- (2) Fire and police departments;
- (3) Civil defense organizations;
- (4) Health departments;
- (5) Rescue squads;
- (6) Consulting engineers for the facility; and
- (7) Other community organizations.

A sample Mutual Aid Agreement form is provided in **Figure 1**. This form will be used to document and/or seek additional emergency contributions or assistance where arrangements have not previously been established.

SAMPLE MUTUAL AID AGREEMENT

Emergency situations could arise in the Utility's waterworks system that would require assistance from another party until normal operations are restored.

IF AN EMERGENCY SITUATION ARISES IN THE **TOWN OF LIZTON'S SERVICE AREA** OR _____, THE OFFICIALS IN BOTH ENTITIES AGREE TO SUPPORT EACH OTHER DURING THE EMERGENCY. EACH ENTITY HAS A CONTINGENCY PLAN FOR RESPONDING TO EMERGENCIES THAT AFFECT ITS WATER MANAGEMENT SYSTEM. _____ AGREES TO PROVIDE SUPPORT IN THE FOLLOWING AREAS:

(Emergency Water Supply, Fire fighting, Rescue Crews, Communications, Personnel, Operations & Maintenance) Other: _____

TO THE EXTENT POSSIBLE UPON REQUEST INITIATED BY:

_____ Name	_____ Name
_____ Title	_____ Title
_____ Utility	_____ Utility

PERSONNEL RESPONDING TO THE REQUEST FOR ASSISTANCE UNDER THIS AGREEMENT WILL REMAIN UNDER THE CONTROL OF THE UTILITY PROVIDING THE SERVICE.

_____ Name	_____ Name
_____ Title	_____ Title
_____ Utility	_____ Utility

FIGURE 1-1

1.5.2 Emergency Information List

Appendix A is a list of emergency telephone numbers which are also available at the Town Hall. *A customer list will be prepared once users are on-line.* This list will be checked for additions, revisions, and accuracy at least annually. Updated lists will be distributed to all pertinent parties.

This list contains the names and current phone numbers of affected parties and persons or organization that might need to be contacted immediately in the case of an emergency. Included on the are emergency medical transport (EMT) facilities, the fire department, the police department, affected parties, and applicable utility companies.

All persons and organizations listed are to be aware that they have been included on the emergency list in order to assure that they respond rapidly if notified. This list will also be available to the Hendricks County Emergency Management Team, which the Town is involved with. This can be of assistance if an emergency occurs in which several persons must be notified immediately.

1.5.3 Emergency Equipment Inventory

Once in place, an inventory will be compiled of emergency equipment and materials that are available within the waterworks facility. Annual review of the emergency equipment inventory will be conducted so information is accurate and up to date. When additional emergency equipment and supplies are needed they will be purchased and stockpiled or arrangements will be made to obtain these items through mutual aid agreements or outside contracts.

1.5.4 Facility Records

The facility records are kept at the Town Hall in a secure place. Pertinent records are held in a safety deposit box or a flood/fireproof vault in order to preserve them in an emergency situation.

1.5.5 Local Coordination

The Town of Lizton is a contributing member and participant in the Hendricks County Emergency Operations Plan (EOP). The Town will provide any needed assistance that they are qualified and able to provide such as infrastructure assessment, repair, and restoration, and utility coordination. The EOP is provided in **Appendix E** of this document.

1.5.6 Responsibilities of Water System Personnel

The Operator has been designated as having responsibility for the overall emergency response program for the water utility. All regular and auxiliary personnel will be assigned specific tasks and responsibilities based on the particular emergency situation. The Operator and Council President will jointly be responsible for authorizing and directing corrective actions authorized or required by all applicable regulations and as otherwise recommended by emergency response personnel, fire and police departments, emergency management, IDEM, the Indiana Department of Health, and all other appropriate agencies.

The Operator or designee is also the media relations contact and will address all inquiries regarding emergencies. Responsibilities include the following:

- 1) Notify and inform the Council of the emergency
- 2) Provide options and recommendations regarding corrective actions to be taken.
- 3) Notify the proper state and local government agency
- 4) Contact the appropriate emergency responders
- 5) Initiate appropriate customer notification.
- 6) Notify the local television station, radio station and newspaper, when appropriate
- 7) Prepare the notice, when applicable, for submittal to the newspaper.

The Operator will continually update the Council President and Clerk Treasurer with progress reports until the problem has been eliminated or corrected. At that time a news release to that effect will be issued as well as other established notifications. The local television (WTHR, WRTV, WISH), radio stations (WIBC, WFBQ), and newspaper (Hendricks County Journal) will be utilized, when appropriate.

1.5.7 Public Notification Procedures

The Clerk Treasurer/Utility Clerk will be responsible for preparing and distributing public notification procedures to customers in the event of a boil water advisory, fecal coliform maximum contaminant level violation or other emergency incident. Responsibilities may be delegated to qualified personnel. Public notification procedures will be performed in accordance with 327 IAC 8-2.1-8 through 327 IAC 8-2.1-10.

Consumers will be notified as soon as possible of any emergency that potentially affects them. The public will be notified of emergencies that pose an immediate threat to health or safety through appropriate media outlets such as television, radio, newspapers, and the internet. Critical users will be notified directly if necessary. These are users who could be severely impacted immediately by a disruption in water service such as schools, institutions, senior citizens complexes, water dependent businesses, interconnected water systems, medical and dental clinics, and individuals with home dialysis machines or other life support devices that are sensitive to water quality changes.

Tier I Notification will be provided within twenty four (24) hours of learning of the violation, by one or more of the following forms:

- 1) Contact appropriate broadcast media (radio or television)
- 2) Post the notice in conspicuous locations throughout the service area
- 3) Hand deliver the notice to appropriate and applicable persons

Tier 2 Notification will be provided no later than thirty (30) days after learning of the violation. It will be accomplished by one or more of the following methods:

- 1) Mail or other direct delivery to each customer and other service recipients
- 2) Publish notice in the local newspaper
- 3) Provide copies for distribution to major users such as apartments and large employers
- 4) Post in public places within the service area and on the Town's webpage
- 5) Provide notice to community organizations
- 6) Post notice in public locations frequented by service customers
- 7) Publish notice in the local newspaper

Tier 3 Notification will be provided no later than one (1) year after learning of the violation. Methods to provide notification will be accomplished by one of the following:

- 1) Mail or other direct delivery to each customer and other service recipients
- 2) Publish notice in the local newspaper
- 3) Provide copies for distribution to major users such as apartments and large employers
- 4) Post in public places within the service area and on the Town's website
- 5) Deliver to community organizations
- 6) Post a notice in public locations frequented by service customers
- 7) Consumer Confidence Report

Door to door notification, local television, and radio stations will be used for emergencies that require immediate response notification. The local newspaper will be used for other notifications that are considered less time-sensitive.

APPENDIX A

EMERGENCY CONTACTS

LIZTON Town & Emergency Numbers

Company	Contact	Position	Phone	Address	E-mail
911 Hendricks County			911		
Hendricks County			317-745-9229 or 317-745-92	355 S. Washington Street, #8, Danville, IN 46122	
Lizton Town Office	Tonya Perry	Clerk Treasurer	317-994-5500	106 N. Lebanon Street, Lizton, IN 46149	ltownhall@gmail.com
Lizton Town Clerk Treasurer	Tonya Perry	Clerk Treasurer	317-994-5500	106 N. Lebanon Street, Lizton, IN 46149	
Lizton Police Department	Eric Mohr	Town Marshall	17-994-6000 ; 317-994-550	106 N. Lebanon Street, Lizton, IN 46149	liztonpd@indy.rr.com
Lizton Planning & Zoning	Dan Lake, AICP	Zoning Administrator	317-994-5500	106 N. Lebanon Street, Lizton, IN 46149	
Lizton Planning & Zoning	Jack Hall	Building Inspector	317-994-5500	106 N. Lebanon Street, Lizton, IN 46149	
Lizton Street/Maintenance	Eric Mohr	Maintenance Superintendent	317-994-5500	106 N. Lebanon Street, Lizton, IN 46149	
Lizton Fire Department	John Joseph	Fire Chief	317-994-5500		
Lizton Fire Department	Mike Scott	Deputy Chief	317-994-5500		
Lizton Utilities	Tonya Perry	Clerk Treasurer	317-994-5500	106 N. Lebanon Street, Lizton, IN 46149	
Town Engineer - TRIAD Associates, Inc.	Lou Savka	Owner/Project Manager	317-377-5230	5835 Lawton Loop East Drive, Indianapolis, IN 46216	lsavka@triadassoc.net
Lizton Poison Control			1-800-222-1222		

Emergency Electrical & Telecommunications Contractors

Company	Contact	Position	Phone	Address	E-mail
Electrician - Stuart Electric, LLC			317-946-1642	80 town Center Drive North, Mooresville, IN 46158	
Electrician - The Electric Express			317-908-8667	7733 Tanager Court, Zionsville, IN 46077	
Electrician - Copper Ridge Home Services, LLC			317-839-6100	6272 Turnbridge Drive, Avon, IN 46123	
Electrician - Ronald L. Dunaway Electric			317-572-1022	4718 West I50 South, Danville, IN 46122	

Emergency Water & Wastewater Contacts - Misc

Company	Contact	Position	Phone	Address	E-mail
Alliance of Indiana Rural Water			317-789-4200	555 W. Jefferson, Franklin, IN	alliance@inh2o.org
Indiana Rural Water Association			866-895-4792	P.O. Box 242, Zionsville, IN 46077	
Smith Projects	Greg Wensel	Project Manager	317-750-3591	238 N. Main Street, Maxwell, IN 46154	gregwensel@smithprojects.com
Smith Projects	Jared Landuyt	Project Manager	317-416-8117	238 N. Main Street, Maxwell, IN 46154	jared@smithprojects.com
Triad Associates	Jim Soper		765-960-0761	5835 Lawton Loop E. Dr, Indianapolis, IN 46216	jsoper@triadassoc.net
Culy Contracting	Tom Franklin		765-546-1893	5 Industrial Park Drive, Winchester, IN 47394	
IDEM	Carolyn Chappell	Inspector	317-694-2397	100 N. Senate Ave, Indianapolis, IN 46204	cchappel@idem.in.gov
Fluid Waste Services			317-773-7996	21787 Riverwood Ave, Noblesville, IN 46062	fws1777@aol.com
Plumber - Central Supply Co.			317-745-0179	Danville, IN	

Plumber - Burney's Plumbing Inc.			317-839-9662	698 Tower Road, Plainfield, IN 46168	Page 93 of 341
Plumber - Westside Plumbing, Inc.			317-445-8399	Brownsburg, IN	www.westsideplumbing.net
Plumber - Justin Dorsey Plumbing - Danville			888-242-2937	2378 State Road 236, Danville, IN 46122	
Plumber - Justin Dorsey Plumbing - Plainfield			317-272-5213	118 E. Main Street, Plainfield, IN 46168	
Plumber - Ferguson Plumbing			317-253-1569	1057 E. 54th Street, Suite A, Indianapolis, IN 46220	
Indianapolis Plumbers Supply Co.			317-783-2981	3849 E. Raymond Street, Indianapolis, IN 46203	

Emergency Responders

Company	Contact	Position	Phone	Address	E-mail
Brownsburg Fire Department - Territory			317-852-1190	470 E. Northfield Drive, Brownsburg, IN 46112	
Brownsburg Fire Department - Station No. 131			317-852-1190	55 E. Main Street, Brownsburg, IN 46112	
Brownsburg Fire Department - Station No. 133			317-852-1190	N. County Road 1000 East, Brownsburg, IN 46112	
Union Township Fire Department			317-994-5500		
Hendricks County Emergency Manager	Sean Horan	Director	317-745-9252	355 S. Washington Street, #208, Danville, IN 46122	shoran@co.hendricks.in.us
Hendricks County Emergency Manager	Lise Crouch	Coordinator	317-745-9252	355 S. Washington Street, #208, Danville, IN 46122	lcrouch@co.hendricks.in.us
Hendricks County Sherriff's Department	Brett Clark	Sheriff	317-745-6269	925 E. Main Street, Danville, IN 46122	
Hendricks County EOC 911 Dispatch			-911		
Vectren Energy			1-877-861-6077		
Danville Metropolitan Police Department	Wendall Ray Raney,	Chief of Police	317-745-4180	49 N. Wayne Street, Danville, IN 46122	rraney@danvilleindiana.org
Avon Police Department	Chief Sean Stoops	Chief of Police	317-272-4485 or 317-839-8700	6550 E. US Hwy 36, Avon, IN 46123	
Avon Police Department	Brian Nugent	Assistant Chief	317-272-4485 or 317-839-8700	6550 E. US Hwy 36, Avon, IN 46123	
Brownsburg Police Department	Joe Grimes	Chief of Police	317-852-1109	31 N. Green Street, Brownsburg, IN 46112	jgrimes@brownsburgpolice.org
Duke Energy			1-800-774-0368		
Hendricks County Health Department	Julie Haan	Director of Environmental Hea	317-745-9217	355 S. Washington Street, Danville, IN 46122	jhaan@co.hendricks.in.us
FBI Field Office (for terrorism or sabotage)			317-595-4000	8825 Nelson B Klein Pkwy, Indianapolis, IN 46250	
American Red Cross - Indiana Region		Indianapolis Office	317-684-1441	1510 N. Meridian St., Indpls, IN 46202	
Lizton Fire Department			317-994-5500	206 Lebanon St., Lizton, In 46149	

Hospitals & Health Facilities

Company	Contact	Position	Phone	Address	E-mail
Hendricks Regional Health			317-745-4451	Danville, IN	
Hendricks Regional Health Brownsburg			317-456-9051	Brownsburg, IN	
Lizton Family Medicine			317-994-6600	1045 Wyatt Way, Lizton, IN 46149	

State and Local Agencies

Company	Contact	Position	Phone	Address	E-mail
Hendricks County Health Department	Julie Haan	Director of Environmental Health	317-745-9217	355 S. Washington Street, Danville, IN 46122	
IDEM: Drinking Water Branch (DW)			317-234-7430 or 317-233-4222 or 800-317-2334	100 N. Senate Avenue, Indianapolis, IN 46204	
IDEM: Emergency Response		24-hour Emergency Spill Line	7-233-7745 or 888-233-7745		
Hendricks County Emergency Mgmt Of	Sean Horan	Director of Emergency Management	317-745-9229	355 S. Washington Street, Danville, IN 46122	
Indiana Department of Homeland Security	Stephan Schulz	District 5 FOC	317-232-3980	302 W. Washington St., Indianapolis	

Bulk Water Suppliers

Company	Contact	Position	Phone	Address	E-mail
A1 Pool Water			317-861-4159	10136 Longford Dr., Avon, IN 46123	
A Aqua 1 Pool Water			(317) 835-7665	6486 N 400 W, Fairland, IN 46126	
Aqua Systems			800-447-5582	7785 E. US Hwy 36, Avon, IN 46123	
Niagara Bottling Co., LLC			909-230-5000 open 24 hours	1250 Whitaker Rd., Plainfield, IN 46168	
Hinckley Springs Water			800-492-8377	9890 E. 121st Street, Fishers, IN 46038	
Abospure Water Co.			317-356-3900	8835 General Way, Indianapolis, IN 46219	
Aqua Systems			317-594-0644	11345 Allisonville Rd., Fishers, IN 46038	
D & A Water Hauling			812-649-5270	5450 N. County Rd. 575 E., Grandview, IN 47615	
Dan's Pool Water			765-482-6878	1230 w. 275 N., Lebanon, IN 46052	
Jack's Pool Water			765-649-3577	2721 W. 300 N., Anderson, IN 46011	
Indianapolis Plumbers Supply Co.			317-783-2981	3849 East Raymond Street, Indianapolis, IN 46203	
Justin Dorsey Plumbing - plumbing supply (serving Lizton)			317-745-4830	2378 State Road 236, Danville, IN 46122	
ACME Plumbing, Drains, and Septic Service			317-542-8277	3702 North Shadeland Avenue, Indianapolis, IN 46226	
Summer's of Brownsburg, Inc.			317-858-5248	1693 E. Northfield Drive, Indianapolis, IN 46112	

Alternate Water Supply

Company	Contact	Position	Phone	Address	E-mail
Town of Pittsboro	Jason Love	Town Manager	317-892-7660	80 N. Meridian St; Pittsboro, IN 46167	jbl1331@gmail.com
Town of Brownsburg	Brian Hartsell	Town Manager, Interim	317-852-1120	61 N. Green, Brownsburg, IN 46112	townmanager@brownsburg.org
CWA	Jeff Sinclair	Market Development	317-927-4744	2020 N. Meridian, Indianapolis, IN 46202	jsinclair@citizensenergygroup.com

Media

Company	Contact	Position	Phone	Address	E-mail
Local TV - WTHR (NBC 13)			317-636-1313	1000 N. Meridian Street, Indianapolis, IN 46204	
Local TV - WRTV (channel 6)			317-635-9788	1330 N. Meridian Street, Indianapolis, IN 46202	
Local TV - WISH (channel 8)			317-923-8888	1950 N. Meridian Street, Indianapolis, IN 46202	
Local Radio - WIBC-FM 93.1			317-222-2222	11 S. Meridian Street, Indianapolis, IN 46204	
Local Radio - WFBQ-FM 94.7			317-257-7565	6161 Fall Creek Road, Indianapolis, IN 46202	
Newspaper: Hendricks County Flyer					

APPENDIX B

CRITICAL PARTY NOTIFICATION CHART

CRITICAL PARTY NOTIFICATION CHART

Refer to the table below for parties to contact during certain emergencies. Public notification must be made when a condition exists that constitutes a public health hazard.

No.	Emergency	Emergency Responders	State Local Agencies	Local Contacts	Chemical Suppliers	Equipment Repair/Supplies	Utilities	Bulk Water Suppliers	Media
1.	Power Outage – minor					✓	✓		
2.	Power Outage – Major		✓			✓	✓	✓	✓
3.	Prolonged Water Outage		✓	✓			✓	✓	✓
4.	Transmission/Distribution System Failure			✓		✓			
5.	Contamination of Supply		✓	✓	✓		✓	✓	✓
6.	Chemical Incident at Facility		✓			✓			
7.	Terrorism/Vandalism	✓	✓	✓					✓
8.	Flood	✓	✓	✓				✓	✓

CRITICAL PARTY NOTIFICATION CHART

Refer to the table below for parties to contact during certain emergencies. Public notification must be made when a condition exists that constitutes a public health hazard.

9.	Severe Weather	✓		✓		✓			
10.	Earthquake	✓	✓	✓		✓			✓
11.	Fire	✓		✓					
12.	Hazardous Material Release in Watershed or Recharge Area	✓	✓	✓				✓	✓

APPENDIX C

PUBLIC NOTIFICATION NOTICES

DRINKING WATER WARNING

Water has high levels of nitrate

DO NOT GIVE WATER TO INFANTS UNDER 6 MONTHS OLD OR USE IT TO MAKE INFANT FORMULA

Water sample results received (__date__) showed nitrate levels of (__level and units__). This is above the nitrate standard, or maximum contaminant level (MCL), of (__state/federal MCL__). Nitrate in drinking water is a serious health concern for infants less than six months old; this includes pregnant women and nursing mothers because of the transfer of nitrate to the fetus or baby through the mother's milk or blood.

What should I do?

- **DO NOT GIVE THE WATER TO INFANTS.** *Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.* Blue baby syndrome is indicated by blueness of the skin. Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptoms occur, seek medical attention immediately.
- Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.
- **DO NOT BOILD THE WATER.** Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.
- Adults and children older than six months can drink the tap water (nitrate is a concern for infants because they can't process nitrates in the same way adults can). However, if you are pregnant or have specific health concerns, you may wish to consult your doctor.

What happened? What is being done?

Nitrate in drinking water can come from natural, industrial, or agricultural sources (including septic systems and run-off). Levels of nitrate in drinking water can vary throughout the year.

We will let you know when the amount of nitrate is again below the limit.

Describe corrective action, seasonal fluctuations, and when system is expected to return to compliance.

For more information, please contact the **TOWN OF LIZTON** at **(317) 994-5500**.

This notice is being sent to you by Indiana State Water System ID# IN5232026

Date distributed: _____

DRINKING WATER WARNING BOIL YOUR WATER BEFORE USING

Disease-causing organisms have entered the Town of Lizton water supply

These organisms are causing illnesses in people. The Utility became aware of a waterborne disease outbreak from _____ on _____.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a rolling boil and let it boil for at least one minute then let it cool before using; or use bottled water. Oiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.
- Symptoms of the waterborne disease include nausea, cramping, headache, dizziness, and other symptoms. If you experience one or more of these symptoms and they persist, contact your doctor. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

What happened? What is being done?

Describe the outbreak.

Corrective action.

When the outbreak might end.

We will inform you when you no longer need to boil your water.

For more information, please contact the **TOWN OF LIZTON at (317) 994-5500**. General guidelines on ways to lesson the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1 (800) 426-4791.

This notice is being sent to you by the Town of Lizton Water Utility. State Water System ID# IN5232026

Date distributed: _____

DRINKING WATER WARNING

Water is contaminated with fecal coliform or *E. coli* bacteria

BOIL YOUR WATER BEFORE USING

Fecal coliform or *E. coli* bacteria were found in the water supply on _____. These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a rolling boil and let it boil for at least one minute then let it cool before using; or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.
- *Fecal coliform* or *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice from their health care providers about drinking water.

What happened? What is being done?

Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains. It can also happen due to a break in the distribution system (pipes) or a failure in the water treatment process.

Describe corrective action.

We will inform you when tests show no bacteria and you no longer need to boil your water.

We anticipate resolving the problem within _____ (estimated time frame).

For more information, please contact the **TOWN OF LIZTON** at **(317) 994-5500**. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1 (800) 426-4791.

This notice is being sent to you by the Town of Lizton Water Utility, Indiana State Water System ID# IN5232026

Date distributed: _____

DRINKING WATER PROBLEM CORRECTED

Customers of the Lizton Water Utility were notified on _____ of a problem with our drinking water and were advised to describe recommended action. We are pleased to report that the problem has been corrected and that it is no longer necessary to describe recommended action. We apologize for any inconvenience and thank you for your patience.

Add further details here when appropriate.

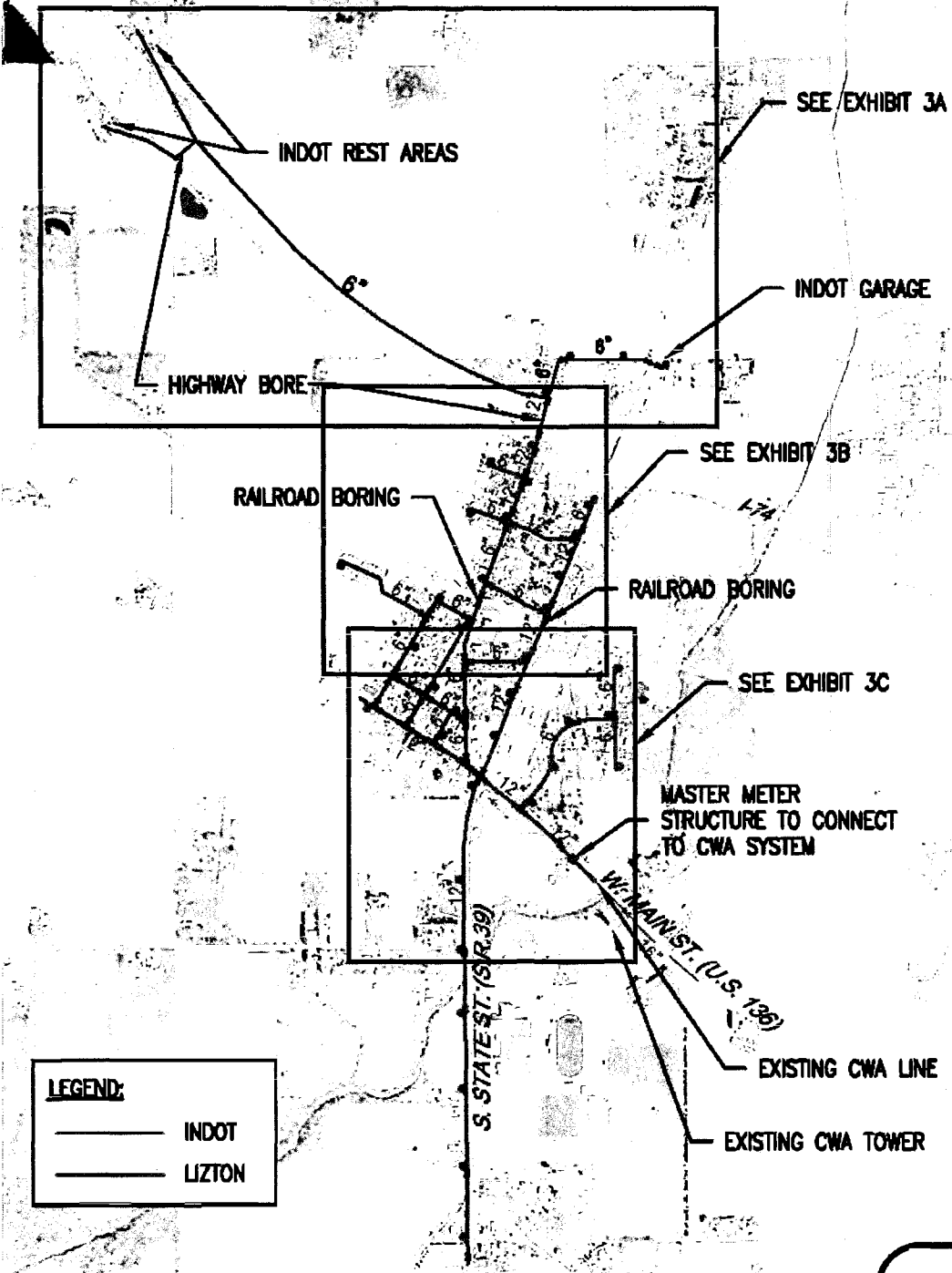
As always, you may contact the **TOWN OF LIZTON** at **(317) 994-5500** with any comments or questions.

This notice is being sent to you by the Town of Lizton Water Utility, Indiana State Water System ID# IN5232026

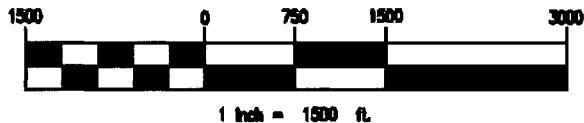
Date distributed: _____

APPENDIX D

MAP & LAYOUT

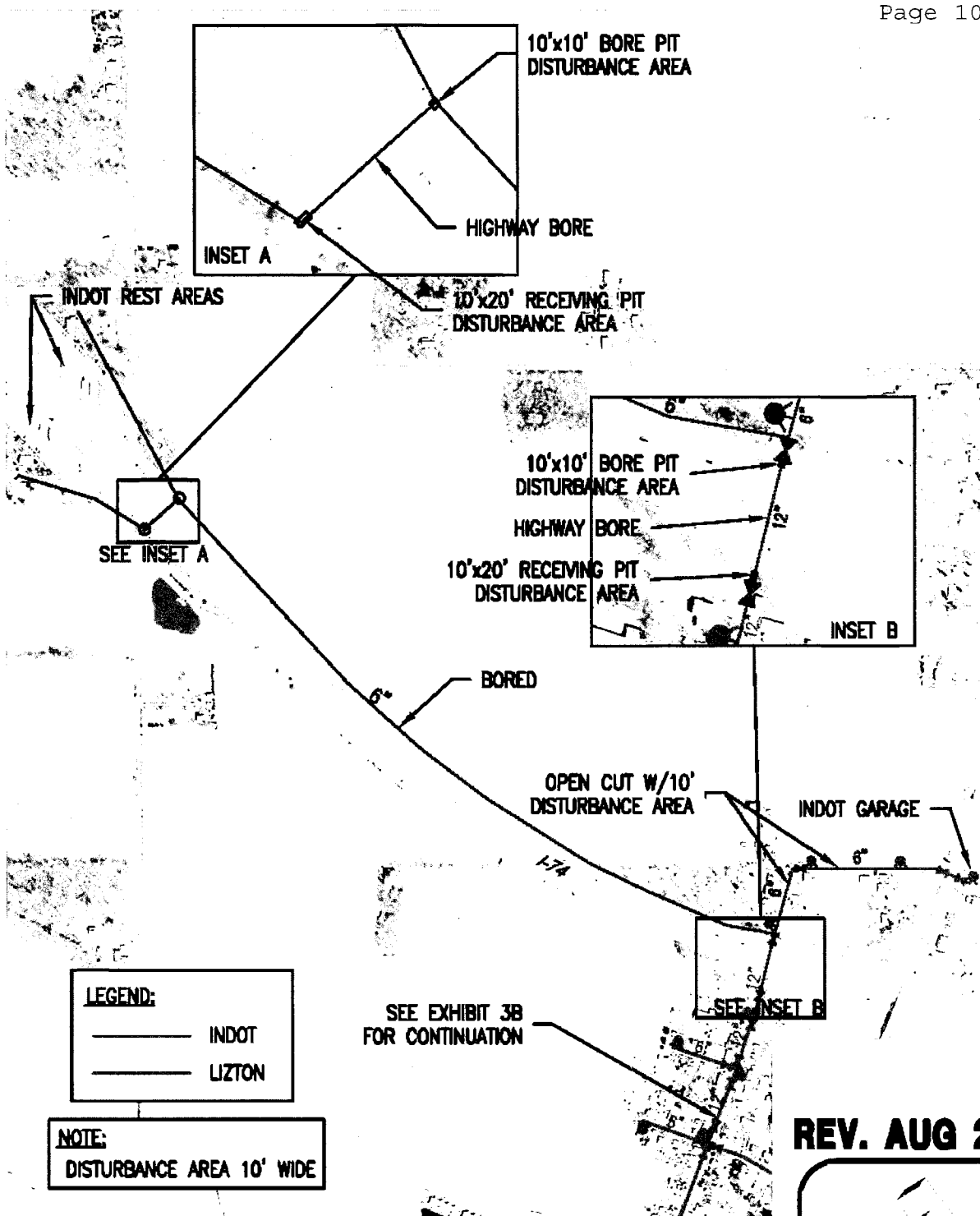


TOWN OF LIZTON
PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS



WATER PER
EXHIBIT 3

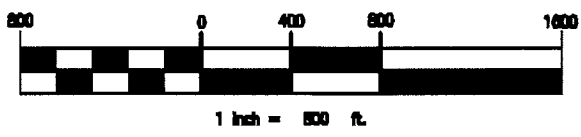
10/03/2018 @ S:\2018\LIZTON\WATER MANAGEMENT PLAN\WATERMGT-EXHIBIT 3.DWG



LEGEND:
—— INDOT
—— LIZTON

NOTE:
DISTURBANCE AREA 10' WIDE

TOWN OF LIZTON PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS



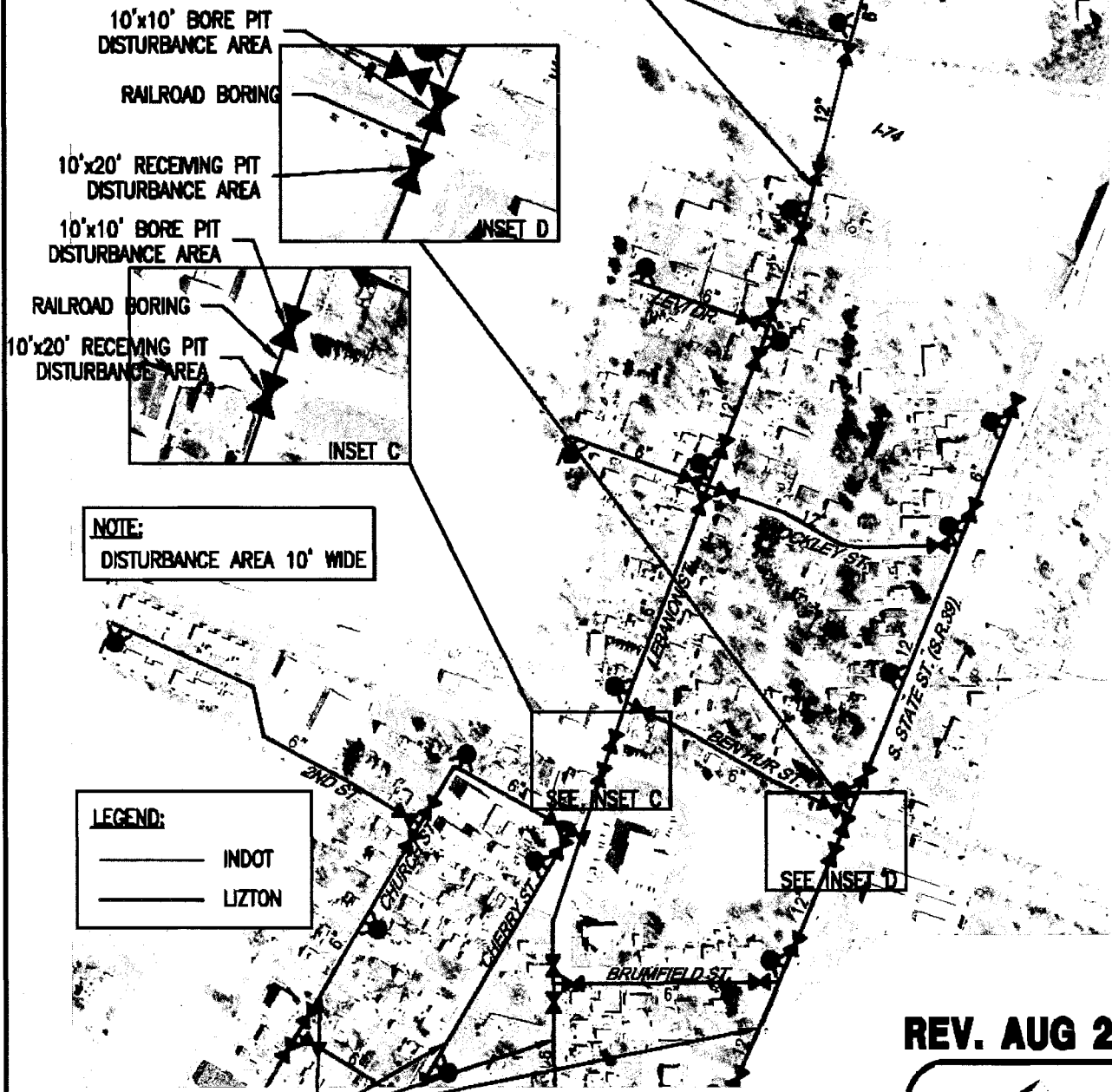
REV. AUG 2018



**WATER PER
EXHIBIT 3A**

08/15/2018 11:54:20 AM S:\2018\LIZTON\201815A - WATER PER\AMD1-EXHIBIT 3 - PRO IMP-REV2.DWG

SEE EXHIBIT 3A FOR CONTINUATION



NOTE:
DISTURBANCE AREA 10' WIDE

LEGEND:

	INDOT
	LIZTON

SEE EXHIBIT 3C FOR CONTINUATION

TOWN OF LIZTON

PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS



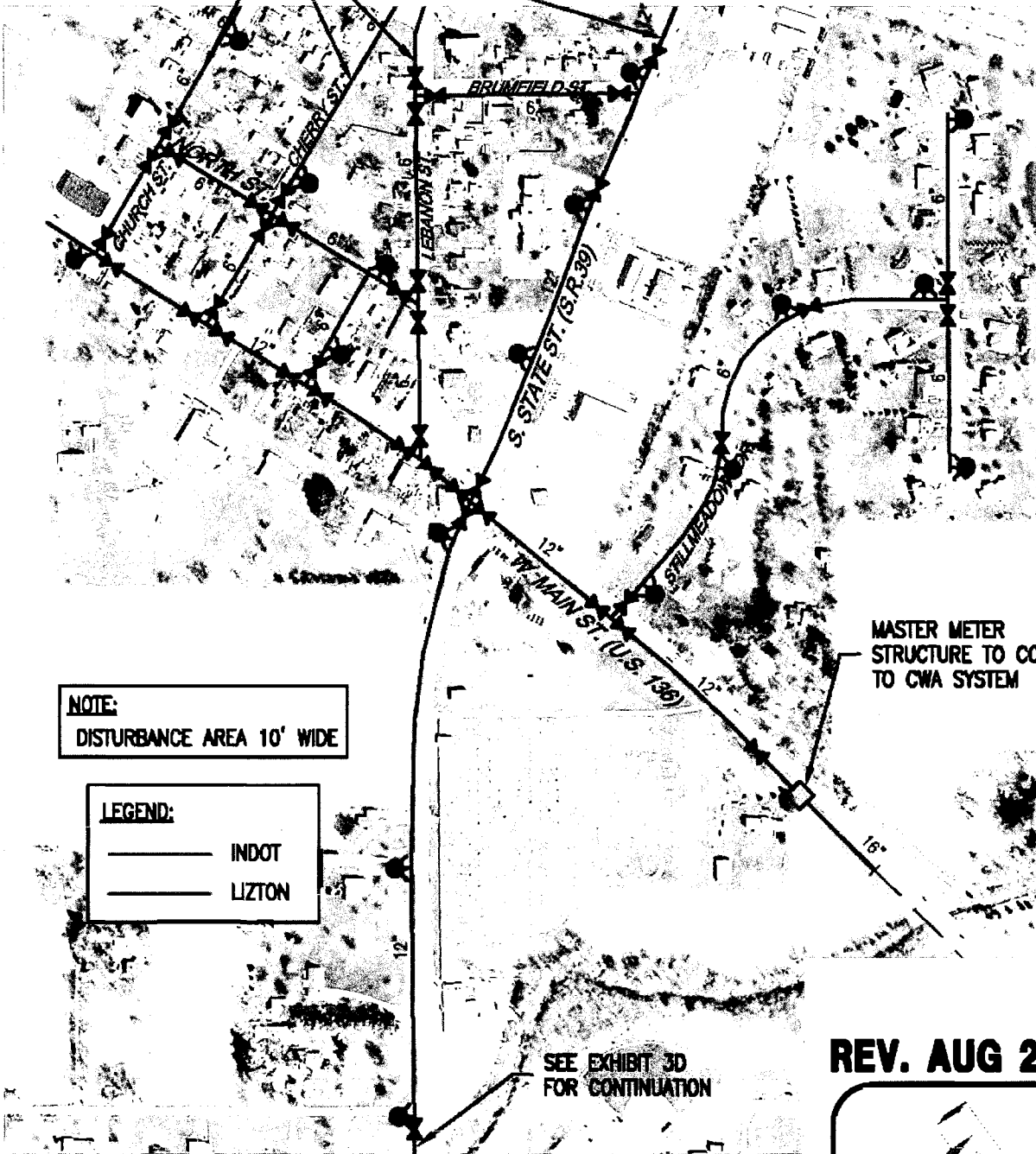
REV. AUG 2018



WATER PER EXHIBIT 3B

08/15/2018 1' S:\2018\LIZTON\201815A - WATER PER\AND1-EXHIBIT 3 - PRO IMP-REV2.DWG

SEE EXHIBIT 3B
FOR CONTINUATION



NOTE:
DISTURBANCE AREA 10' WIDE

LEGEND:

	INDOT
	LIZTON

MASTER METER
STRUCTURE TO CONNECT
TO CWA SYSTEM

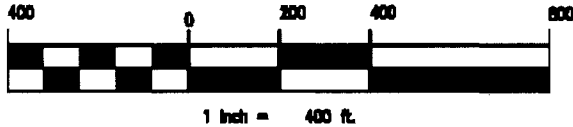
SEE EXHIBIT 3D
FOR CONTINUATION

REV. AUG 2018



**WATER PER
EXHIBIT 3C**

**TOWN OF LIZTON
PROPOSED DISTRIBUTION SYSTEM IMPROVEMENTS**



APPENDIX E

COMPREHENSIVE EMERGENCY OPERATIONS PLAN

Hendricks County and Cities Within

COMPREHENSIVE EMERGENCY OPERATIONS PLAN

The County of Hendricks, Indiana

Including the Cities Within

BASIC PLAN

I. INTRODUCTION

A. Mission

To coordinate and assist all emergency management activities to protect human life, property and the environment of Hendricks County.

B. Purpose

This document establishes a framework for Hendricks County to prepare for, respond to, mitigate the impacts of, and recover from a wide variety of emergencies or disasters. The plan provides for flexibility of direction, coordination and method of operation to enable the community to accomplish the following purposes:

1. Prepare law enforcement personnel, health officials, the media and others for emergencies that may occur in Hendricks County.
2. Ensure an immediate, appropriate coordinated response to any emergency.
3. Minimize loss of life, personal injury, and damage to property resulting from hazardous and emergency conditions.
4. Minimize conditions occasioned by disaster-related shortages of materials or services.
5. Provide relief and promote recovery.

C. Scope

The Comprehensive Emergency Management Plan, Hendricks County, Indiana:

1. Describes emergencies and disasters which may occur in Hendricks County. Provides procedures to disseminate warnings and to determine, assess and report the magnitude of such disasters.

2. Establishes the parameters under which Hendricks County will operate in response to emergencies and disasters by:
 - a. Defining the emergency roles and missions of County departments, divisions and agencies.
 - b. Providing direction for the execution of measures to provide relief and assistance.
3. Establishes a procedure for the employment of county resources. This procedure covers actions to be taken by the designated organization and mobilization of these resources to ensure effective actions before, during and after an emergency.
4. Identifies and designates required actions and functional responsibilities to obtain and implement assistance and relief from the State, Federal, quasi-governmental and private organizations.
5. Outlines the forms of recovery assistance available to individuals, businesses, governments, and the actions required to implement such assistance.

D. Methodology

The Hendricks County Comprehensive Emergency Management Plan (CEMP) is developed on continual basis using information and comments from those agencies, which constitute the emergency response organization. Indiana Code 10-4-1 and Ordinance 2001-18 of the Code of the County of Hendricks require the Emergency Management Department prepare and maintain in current status a county emergency management plan to address the response to emergencies occurring in Hendricks County. This plan shall be the sole emergency management plan for the county and shall be filed in the office of the Hendricks County Clerk. No police or private organizations shall develop emergency operating or disaster plans or procedures that conflict with the County Emergency Management Plan except where specifically authorized by Federal, State or Local Law.

The procedures set forth in the CEMP are to be routinely reviewed and updated. Each Emergency Support Function (ESF) operating procedure, with the exception of ESF-5 Planning and ESF-13 Military Support has been developed with the assistance of ESF teams. These teams were composed of representatives of the primary and support agencies assigned to that ESF. Each agency reviews the ESF to ensure that it is consistent with the latest response capabilities and measures.

Annual reviews are held with participating agencies to update the CEMP and its component Emergency Support Functions.

In an effort to ensure the preparedness of each County agency, each agency of the local government is required to prepare Agency Continuity of Government Plan. These plans include an agency self-assessment of preparedness. This self-assessment assists the use that information to development and implementation of a Long Term Action Plan designed to enhance their emergency preparedness and disaster response capabilities.

E. ORGANIZATION (See Figure 1)

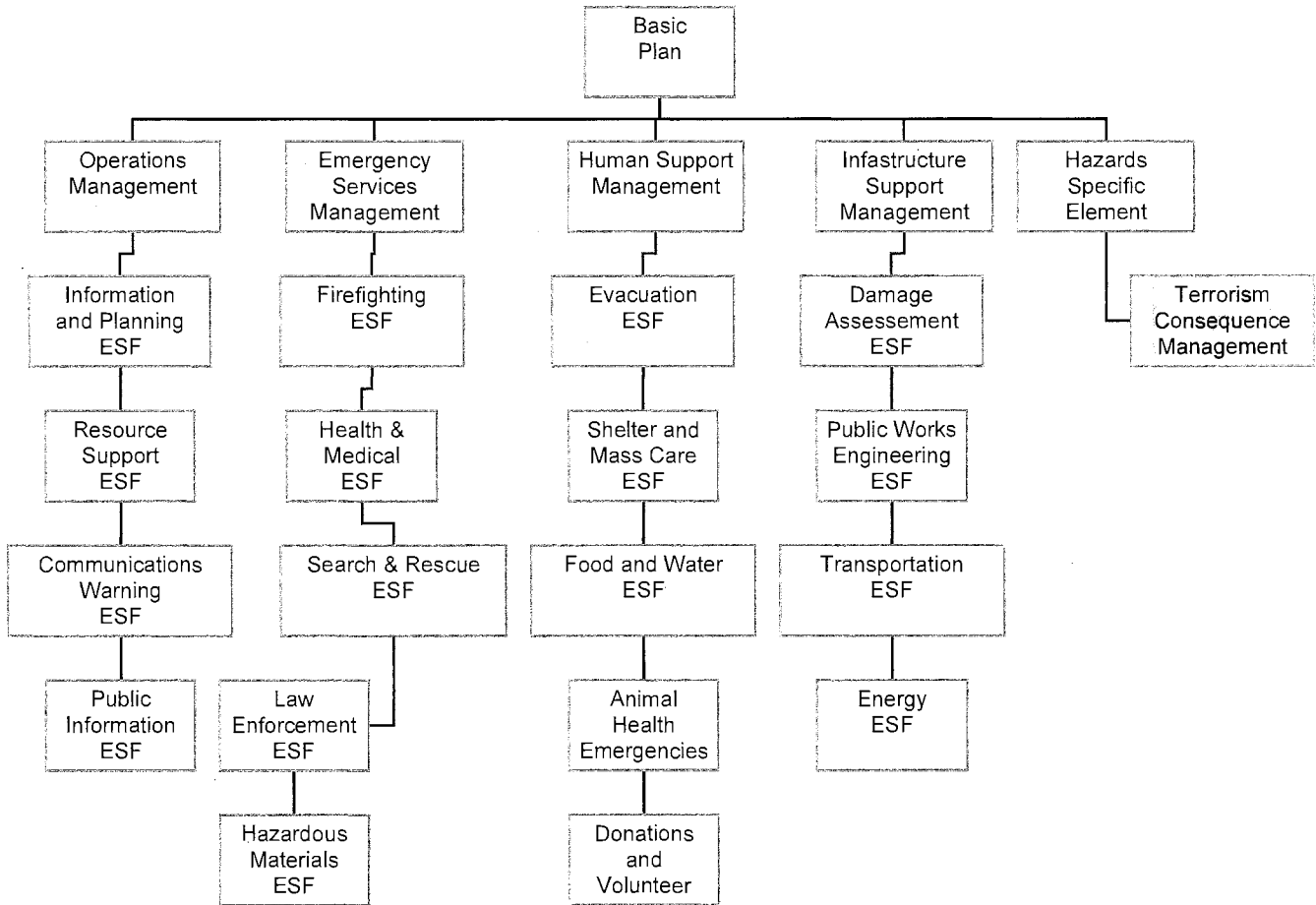
The Operations Section includes three Emergency Support Functions: Communications and Warning, Information and Planning, and Resource Support.

The Emergency Services Section includes five Emergency Support Functions: Health and Medical, Search and Rescue, Hazardous Material, Firefighting, and Law Enforcement.

The Human Support Section includes four Emergency Support Functions: Shelter and Mass Care, Food and Water, Animal Health and Donation and Volunteer Management.

The Infrastructure Support Section includes four Emergency Support Functions: Public Works and Engineering, Energy, Damage Assessment and Transportation.

CEMP Organizational



Elements of the Comprehensive Management Plan (Figure 1)

II. SITUATION

The analysis of potential hazards is the basic component of any community's comprehensive emergency management plan. A complete understanding of the community's geography, demographics, and land use trends is essential to be able to minimize the possible loss of life, human suffering, and damage to public and private property associated with natural or man-made disasters. The information developed can provide the Hendricks County Emergency Management Agency with a tool, which can be used to identify those hazards, which require an organized response to properly manage related activities, so that needed priorities and actions can be established.

The hazard analysis involves not only identification of the kinds of hazards to which Hendricks County is subjected, but also specific estimates of people and property at risk from a particular hazard. When this measure of vulnerability, reflecting a worst-case situation, is combined with available hazard information, the community can estimate the frequency and extent of damage and the areas and persons affected. This combination of factors is the key to determining if present capabilities are adequate for mitigating, preparing for, and responding to an emergency, and if found inadequate, identifying procedures needed to upgrade these capabilities.

A. Characteristics of Hendricks County

Hendricks County is 420 square miles with twelve (12) townships: Brown, Center, Clay, Eel River, Franklin, Guilford, Liberty, Lincoln, Marion, Middle, Union and Washington. Eleven incorporated cities: Amo, Avon, Brownsburg, Clayton, Coatesville, Danville, Lizton, North Salem, Plainfield, Pittsboro and Stilesville.

Hendricks County is located just west of Indianapolis. Danville is the County Seat. It is bounded on the north by the county of Boone; south by the county Morgan. Guilford and Washington Townships remain rural areas with continuous growth toward urbanization. The population of Hendricks County is 104,093 according to the 2000 census.

One rail lines serve the area; CSX Corporation. Nuclear waste travels through Hendricks County both by rail and truck transport on a regular basis

Marathon, Buckeye and Panhandle Eastern Pipelines operate major petroleum pipelines, which passes through Hendricks County.

Hendricks County has one airport, Gordon Graham Airport. The Indianapolis International Airport is a Class C facility with three runways. It borders just Southwest of Hendricks County. It is served by 21 airlines and handles approximately 7.3 million passengers per year and with 719 takeoffs and landings

per day. It is the third busiest cargo hub in the United States, to which could impose a threat to Hendricks County in the event of an emergency at the facility.

One hospital provides medical care for Hendricks County.

B. Hazards Evaluation and Vulnerability Analysis

The following hazards have the possibility of occurring within Hendricks County because of our infrastructure, climatic patterns and population. Hazards are listed according to the likelihood of their occurrence and/or the seriousness of their effect on the community, as determined by historical record or analysis of the conditions, which might cause them:

Natural

- Tornado (March-July)
- Flood
- Earthquake (New Madrid fault, Wabash Valley fault)
- Winter Storm (December-March)
- Drought/Heat Wave (May-September)
- Wildland Fire (May-October)

System Failure

- Transportation Accident-Aircraft
- Utility Failure

Hazardous Material

- Hazardous Materials Incident-Highway Transport
- Hazardous Materials Incident-Fixed Facility
- Hazardous Materials Incident-Rail Transport
- Hazardous Materials Incident-Pipeline

Nuclear Incident

Biological-Chemical terrorism

Civil Disorder

SEVERE WEATHER

Hendricks County has experienced damage associated with severe thunderstorms, tornadoes, straight-line winds, hail, flooding, severe winter storms, blizzards, and ice storms and lighting strikes. Severe weather can cause home and business structural damage, power loss, street blockages, and local and generalized flooding.

HAZARDOUS MATERIALS INCIDENTS

Most serious hazardous materials incidents occur at fixed facilities within the county. There are more than 78 facilities in the county that stock reportable quantities of substances on the Environmental Protection Agency (EPA) Extreme Hazardous Substance notifications list. These facilities are located throughout the county.

Rail carriers routinely transport Environmental Hazardous Substance (EHS) materials through the county, and especially through the county government seat and other rural areas.

Hazardous materials incidents may cause small to large sections of the county's population to be evacuated or the shelter-in-place. Notification, evacuation, evacuation routes, and transportation can be major problems in the event a large segment of the population must be relocated.

Hazardous materials carriers frequently travel along the major roads through the county. At present, there is no estimate of the amount of hazardous materials traffic, which traverses the county; however, incidents of EHS escaping from their transporters are relatively few.

A number of petroleum pipelines transport a variety of products through the southwest, northwest and north/northeast portions of the county. Products transported are fuels and flammable gases. There has not been a major pipeline explosion in Hendricks County in years.

AIRCRAFT ACCIDENTS

In addition to the Gordon Graham Airport in Hendricks County, there is one other airport with close enough proximity to affect the county. This is the Indianapolis International Airport.

The majority of standard instrument approaches to the Indianapolis International Airport bring traffic across the county at distances of five, ten, and fifteen miles from the airport. These patterns cover the Southeast and Northwest portion geographical area of the county. Straight-in approaches bring aircraft traffic over

the Plainfield area. Air cargo operations depart and arrive mainly between 10:00 PM and 4:00 am on weekdays.

According to the Airport Authority, the Indianapolis International Airport experience approximately 600 passenger aircraft cycles per day; air cargo operations account for approximately 130 more cycles at night. Additionally, an unknown number of air courier flights take place daily.

FIRES

Hendricks County has a significant number of single story structures, which present special problems during a fire or other emergency on the premises. Railroads and farming land have the potential to be sites of Wildland fires under conditions of drought. This type of fire can be a problem because water supplies in affected areas may not be sufficient to extinguish fires in the same manner as structure fires.

UTILITY FAILURES

Power failures are a possibility; especially in the event severe weather such as high winds or ice storms causes widespread failure of power lines. Cinergy (PSI), Hendricks Power & Light (REMC), and Indianapolis Power and Light have mutual aid agreements with other local and regional power companies to share resources and repair capabilities. Redundancies in the local power distribution systems decrease the likelihood of prolonged power disruptions in the county. Vectren Gas Company provides natural gas products for commercial and residential use throughout the county.

Ameritech and TDS provide local telephone services to the county. Its distribution network is redundant and capable of being re-routed around local failures. The system is capable of being overloaded during an emergency and can also affect cellular phone communications.

The Local Municipalities provides drinking water for most of the county. Indianapolis Water Company provides a very small amount of water supply along with ground water wells.

Comcast and Time Warner provide cable television services to the county. Both cable operators have agreements to provide Emergency Alert System information as necessary on behalf of local government.

CIVIL DISORDER

Although all areas of the county may be subject to civil unrest, the Danville area is the most likely area for acts of civil disorder due to the locations of County and local government offices and being the County Seat.

EARTHQUAKES

Hendricks County is located in a zone, which will experience damage and injuries in the event of a Richter 7.0+ earthquake with an epicenter located in the New Madrid fault, which will have the effect of a Richter 5.5-6.1 earthquake in Indianapolis. While the last major earthquake in the New Madrid fault was in 1811, there have been smaller earthquakes affecting Marion County. In 1895 on the New Madrid fault, and in 1899 and 1987 in the Wabash Valley fault. The best estimates of the Central United States Earthquake Consortium indicated a Richter 7.0+ New Madrid earthquake would result in 157 fatalities, 787 serious casualties, and over 78,000 displaced persons in Marion County. Seismologists at the University of Memphis predict an 86% to 97% chance of a major earthquake occurring in the New Madrid zone within the next 50 years.

TERRORISM-WEAPONS OF MASS DESTRUCTION

There have been over 45 anthrax hoax incidents in Indiana between 1998 and 2000. The attacks on New York City and Washington, D.C. on September 11, 2001 and the subsequent anthrax attacks in New York City and Washington, D.C. on October 11, 2001 brought an increase of response calls to suspicious packages and suspicious powders to approximately 25 a day.

Although the "Cold War" between the United States and the former Soviet Union is over, the threat of the use of weapons of mass destruction against the United States has not diminished. Russia, China, India, and Pakistan have demonstrated the use of nuclear weapons. North Korea, Iraq and Iran have well-developed biological and chemical weapons capabilities. The collapse of the former Soviet Union and its resulting need for foreign capital has increased the likelihood of the illicit sale of nuclear weapons and weapon making technology. Chemical and biological weapons are becoming the "poor man's" weapon of mass destruction with a dramatic increase in chem-bio incidents in the last few years including: 1995 bubonic plague incident in Ohio, 1995 ricin incident in Arkansas, 1997 anthrax incident in Washington, D.C., and the 1998 anthrax incident in Las Vegas. As the two attacks on the World Trade Center and the Oklahoma City bombings have demonstrated, we are not immune to home grown terrorism. Hendricks County is a target because it is the County Seat, and borders the State Capitol.

III. CONCEPT OF OPERATIONS

Local authorities will most likely be the first-responders to an emergency or disaster in Hendricks County. Each agency of local government will address the functions for which it is responsible. This requires each agency to be aware of the functions it will have to perform during a disaster. Agency personnel must be trained in these disaster responses functions, and be available to work prior to, during, and following a disaster.

State and Federal governments will support the efforts of the County when the County is unable to cope with a disaster. Hendricks County will handle most emergencies in accordance with federal, state, and local law.

Specialized assistance for specific needs may be requested from various State and Federal agencies. Procedures for requesting aid from Federal programs are included in the Emergency Operations Center Standard Operating Procedures manual. The Commissioners and Emergency Management Director (EMA) will keep the Indiana State Emergency Management Agency informed of such requests.

Requests for local assistance will be made to the Director of the Emergency Management Agency through the appropriate County/City agency. After an evaluation of the situation has been made by the Emergency Management Director based on agency reports and reports from Damage Assessment Teams with the County, the Commissioners may direct County resources into the affected area and/or declare a State of Local Emergency to exist. The County plan will be implemented, the Emergency Operations Center activated, and County resources made available for special assistance as requested by the Emergency Management Director. The Emergency Operations Center (EOC) staffing assignments shall be as shown in the Emergency Operations SOP. Activation of the EOC will activate the Emergency Preparedness Organization, which is organized using the Emergency Support Function (ESF) concept, mirroring the organization of State and Federal disaster response organizations. State of Emergency cannot be declared for particular areas of the County.

County and local agencies will provide resources to assist these designated areas according to the functional responsibilities outlined in this document and within the Standard Operating Procedure (SOP) of the Countywide Emergency Operating Center. For each emergency support (disaster) function, one agency has primary responsibility and other agencies are assigned supporting roles. The primary agency will provide both resources and leadership relating to that function, with support agencies providing resources as requested by the agency with primary responsibility.

When local resources are determined to be inadequate to cope with the disaster, the Commissioners will request State and/or Federal assistance through the Governor. The Emergency Management Director will coordinate with the Indiana State Emergency Management Agency to assure the most effective management of such assistance.

For planning and preparedness purposes, the Hendricks County Comprehensive Emergency Management Plan addresses emergency preparedness and management as a four phased process; Preparedness, Response, Recovery, and Mitigation. The Annexes of this plan are consistent with those established by the Federal Response Plan and the State of Indiana Comprehensive Emergency Management Plan, and utilize the Emergency Support Function concept of organization and response.

The Commissioners or their authorized designee will initiate, execute, and direct the operation. The Commissioners or his authorized designee will control the operation, either personally and/or through delegation of tasks.

A. Authorities

1. Federal Law

Authority for the creation and responsibilities of state disaster preparedness agencies and recovery efforts is established by P.L. 81-920, the Federal Civil Defense Act of 1950, as amended, the Federal Disaster Relief Act of 1974, as amended, and the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, as amended.

2. State Law

The Civil Defense and Disaster Law of 1975, as amended (*Iad. Code section 10-4-1, et seq.*) Directs the establishment of county emergency management agencies in each county of the State of Indiana.

The statute establishes a framework for emergency management in the State of Indiana in order to generally provide for the common defense and to protect the public peace health and safety and to preserve the lives and property of the people of the state.

3. Hendricks County

Hendricks County Ordinance 2001-18 establishes the Emergency Management Agency of Public Safety as the Local Emergency Preparedness Agency.

The ordinance sets forth the responsibilities of the Emergency Management Director as the emergency management agency for Hendricks County. The ordinance is attached as Tab "A". The ordinance expressly grants the Commissioners of Hendricks County certain authority and powers during a state of local disaster emergency.

B. Organization

1. Non-Emergency Operations

The executive power of the county government (except as retained by the excluded cities and towns) is vested by the Commissioners of Hendricks County, who are chief executive and administrative officers of the government.

2. Emergency Operations

a. Authorization

The Commissioners of Hendricks County is authorized to activate the Comprehensive Emergency Management Plan, or so much thereof, as is necessary. The Emergency Management Director shall in turn proceed to execute the County Emergency Management Plan.

C. Responsibilities

1. General

Officials at all levels of government share responsibility for the necessary planning needed to minimize losses and provide relief from emergencies. This shared responsibility includes the emergency preparedness and response capabilities of the Federal, State, County government, municipal governments, districts and independent authorities, and volunteer agencies.

Initial response will provide for an immediate reaction to alleviate human suffering, prevent loss of life, protect property, and to return the area to normalcy in the least possible time. Operational plans shall be developed for accomplishment of various program goals and objectives designed to effectively reduce hazards and to bring long-range recovery to distressed areas.

2. Role of Hendricks County

- a. Be prepared to direct and control local response to a majority of emergencies in accordance with local laws and mutual aid arrangements with adjacent communities, special districts and voluntary organizations.
- b. Provide immediate response through local police, fire/rescue and public facilities.
- c. Establish readiness procedures to ensure proper training of personnel and the availability of appropriate personnel and equipment in the time of an emergency.
- d. Request activation of mutual aid arrangements when specific aid coordination in such agreements is required.
- e. Request assistance from other governments, or higher levels of government, State and Federal agencies, through the Indiana State Emergency Management Agency.

3. Specific Responsibilities of the Commissioners of Hendricks County

The following specific responsibilities apply to the Commissioners of Hendricks County as established by Indiana Code Title 10 and of the Ordinance Code Number 2001-18. Expanded functional responsibilities of the Lead agencies are found in the Response Section of this Comprehensive Emergency Management Plan.

- a. During the continuance of a natural disaster emergency, the Commissioners are commanders-in-chief of all the emergency management forces available in the County. The Commissioner may issue executive orders, proclamations and regulations and amend or rescind them in the fulfillment of this responsibility, and such executive orders, proclamations and regulations shall have the force and effect of law during the period for which they are effective. To the greatest extent possible, the Commissioners shall delegate or assign command authority by prior arrangement embodied in the emergency management plan or in appropriate executive orders or regulations, but this shall not restrict his authority to do so by orders issued at the time of and during the disaster emergency.
- b. The Commissioners of Hendricks County is the head of the Emergency Management Director. As such, he/she is head of the

elected and appointed officials that have the executive authority to establish the policies that will direct the Emergency Operations Center and emergency response actions.

c. Declaration; Termination

When the Commissioners of Hendricks County finds that a disaster has occurred or that the occurrence or the threat thereof is imminent, he may declare a state of "Local Disaster Emergency" exists in all or part of the county. He will direct the Emergency Management Director, along with the Office of Counsel, to prepare a "Proclamation of Local Disaster Emergency". The declaration is filed with the Hendricks County Clerk. Should Federal or State assistance become necessary, a Petition by the Governor of the State of Indiana shall be prepared. The state of emergency shall continue until the Commissioners find that the threat or danger has been dealt with to the extent that the emergency conditions no longer exist and he terminates the state of disaster emergency by proclamation; but no state of local emergency may continue for longer than seven days unless renewed by action of the County Commissioners. At the same time as the state of emergency is declared, the Commissioners may convene the County Council in special meeting, at which he shall report to the Council all the facts and circumstances concerning the disaster and his recommendations in connection therewith. The Council by resolution may cancel a state of emergency at any time, whereupon the Commissioners shall issue proclamation ending the state of emergency. All proclamations issued under this subsection shall indicate the nature of the disaster, the area or areas of the County threatened by it and the conditions which have brought it about or which make possible the termination of the state of disaster emergency.

- d. Suspend the provisions of any ordinance prescribing procedures for the conduct of County's business or the rules, regulations or orders of any County's agency, if strict compliance with such ordinance, rule, regulation or order would in any way prevent, hinder or delay necessary action in coping with the disaster.
- e. Use all available resources of the County government as reasonably necessary to cope with the disaster.
- f. Transfer the direction, personnel or functions of County agencies, or units thereof, for performing or facilitating emergency services.

- g. Request the assistance and cooperation of the independent agencies, or such of them as are reasonably necessary to implement the emergency management plan, and, in the event that an independent agency fails or refuses to provide the requested assistance and cooperation or that there is no one available to order such assistance and cooperation, commandeer or utilize such independent agency's personnel and equipment as reasonably necessary to cope with the disaster.
- h. Subject to the provisions of Indiana Code Title 10, commandeer or utilize any private property if he finds this necessary to cope with the disaster.
- i. Direct and compel by any necessary and reasonable force the evacuation of all or part of the population from any stricken or threatened area within the County if they deem this action necessary for the preservation of life or other disaster mitigation, response or recovery.
- j. Prescribe routes, modes of transportation and destinations in connection with an evacuation.
- k. Control ingress to and egress from a disaster area, the movement of persons within the area and the occupancy of premises therein.
- l. Suspend or limit the sale, dispensing or transportation of alcoholic beverages, firearms, explosives and combustibles.
- m. Make provision for the availability and use of temporary emergency housing.
- n. Take or direct measures for limiting or suspending lighting devices and appliances, gas and water mains, electric power distribution and other utility services in the general public interest.
- o. Take or direct measures concerning the conduct of civilians, the movement and cessation of movement of pedestrian and vehicular traffic prior to, during and subsequent to drills and actual or threatened disasters, the calling of public meetings and gatherings and the evacuation and reception of the civilian population, as provided in the emergency management plan.
- p. Authorize the use of forces already activated or mobilized to assist private citizens of the County in cleanup and recovery operations

during a natural disaster when permission to enter onto or into private property has been obtained from the property owner.

- q. Enforce and utilize the provisions of mutual aid plans and interjurisdictional agreements and, in connection therewith:
 - (1) Organize and dispatch Emergency Management support forces, including personnel, supplies and equipment as necessary, to other counties, transfer operational command of such forces to the other jurisdiction and resume operational command of such forces when they are no longer needed outside of the County.
 - (2) Request and assume operational command of Emergency Management support forces, including personnel, supplies and equipment as necessary, dispatched from other jurisdictions into the County and transfer operational command of such forces to the original jurisdiction when they are no longer needed; and loan, lease or transfer, on such terms and conditions as he deems necessary to promote the public welfare and protect the interests of the County, any property of the County government required or useful to effectuate the mutual aid plan or interjurisdictional agreement, and receive and utilize any property of another jurisdiction, by loan, lease or transfer on such terms and conditions as he deems advisable, pursuant to a mutual aid or interjurisdictional agreement.

- r. Waive procedures and formalities otherwise required by the Charter or by law pertaining to:
 - (1) The performance of public work
 - (2) The entering into of contracts
 - (3) The incurring of obligations
 - (4) The employment of permanent and temporary workers
 - (5) The utilization of volunteer workers
 - (6) The rental of equipment

- (7) The purchase and distribution, with or without compensation, of supplies, materials and facilities
- (8) The appropriation and expenditure of public funds

D. Issuance of Executive Orders and Proclamations:

The Commissioners of Hendricks County shall, by proclamation, declare a state of local disaster emergency, which shall activate the Comprehensive Emergency Management Plan and place into operation, the Emergency Operations Center. It will be the authority for the deployment and use of any resources to which the plan applies and for use or distribution of any supplies, equipment, materials or facilities available, and any other provisions of County Codes and regulations relating to disaster emergencies.

E. Increased Readiness Procedures:

The Emergency Management Agency is responsible for monitoring all significant incidents and for placing on alert, those agencies that may be required to assist in the response. To reduce the effects of disasters, a system for reacting to various warnings of impending local disasters and emergencies of regional significance, such as tornadoes is established by Emergency Management Agency. This recognizes certain conditions, which trigger precautionary and response actions, by the either Emergency Management Agency or larger elements of the emergency response organization.

F. Levels of Activation

The Director of the Emergency Management Department has established a graded level of Emergency Operations Center activation based on six (6) levels of notification and activation. The Commissioners, through the Emergency Management Agency may designate what level of activation is required in response to a given situation, and shall ensure all steps for notification and operation are completed for the that level of activation.

1. Special Event:

Normal activation of the EOC for use as a command and control center for special events.

2. Emergency Standby:

Conditions have developed that jeopardize the County, but have not yet caused, and may never cause, adverse effects. Monitor Only.

3. Level I:

Emergency Conditions have occurred and are having a serious, but limited impact on portions of the County. On site Incident Command in effect to stabilize the incident. Monitor and provide resources. No Mutual Aid or state assistance requested.

4. Level II:

Emergency Conditions are having a serious effect on most or the entire County; resources are heavily deployed. Multiple Incident Command sites. No Mutual Aid or state assistance requested.

5. Level III:

Emergency Conditions are having a very serious effect on most or the entire County; resources are fully committed and the incident(s) continue to expand. State assistance is requested.

6. Level IV:

Emergency Conditions are affecting the entire State. Governor's Declaration of Disaster in force.

6. Level V:

Federal Assistance is requested.

IV. Execution

A. Emergency Response Organization

▪ **Direction and Control**

The Direction and Control of major disaster preparation, response and recovery is centered on the Countywide Emergency Operations Center. The Director of the Emergency Management Agency can activate the Emergency Operations Center, located at 355 S. Washington St. # 208, Danville, Indiana, at any time in response to the approach of severe weather, or in case of a technological accident. When the Director of the Emergency Management Agency is notified that there is a significant threat of any kind to Hendricks County, he may recommend to the Commissioner that the County Emergency Operations Center be activated. The Director may activate the EOC before formal activation by the Commissioners, in

preparation of the formal activation, or at any time, he feels it necessary to do so in response to an approaching or anticipated emergency event.

- a. Hendricks County Emergency Management has a mobile command Emergency Operations Center (EOC) available for activation. The Mobile EOC is utilized and activated for:
 - Special Events
 - When requested by local agencies
 - In the event the primary EOC located at the Hendricks County Government Center is incapacitated.
 - In support of Primary EOC for large-scale events or disasters.

▪ **Operational Organization**

Personnel of the EOC are identified, in order to separate functional areas of responsibility and to take advantage of the spatial arrangements of the physical facilities provided in the Emergency Operations Center.

Each department is specially identified in the accompanying organization rosters. Their principle tasks and actions to be at the different stages of response are also outlined. In addition to the attached group task outlines, each of the principle participants, including the Commissioners of Hendricks County, head of the Hendricks County Chapter of the American Red Cross, are provided with specific outlines of their duties and responsibilities, so that they understand their roles within the EOC and what is expected of them during an emergency.

Provided to the members of the EOC and to other related city and county agencies, are the Emergency Operations Center Standard Operating Procedures. This SOP delineates responsibilities and procedures of persons or agencies that have either the primary responsibility or a supporting role in performing certain acts or functions in response to a disaster or its aftermath.

▪ **Emergency Management Responsibilities**

Commissioners of Hendricks County, Hendricks County Council and the Sheriff of Hendricks County:

Responsibilities:

- a. Authorize acceptable recommendations of Staff Advisory Group and the Operating Group.
- b. Authorize issuance of public evacuation recommendations at appropriate time.
- c. Promulgate emergency policy decisions.
- d. Oversee Response/Recovery" operations.
- e. Issue necessary proclamations and ordinances.

▪ **Advisory Group**

Commissioners of Hendricks County

Director of Emergency Management

Counsel, County of Hendricks

Responsibilities:

- a. Prepare advisory recommendations for Executive Group.
- b. Keep officials and emergency agencies advised of progress and their required preparedness status.

▪ **Operations Group**

The functional organization of the Operations Group is based on the Emergency Support Function (ESF) concept introduced in 1992 by the Federal Response Plan and since incorporated into the State of Indiana Comprehensive Emergency Management Plan. The Indiana Comprehensive Emergency Management Plan encourages Indiana's counties to utilize the ESF concept in the development of their local response plans.

The Federal Response Plan developed a functional grouping of Federal agencies in order to clearly define the roles and responsibilities of these elements of the Federal government in response to a major natural disaster. Each ESF is headed by a primary agency, which is selected based on its authorities, resources and capabilities. Other agencies are designated as support agencies for one or more ESFs based on their resources and capabilities to support their functional area.

The Indiana State Emergency Management Agency rewrote its procedures to implement the ESF concept and developed an emergency response consistent with the Federal Response Plan. In order to be consistent with Federal and State agencies, and to facilitate the coordination of its response to a natural or manmade disaster, the Hendricks County Emergency Management Agency uses the ESF concept for its emergency management operations. The Hendricks County Comprehensive Emergency Management Plan contains the following ESFs, which are organizational components of the Operations Group of the EOC.

▪ **Operations General Responsibilities**

Each member of the Operations Group, as a senior administrator of the local government or other entity, must be prepared to respond to a disaster situation in an orderly, precise manner. As a situation develops prior to the activation of the EOC, the Emergency Management Department will constantly update the EOC staff. Besides the specific actions required by their position, the following general actions will be taken by EOC staff members and other senior administrators whom are not required to report to the EOC.

- a. Special Events
- b. Emergency Standby
- c. Level I
 - (1) Brief Supervisors, emphasize assigned emergency responsibilities
 - (2) Verify personnel assignments
 - (3) Review plans and procedures
- d. Level II
 - (1) Inventory equipment and supplies and prepare facilities
 - (2) Check out communications, internal and external
 - (3) Monitor situation
 - (4) Alert personnel
 - (5) Establish liaison with control
 - (6) Implement personnel standby procedure

- e. Level III
 - (1) Recall critical personnel for emergency response operations.
 - (2) Release non-essential personnel for deployment as emergency management volunteers.
 - (3) Monitor situation
 - (4) Maintain cross-agency coordination
 - (5) Report to Emergency Operations Center or other assigned location.

- f. Level IV
 - (1) Initiate response actions as dictated by existing plans and operating procedures.
 - (2) Identify areas to be evacuated.
 - (3) Coordinate evacuation procedures and the implementation of the County Evacuation Traffic Management Plan.
 - (4) Monitor progress of evacuation and sheltering activities.
 - (5) Prepare and issue necessary public announcements and official announcements, including evacuation orders and Declaration of Local State of Emergency.
 - (6) Coordinate activities with State and other Federal agencies.

- g. Recovery Actions
 - (1) Perform assigned emergency tasks
 - (2) Request additional assistance, as needed
 - (3) Advise all personnel of "All Clear"
 - (4) Report damage estimates
 - (5) Complete all recovery actions
 - (6) Revert to day-to-day operations

▪ **Emergency Support Functions**

All Emergency Support Functions of this section support the overall effort of the jurisdictions first responders.

Transportation (ESF 1)

Provides overall coordination of transportation assistance to County Departments, other governmental and private agencies, and others requiring transportation assistance in disaster situations.

Functions:

Monitor, prioritize and allocate all available transportation resources.
Coordinate "Special Need" evacuation transportation.
Coordinate the use of privately owned transportation resources.

Primary School District: Avon Community School Corporation

Supporting Districts:

Brownsburg Community School Corporation
Danville Community School Corporation
Mill Creek School Corporation
North West Hendricks School Corporation
Plainfield Community School Corporation

Communications/County Warning Point (ESF 2)

Coordinates telecommunication support necessary to conduct disaster response and relief operations.

Functions:

Maintain communications with State Warning Point, other county and municipal agencies.
Maintain and operate communications equipment necessary to keep public informed.
Serve as single focal point for communications problem/issues impacting on emergency/disaster operations.
Provide support and liaison to Rapid Impact Assessment Teams for communication assessment.

Primary Agency: Hendricks County Dispatch Centers (All)

Support Agencies:

Brownsburg Police Department
Danville Police Department
Hendricks County Sheriffs Department
Avon Police Department
Plainfield Police Department

Public Works and Engineering (ESF 3)

Provides public works and engineering support to assist County agencies and Municipalities in response/recovery operations.

Functions:

Pre-emergency preparation of public buildings and facilities.
Technical Advice and Evaluation.
Debris clearance and disposal.
Temporary constructions of emergency access routes.
Emergency restoration of critical public services.
Restoration of water supply, and wastewater facilities and systems.
Damage Assessment.
Construction management and inspection.
Emergency Demolition and stabilization of damaged structures.
Provide liaison to Rapid Impact Assessment Teams for damage assessment to local roads and bridges.

Primary Agencies: Department of Public Works

Support Agencies:

Parks
Fire Department
Police Department
Hendricks County Health Department
Indiana Department of Environmental Management
U.S. Environmental Protection Agency
Power and Light Company
Water Company
Hendricks Power
PSI
Indiana Gas Company

Firefighting (ESF 4)

To detect and suppress fires resulting from or occurring coincidentally with a disaster.

Functions:

Coordinate all disaster/emergency related firefighting activities within the County Provide liaison with County EOC for search and rescue.

Support Agencies:

Amo Volunteer Fire Department (Mill Creek District # 5)
Brownsburg Fire Territory
Coatesville Volunteer Fire Department (Mill Creek District # 6)
Danville Fire Department
Eel River Township Fire & Rescue
Hazelwood Volunteer Fire Department
Liberty Township Fire Department
Lizton / Union Township Volunteer Fire Department
Pittsboro / Middle Township Fire Department
Plainfield Fire Department
Stilesville Volunteer Fire & Rescue
Washington Township / Avon Fire Department

Information and Planning (ESF 5)

To coordinate the overall information and planning activities at the County Emergency Operations Center and to collect process and disseminate information about a potential or actual event. Due to the limited physical area of the EOC, and the limited staff available for this function, information and planning becomes a shared task of the all agencies.

Functions:

Information processing: Collect, process and disseminate information for operations and reports.

Assign response tasks to individual Emergency Support Functions.

Establish operational and logistical goals and objectives.

Maintain displays of pertinent information (maps, charts, status boards, computerized databases and other electronic information.

Serve as the focal point for the disaster planning and response process.

Develop and disseminate necessary reports for damage assessment.

Maintain Message Control function of the EOC, and track messages, requests, personnel assignments, EOC manpower levels and other EOC functions.

Prepare and coordinate requests to the State EOC

Coordinate assignment and deployment of local personnel to Rapid Impact Assessment Teams

Primary Agency: Hendricks County Emergency Management

Support Agencies:
All other Emergency Support Functions

Mass Care (ESF 6)

Coordinate the efforts to provide sheltering, feeding and emergency first aid following a disaster to all civilian population.

Functions:

Operate Public Shelters.
Provide medical assistance at shelters.
Provide security for shelters and distribution points.
Provide information on the status of victims
Provide food, water, and other essential commodities to victims.
Operate Special Medical Needs Shelters.
Operate Senior Citizen Shelters
Provide liaison with Rapid Impact Assessment Teams for mass care assessment.

Primary Agency: Hendricks County Emergency Management Agency

Primary Supporting Agency: American Red Cross

Support Agencies:

Hendricks County Health Department
Hendricks County Sheriffs Department
Hendricks County School Districts (Shelters)
Hendricks County Parks
Hendricks County Mental Health Association
Indianapolis Crisis Assistance Response Team
CICOA
The Salvation Army
Indiana Volunteer Agencies Active in Disaster (INVOAD)
Hendricks County RACES
IPL, Cinergy (PSI), & Hendricks County Power & Light (REMC)
Military Department of Indiana (National Guard)

Resource Support (ESF 7)

To locate, obtain and provide essential material resources and personnel to the EOC and to County organizations/agencies in emergency operations.

Functions:

Provide the following types of services

Contract Services
Office Equipment/Supplies
Financial Support
Office Space

Primary Agency: Hendricks County Emergency Management

Support Agencies:
County Auditor
Computer Center
Department of Human Resources
Commissioners Office
Planning and Building
Engineering Department
Every City/County Agency

Health and Medical Services (ESF 8)

To provide a coordinated response to public health needs following a disaster.

Functions:

Coordinate emergency medical services.
Coordinate arrival of Disaster Medical Assistance Teams (DMATS).
Plan for and coordinate employment of medical volunteers.
Provide medical care personnel.
Provide victim identification/emergency mortuary services.
Provide health equipment/supplies.
Provide medical staff for special medical needs and public evacuation shelters. Monitor quality of potable water and food supplies, and issues appropriate warnings.
Provide liaison Rapid Impact Assessment Teams for health facilities, medical requirements, water and sewer.

Primary Agency: Hendricks County Health Department

Support Agencies:
Hendricks Community Hospital
Hendricks County Coroner's Office
The American Red Cross
The Hendricks County Mental Health Association
Amo Vol. Fire Department
Washington Twp. /Avon Fire Department
Brownsburg Fire Territory
Liberty Township Fire & Rescue
Danville Fire Department

Eel River Twp. /North Salem Vol. Fire Department
Fire Department of Liberty Twp.
Hazelwood Vol. Fire Department
Lizton Vol. Fire Department
Plainfield Fire Department
Avon School District
Brownsburg School District
Danville School District
Mill Creek School District
Tri-West School District

Urban Search and Rescue (ESF 9)

To locate, extricate, and provide immediate medical treatment to victims trapped in collapsed or severely damaged structures as a result of a disaster.

Functions:

Develop detailed plans for employment of search and rescue assets
Plan for the arrival and employment of FEMA search and rescue teams
Coordinate provision of technical guidance to search and rescue teams

Primary agency: Hendricks County Emergency Management

Support agencies:

Hendricks County Fire Rescue Services
Hendricks County Emergency Management SAR Team

Hazardous Materials (ESF 10)

Note: All Hendricks County Fire Departments Rely Upon IFD for HAZMAT

To respond to an actual or potential release of hazardous materials.

Functions:

Develop and maintain HAZMAT Teams.
Coordinate evacuation of contaminated area.
Plan for reception and employment of additional HAZMAT personnel.

Primary Agency: Indianapolis Fire Department

Support Agencies:

Marion County Health Department
DPW Office of Environmental Services

Municipal Fire Departments
Emergency Management Division

Food and Water (ESF 11)

Identify, secure and arrange for the transportation and distribution of food and water assistance to disaster victims in the impacted areas.

Functions:

Obtain appropriate food supplies.

Arrange transportation.

Coordinate distribution.

Coordinate Disaster Food Stamp assistance with State and local officials.

Ensure that all shelters, hospitals, nursing homes, and similar facilities have sufficient food/water.

Inspect food hygiene at distribution sites and shelters.

Primary Agency: Hendricks County Health Department

Support Agencies:

The American Red Cross

The Salvation Army

Community Action of Greater Indianapolis (Hendricks Co. Community Action)

St Marks Episcopal Church, Plainfield

Gleaners' Food Bank, Indianapolis

Indiana Grocers' Association

Indiana Restaurant Association

Energy (ESF 12)

Plan for and coordinate necessary actions to facilitate the restoration of energy systems following a disaster.

Functions:

Provide emergency power and fuel to support response operations.

Plan for, administer and enforce energy priorities and allocations.

Provide technical assistance involving energy restoration.

Assist utilities and county and municipal agencies in obtaining equipment, labor and transportation to repair and restore energy systems.

Coordinate mutual aid assistance in restoring the energy distribution network.

Provide liaison with Rapid Impact Assessment Teams for energy and power needs.

Primary Agency: Local Energy Providers

Support Agencies:
Department of Public Works
Hendricks Power
Emergency Management Department
IPL/AES
Cinergy/PSI

Military Support (ESF 13)

Coordinates requests for and deployment of military assets in support of all ESFs.

Functions:

Assist in the distribution of food and water.
Provide manpower and equipment support to assist in emergency road clearance and debris removal.
Coordinate medical and other support activities within capabilities.
Assist EOC in coordinating with any Federal Military Forces dispatched to assist in disaster operations.
Provide facilities and/or shelters in the event that American Red Cross shelters become full.
Coordinate with the Fire Departments to provide manpower/equipment to assist in search and rescue operations.

Primary Agency: Military Department of Indiana, Indiana National Guard

Support Agencies:
U.S. Naval Reserve
Civil Air Patrol
Department of Defense

Public Information (ESF 14)

Plan for, coordinate, provide and disseminate information to the public during all phases of disaster operations.

Functions:

Serve as primary coordination point with all media.
Prepare news releases.
Coordinate activities within EOC, including conducting of periodic briefings, special announcements, and detailed status reports.
Serve as coordinator for all press requests for interviews dealing with disaster operations.

Coordinate emergency information broadcast requirements with local television, radio, and cable stations.

Coordinate operation of Citizen-Information-Center.

Primary Agency: Jurisdictional Law Enforcement, Fire Service, and/or Public Works Public information Officer in the immediate disaster area

Support Agencies:

Any Available Public Information Officers from the excluded cities or towns, county, township, or city-county public safety agencies unaffected by the disaster

Primary (or Multiple) affected agency Officials, County and Town (s) Council President's

Hendricks County Sheriffs Department

Indiana State Police

Hendricks County Health Department

Hendricks Community Hospital as well as surrounding Hospitals

Department of Administrations

Department of Public Safety

Department of Public Works

Local Media organizations

Local Emergency Planning Committee

Volunteers and Donations (ESF 15)

To plan, coordinate and operate the county's donation and volunteer operations.

Functions:

Plan for, staff, and operate donation receipt and distribution activities in conjunction with American Red Cross and Mass Care Support Function, (ESF 6).

Primary Agency: Indiana Volunteer Organizations Active in Disasters (INVOAD)

Support Agencies:

Emergency Management Division

Community Centers of Indianapolis

Salvation Army

Private Non-profit Relief Organizations

Indianapolis Chapter of the American Red Cross

Law Enforcement and Security (ESF 16)

Command, control and coordination of law enforcement resources and activities.

Functions:

Plan and coordinate employment of state and federal law enforcement resources.

Man predestinated traffic control points.

Maintain law and order.

Provide security to all other emergency response operations, including field forces and facilities such as shelters, feeding sites, and collection centers.

Assist in the dissemination of evacuation orders of the public and to help proceed evacuation to maintain safety during the process.

Enforce evacuation orders.

Primary Agency: Hendricks County Sheriff's Department

Support Agencies:

Plainfield Police Department

Brownsburg Police Department

Avon Police Department

Danville Police Department

Pittsboro Police Department

Clayton Town Marshall

Amo Town Marshall

Lizton Town Marshall

Coatesville Town Marshall

Indiana State Police

Indiana National Guard

Animal Issues (ESF-17)

Plan, coordinate and direct efforts aimed at identifying the materials and services that may be needed or that may be available during a disaster to care for injured or abandoned animals.

Functions:

Identify local and attainable outside assets that may be needed to help care for animals during a disaster.

Identify animal-oriented organizations and individuals that may be organized to Assist County efforts to respond to the needs of impacted animals and insure safe evacuation.

Develop operating procedures for the utilization of county resources and those that may be available through donation or mutual aid.

Primary Agency: Hendricks County Animal Control

Support Agencies:

Hendricks County Humane Society
Central Indiana Veterinary Medical Association
Hendricks County Health Department
Purdue Co-op Extension
Various small local rescue groups and donors

Business and Industry (ESF-18)

Plan for the flow of information between government emergency management agencies (EOC) and private corporations and business groups in order to facilitate corporate evacuations and re-entries, provide education and training to corporate employees, coordinate the flow of private relief and recovery resources into impacted areas, and to identify potential sources of relief and recovery materials and supplies available through the private sector.

Functions:

Coordinate education and training efforts directed at private sector recovery. Develop and implement procedures that facilitate private sector re-entry and damage assessment, and the collection of private sector damage information in the EOC for use by emergency preparedness officials.

Coordinate private sector response and recovery operations in conjunction with governmental efforts.

Primary Agency: Hendricks County Emergency Management

Primary Supporting Agency: Chamber of Commerce

Support Agencies:

Midwest Contingency Planners

▪ Mutual Aid Agreement

- a. Each of the following Primary Emergency Support Function (ESF) has signed the Mutual Aid Agreement to implement planning efforts and to participate in county activities to maintain the overall response capability.

1. Avon Community School Corporation
2. Hendricks County Sheriffs Department
3. Department of Public Works
4. All Jurisdictional Fire Agencies
5. Hendricks County Emergency Management Department

6. Hendricks County Health Department
7. Cinergy/PSI
8. Military District of Indiana- Indiana National Guard
9. All Jurisdictional Law Enforcement
10. Hendricks County Animal Control

▪ **Volunteer and Private Organizations**

Several volunteer organizations have aligned themselves with each other to exchange ideas, supplies, equipment and volunteers in the event of a disaster. The American Red Cross and Salvation Army along with various food banks are dedicated to serving the county when needed.

B. Operations Support

All Operations Support Functions will support the Emergency Support Functions, which coordinate activities of the local Emergency Operations Center.

1. Staffing

The EOC must be adequately staffed, and all identified ESF lead agencies must be represented. Each City and County agency must be prepared to staff the EOC 24 hours per day operations. Duty Officers (as assigned by certain elected and appointed officials) must be identified to the Emergency Management Director, and staff changes must be made known to the EMD as they occur, in order to accurately maintain the EOC call-down system and to allow for limited access to, and security within, the EOC.

2. Communications

The Emergency Operations Center (EOC) serves as the emergency communications center for Hendricks County during a countywide disaster. The EOC's communication facility will support all ESF lead agencies and has the following equipment capabilities:

Telephone and radio communications with emergency response agencies and resources in the City/County.

Link with the State Warning Point and other local emergency management offices and NWS offices in the State.

Weather terminal link with the National Weather Service.

Radio and land lines.

Emergency Management FAX communication link with local and state emergency management facilities.

Emergency Alert System

The County Warning Point (ESF 2: Communications) is responsible for dissemination of severe weather warnings and alerts. Pager, telephone and radio networks, and the Weather Alert Radio System issue warnings to government entities and other related agencies and organizations.

3. MAC-Citizen-Information-Center

A Citizens-Information-Center (CIC) will be operational in the Commissioners Rooms in the Government Center as part of the Operations Group's services. The MAC-CIC responds to general information requests from the public, and refers valid requests or important information to the Operations Group for action or reference. The MAC-CIC will respond to a multitude of calls, hopefully preventing an overload of non-emergency calls to 911.

Trained employees recruited from various City/County departments and agencies will staff the MCA-CIC. The Emergency Management Director will provide a MAC-CIC supervisor for each shift current and updated information. Each workstation will be supplied with a telephone, Message Control Forms, Message Log, and EOC Information Reference.

Operations of the MAC-CIC, including recruitment and training of City/County employees to serve as operators, will be the responsibility of the Emergency Management Director and the Hendricks County Commissioners.

For calls other than general information (e.g., a request for assistance), the operator will make a notation in the MAC-CIC log, fill out a Message Control Form (MCF), and forward it to the EOC Operations Group for action. When a request of an emergency nature is called into the CIC, the supervisor will determine if the call can be handled by MCF, if the call should be transferred to the appropriate ESF, or if the caller should be requested to call back using 9-1-1.

4. EOC Message Control and Information Flow

The Message Control Form (MCF) serves as the primary record and control document for all messages, actions, and agency coordination

related to EOC operations. This form also serves as an audit trail for the post-operation review and critique. A MCF must be completed for incoming messages requiring action to the EOC and MAC-CIC. The form consists of an original and three carbonless copies, (white, yellow, pink, and gold). All copies of the MCF go to the Message Control Desk and are distributed as follows:

The sender retains gold copy.

White, yellow and pink forms go to the Message Control Center.

White (original) remains at the Message Control Desk.

Yellow and pink copies go to the ESF required to take action. The yellow copy is returned to the Message Control Desk with the action taken noted by the ESF after the action is completed. The pink copy is kept by the action ESF.

In order for messages to be properly assigned and acted upon, information must be printed legibly, and boldly enough to register on all copies.

The Message Control Desk is located in the Operations Room, and will be initially staffed by Emergency Management Department Staff as Message Control Administrator. Another person will be assigned as a Message Expeditor. Additional staff will be added in response to workload.

The Message Control Administrator is responsible for assigning a control number to each MCF, logging message information, requesting assignment of action agency, routing messages, and logging information from the yellow copies returned by the action ESF.

If an ESF receives a direct (phone or radio) message from a field unit, outside agency, the MAC-CIC, or other source, the ESF will log that message, and prepare a MCF for the Message Control Desk's information and tracking.

5. Media

The Joint Information Center is comprised of staff from the Public Information Officers of the various agencies staffing the EOC and is responsible for ensuring that the media is informed of all pertinent public information statements originating from the EOC. The Joint Information Center supervises the EOC Media Room, located on the first floor of the Government Center, and acts as liaison between the media and EOC. The Joint Information Center shall coordinate the activities of other

department's Public Information Officers, and all information released to the media.

a. Media access to the EOC

Due to the operational requirements and limited space within the EOC, media representatives will not be allowed beyond the first floor area.

Media representatives, at the discretion of the Commissioners of Hendricks County, may be permitted beyond the first floor on a very limited basis, during non-critical periods of the response operation.

b. Hendricks County Media Plan

In the event that the EOC is activated, the following rules will apply to media relations.

The Joint Information Center will be the sole source of information for dissemination to the media and the public. This is to insure accuracy of reports from the EOC and other elements of the County's response to a disaster. No information will be released without the authorization of the EOC Executive Committee.

As required by the situation, news releases will be provided on a regular schedule, which will be available to media representatives.

Within the EOC, press interviews will be conducted only in designated areas, essentially the Media Briefing Room on the first floor. Requests for interviews should be submitted to the Joint Information Center staff. Every effort will be made to accommodate the media, as the duties and responsibilities of officials being interviewed permits.

Media representatives must display their press identification badges to obtain entry to the media briefing area and these badges must be worn at all times. As space in the media room is limited, a maximum of four persons per media entity will be allowed access to the EOC buildings at any one time. Media representatives must sign-in when entering and sign-out when leaving the EOC.

6. Security

During emergency activation, only authorized personnel will be permitted in the EOC. A security checkpoint will be established in the parking lot of the Government Center. Entry will be restricted to the EOC staff and other authorized personnel. Media representatives with proper identification will be allowed access to the first floor Media Briefing Room or as otherwise permitted, and security escorts may be assigned.

C. Reports and Records

The planning and activation of disaster response requires timely and accurate reporting of information and the maintenance of records on a continuous basis.

1. The Commissioners, represented by the Director of the Emergency Management Agency, is responsible for submitting local government situation reports, damage assessments and other reports and information to the State Emergency Management Agency.
2. Heads of Emergency Support Functions and City/County agencies are responsible for submitting reports to Emergency Management Agency, which will compile information in situation reports and other materials.
3. The Director of the Emergency Management Agency will request reports from relief agencies and other non-government organizations when deemed necessary.
4. Records of expenditures and obligations in emergency operations must be maintained by individual County/City agencies, employing their own record keeping procedures for this purpose.
5. The Emergency Management Director will receive reports and maintain historical files. These files will provide source material for evaluations of emergency procedures.
6. The Office of the Emergency Management will establish procedures for internal reporting and record keeping.

D. Reporting Guidelines

1. Initial Damage Assessment Reports

- a. Initial reports (Preliminary Damage Assessment Reports) are the basis for the Commissioners decisions to declare a state of local

disaster emergency, and for the Governor's decisions to declare a state of emergency and to request a Presidential Disaster Declaration. These reports determine the specific types and extent of assistance made available to the affected area.

- b. These reports determine the specific types and extent of assistance made available to the affected area.
- c. Preliminary and final Damage Assessment Reports will be developed and processed according to the Damage Assessment Standard Operating Procedure.

2. Situation Reports

- a. Update, inform of new developments and provide more complete information than submitted in prior reports, at intervals established by the Commissioners or the Emergency Management Director.
- b. City/County agencies will submit daily reports to the EOC summarizing the emergency response activities of these particular agencies for that day.
- c. Situation reports may also be submitted to report minor emergencies requiring special actions.

3. Post Emergency Reports

- a. City/County agencies will submit post emergency reports to the Emergency Management Agency.
- b. Post-emergency reports will be completed within three weeks following the emergency. They will evaluate:
 - (i). - The effectiveness of warning systems.
 - (ii). - The practical application of emergency plans.
 - (iii). - The effectiveness of communications.
 - (iv). - The use of surplus and excess property, and equipment and facilities obtained under Federal matching fund programs.
 - (v). - The handling of requests for County, State and Federal assistance and the assistance received.

- (vi). - The effectiveness of mutual aid agreements and other understandings with regard to the assistance provided.

E. Administration

1. Agreements and Understandings

- a. Emergency utilization of resources and capabilities of organizations not part of County government will be pre-arranged under agreements or understandings to the maximum extent feasible.
- b. Agreements and understandings will be entered into by duly authorized officials and will be formalized in writing whenever possible.
- c. Agreements and understandings between elements of the City/County government will be included within the plans of County government. Details of such agreements and understandings which are inappropriate for inclusion in the plan will be set forth in supporting operations procedures, instructions or other directives of the units of government concerned.
- d. Agreements remain in effect until rescinded or modified.
- e. Agreements must state the procedure for payment or reimbursement for personnel services rendered equipment costs and expenditure of material. A clear statement of agreement on this matter is mandatory.

F. Records Preservation and Restoration

All City/County agencies and constitutional authorities must ensure protection of their records so that normal procedures may continue after the disaster. These records may also be necessary for the rapid discovery from the effects of a disaster.

The Hendricks County Emergency Management Agency and the Board of Commissioners will maintain all expenditures and obligations for equipment and materials during all natural or man made disasters.

In the event an emergency temporary location for the seat of government is necessary as a result of a disaster, each agency administrative officer with the advice and assistance of the Emergency Management Director shall prepare and promulgate a continuity of government plan for use in preparing to remove to an emergency temporary location. Said plan shall include:

1. A procedure for determining which personnel, records, equipment and supplies are to be considered "essential" and, therefore, will be scheduled for removal to the temporary location.
2. The method or methods by which records, equipment and supplies are to be prepared for physical removal from their usual locations to the emergency temporary location.
3. The precautions to be taken and steps to be followed to preserve and protect records.

G. Funding and Accounting

1. Emergency operations are funded by the budgeted allocations of the county agency having emergency operations. The Hendricks County Emergency Management Agency and the Hendricks County Board of Commissioners has access to all emergency funds through submitting claim(s) to the Auditor of Hendricks County.
2. Complete and accurate accounts of emergency expenditures and obligations, including personnel and equipment costs, must be maintained. Accounts are required to identify and document (1) funds for which federal reimbursement will be requested and (2) those funds eligible for reimbursement under emergency or major disaster project applications.
2. When federal public assistance is provided under the Disaster Relief and Emergency Assistance Act, local projects approved by the Federal Emergency Management Agency are subject to both State and Federal audit.

H. Maintenance and Auxiliary Activation of the County Plan

The Emergency Management Agency will maintain this plan and update it as needed. Examination and review of the plan, including all annexes, will take place annually, with a complete re-evaluation and update every third year. The Emergency Management Director will conduct such review. This plan supercedes any previous editions of any Hendricks County Plan.

I. Interagency Agreements

1. Emergency utilization of resources and capabilities of organizations not part of County government will be pre-arranged under agreements or understandings to the maximum extent feasible.
2. Agreements and understandings will be entered into by duly authorized officials and will be formalized in writing whenever possible.
3. Agreements and understandings between elements of the County government will be included within the plans of County government. Details of such agreements and understandings which are inappropriate for inclusion in the plan will be set forth in supporting operations procedures, instructions or other directives of the units of government concerned.
4. Agreements remain in effect until rescinded or modified.
5. Agreements must state the procedure for payment or reimbursement for personnel services rendered equipment costs and expenditure of material. A clear statement of agreement on this matter is mandatory.

J. Deactivation

The Emergency Operations Center will be deactivated upon direction of the Commissioners. The Emergency Management Director will insure that other agencies, including the State Emergency Operations Center, are notified.

DISCLAIMER

****The Hendricks County Emergency Management Plan DOES NOT guarantee any precise outcome of responding to emergencies or disasters within Hendricks County. ****

APPENDIX F

Agreement with CWA

**WHOLESALE FINISHED WATER PURCHASE AGREEMENT
BETWEEN
CITIZENS WATER
AND
THE TOWN OF LIZTON**

This AGREEMENT FOR PURCHASE OF WHOLESALE FINISHED WATER (this "Agreement"), made and entered into the 14th day of February, 2019 (the "Effective Date") by and between the Department of Public Utilities, the City of Indianapolis, acting by and through the Board of Directors for Utilities, as trustee, in furtherance of a public charitable trust for the water system d/b/a Citizens Water ("Citizens Water"), and the Town of Lizton, Indiana, a political subdivision existing under the laws of the State of Indiana ("Town") (Citizens Water and the Town, collectively the "Parties" and individually, a "Party"),
WITNESS THAT:

RECITALS

WHEREAS, Citizens Water provides water utility service to approximately 324,000 customers in Central Indiana, including in Hendricks County;

WHEREAS, the Town, which is located in Hendricks County, is undertaking the steps necessary to establish and operate a water utility to provide retail water service to customers within its boundaries;

WHEREAS, the Town is interested in purchasing water generated by Citizens Water by connecting to Citizens Water's system, and thereafter transporting the water for sale within the Town's boundaries;

WHEREAS, Citizens Water is willing to provide wholesale water service to the Town, subject to the terms and conditions contained herein.

NOW, THEREFORE, in consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

AGREEMENT

1. **Incorporation of Recitals.** The recitals set forth above constitute an integral part of this Agreement and are incorporated herein by this reference with the same force and effect as if set forth as agreements of the Parties.
2. **Definitions.**
 - a. **Construction.** For all purposes of this Agreement, except as otherwise expressly provided or unless the context otherwise requires, the following capitalized terms generally used in this Agreement shall have the meanings defined or referenced

below and include the plural as well as the singular. Certain other capitalized terms used only in specific sections of this Agreement may be defined in such sections.

Unless the context otherwise requires, any reference to a "Section" or "Subsection" refers to a Paragraph or Subparagraph, as the case may be, of this Agreement and the words "herein," "hereto," and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section, Subsection, or other subdivision.

b. Defined Terms.

"Delivery Point" shall mean the connection between the Town's and Citizens Water's distribution systems located at approximately 39 52'54.75 N 86 32'33.10 W, as shown on Exhibit A attached hereto and incorporated herein by this reference.

"Emergency Event or Condition" shall mean an unexpected and / or sudden event or condition requiring action by a Party including, by way of illustration and not by way of limitation, a drop in water pressure, environmental compliance issues, power failures, weather conditions, and main breaks.

Term. The initial term of this Agreement shall commence on the Effective Date and shall be for a period of ten (10) years. ("Initial Term"). The term of this Agreement will be automatically extended on all of the terms and conditions set forth herein for an additional term of ten (10) years ("Extension Term"), commencing on the day following the last day of the Initial Term, unless: (a) either party may provide the other with written notice of its intention not to extend this Agreement not less than ninety (90) days prior to the expiration of the Initial Term; or (b) this Agreement is (or has previously been) otherwise terminated in accordance with its terms. The Initial Term and Extension Term, if applicable, shall be referred to herein collectively as the "Term."

3. Thereafter, the Agreement may be renewed or extended upon such terms, and for such period of time, as may be agreed upon by the parties. If the Town fails to take water service within two (2) years from the Effective Date, Citizens Water may terminate this Agreement without prejudice to Citizens Water.
4. **Delivery of Water.** Citizens Water agrees to deliver or make available for delivery to the Delivery Point and sell to the Town and the Town agrees to purchase finished water, subject to the water volume and flow rate limitations within Paragraph 7 herein.
5. **Monthly Volume, Service, and System Development Charge.** The Town shall pay Citizens Water monthly, in accordance with Citizens Water's normal billing procedures, an amount equal to the sum of: (a) a volume charge for the water delivered to the Town by Citizens Water (the "Volume Charge"); (b) a service charge for the 8-inch meter (the "Service Charge"); and any other applicable charges under Citizens Water's Terms and Conditions as defined herein. The Volume Charge shall be the amount of metered water volume actually delivered to the Town, multiplied by Citizens Water's rates as found in

its rates and charges and terms and conditions for service, as approved by the Indiana Utility Regulatory Commission ("IURC") and as may be amended from time to time ("Terms and Conditions"). The Service Charge shall be as set forth in Citizens Water's Terms and Conditions.

6. **Water Quality and Monitoring.** The Parties agree with respect to their respective water distribution systems to comply with all applicable federal, state, and local laws and regulations including, but not limited to, U.S. Environmental Protection Agency ("EPA") and Indiana Department of Environmental Management ("IDEM") regulations and standards, including, but not limited to, those regarding the quality and the monitoring of the quality of water, reporting, permitting, corrective action, and notification (collectively the "Water Quality Regulations and Standards"). Citizens Water shall be responsible for costs associated with its compliance with the Water Quality Regulations and Standards up to the Delivery Point.
 - a. The Parties acknowledge and agree that under this Agreement, Citizens Water's water distribution system is a "Wholesale System," as defined by 327 IAC 8-2-1(103), and the Town's water distribution system is a "Consecutive System," as defined by 327 IAC 8-2-1(17)
 - b. Citizens Water shall provide a combined chlorine residual at the Delivery Point within a concentration range of 0.5 to 1.0 mg/L. Citizens Water shall immediately notify the Town of any combined chlorine residual outside the required concentration range. The results of all bacterial tests performed by Citizens Water or its designee at the Delivery Point shall be provided to the Town, along with the results of any other biological, chemical, and physical tests performed on Citizens Water's water supply and water distribution system within seven (7) days of Citizens Water's receipt of same.
7. **Limitations of Service Volume; Water Shortages and Diminished Supply.** Citizens Water shall not be required to deliver to the Town more than two hundred and fifty thousand gallons of finished water in any one calendar day (250,000 GPD). Citizens Water will consider providing additional supply to the Town, provided: (1) the Town submits a request demonstrating that it will require additional supply to meet the Town's demand that will occur during the Initial Term or Extension Term that is then currently in effect; (2) Citizens Water determines in its sole and absolute discretion that it is able to accommodate the provision of such additional supply; (3) the Town will guarantee a minimum purchase of water commensurate with the additional supply as determined by Citizens Water; (4) the Town will be responsible for all costs of any system improvements needed on either Party's system to provide the additional supply; and (5) the Parties are able to agree on any other terms necessary for the provision of the additional supply.

Citizens Water shall, at all times, endeavor to operate and maintain its water distribution system in an efficient manner. Citizens Water shall immediately notify the Town of any

Emergency Event or Condition of which Citizens Water is aware which may affect the quantity or quality of finished water available for delivery to the Town. In the event of an extended shortage of water or the supply of water available to Citizens Water is otherwise diminished over an extended period of time, as determined by Citizens Water in its sole, absolute discretion (a "Water Shortage"), the amount of finished water delivered to the Town shall be reduced or diminished in the same ratio or proportion as the amounts supplied to other Citizens Water customers are reduced or diminished.

Further, the Town agrees that it shall enact, within thirty (30) days of the Effective Date of this Agreement, a water conservation ordinance no less stringent than the Water Conservation Ordinance, General Ordinance No. 15, 2009, adopted on February 9, 2009, by the Indianapolis City-County Council, as amended from time to time.

8. **Pressure.** Citizens Water shall operate and maintain supply, treatment, and pumping facilities within Citizens Water's system sufficient to provide finished water to the Town, under normal operating conditions, at a pressure of approximately 55 to 65 pounds per square inch gauge (PSIG), as measured at the Delivery Point. Citizens Water shall use commercially reasonable efforts to supply such pressure, but the Parties acknowledge and agree that main breaks, power failures, weather conditions, use of water to fight fires, and other Emergency Events or Conditions may prevent Citizens Water from being able to maintain such pressure at all times, and Citizens Water makes no guarantee to do so.
9. **Connection Construction Requirements.** The Town and Citizens Water agree that the proposed capital improvements required to implement this Agreement include a meter, a meter pit, and a meter vault (the "Capital Improvements"). The proposed locations of the Capital Improvements are depicted in Exhibit B. Citizens Water shall build and install the Capital Improvements at Citizens Water's sole cost and expense. The Capital Improvements shall be owned, operated and maintained as part of the Citizens Water distribution system. Citizens Water agrees to equip the meter at the Delivery Point with a wireless telemetry system for the continuous transmission of flow and pressure data to Citizens Water ("Wireless Telemetry System"). The Town shall be responsible for all costs associated with purchasing, installing, operating, and maintaining its own Wireless Telemetry System to the extent it wishes to have one, consistent with prudent utility practice. The water infrastructure downstream of the Delivery Point shall continue to be the property of the Town and the Town shall continue to be responsible for all of the costs associated with operating and maintaining said water utility infrastructure.
10. **Indemnification.** The Town shall protect, defend, indemnify, and save harmless Citizens Water from and against all liabilities, obligations, claims, damages, penalties, causes of action, cost and expenses imposed upon or incurred by or asserted against Citizens Water by reason of the Town's: (a) failure to comply with any Water Quality Regulations and Standards or the monitoring of water quality after delivery of finished water to the Delivery Point; (b) receipt of an insufficient supply of finished water or insufficient water pressure from Citizens Water related to main breaks, power failures, weather conditions, use of finished water to fight fires, and other Emergency Events or

Conditions beyond the control of Citizens Water; or (c) use or resale of finished water obtained by the Town at the Delivery Point.

This Paragraph 10 shall survive the termination of this Agreement.

- 11. Assignment, Binding Agreement.** This Agreement is subject to Citizens Water's Terms and Conditions as provided in Water Rate No. 8, Sale for Resale Metered Water Service, and shall be binding upon the Parties and their respective successors and assigns. To the extent there is a conflict between this Agreement and the Terms and Conditions, the provision providing the greater right or remedy to Citizens Water shall govern. By entering into this Agreement, the Town agrees that the IURC has jurisdiction over the Agreement. The Town may not, without the written consent of Citizens Water, assign this Agreement to any assignee.
- 12. Governing Law/Mutual Assistance on Regulatory and Property Matters.** This Agreement is subject to the pertinent laws, regulations, and rules of the State of Indiana, but not including Indiana's choice of law provisions, and of its administrative agencies. Where governmental permits, certificates or approvals are required for the construction of lines, improvements or betterments, or operations, the Parties shall cooperate with and assist each other in obtaining such permits, certificates and approvals. The Town also agrees to provide Citizens Water or its successor(s) with easements on Town owned property at no cost for water distribution facilities and related appurtenances in the future and with access at no cost to facilities to the extent necessary for purposes of installing, operating and maintaining automated meter infrastructure to provide or facilitate Citizens Water's provision of water service to its customers. Notwithstanding the terms of this Paragraph 12, each Party shall be responsible for its costs associated with regulatory or property matters unless otherwise agreed in writing.
- 13. Amendment.** This Agreement may be amended or modified only in writing signed by the Parties.
- 14. Notices.** Any notices, requests, demands, or other communications provided for by this Agreement shall be sufficient if in writing and if (a) delivered by hand to the other Party; (b) sent by facsimile communication with appropriate confirmation of delivery; (c) sent by registered or certified United States Mail, return receipt requested, with all postage prepaid; or (d) sent by recognized commercial express courier services, with all delivery charges prepaid; and addressed as follows:

If to Citizens Water:
Vice President, Water Operations
2020 North Meridian Street
Indianapolis, Indiana 46202.

If to the Town:
Town Council President
Town of Lizton
106 N. Lebanon
P.O. Box 136
Lizton, Indiana 46149

The Parties may change the address indicated above by providing written notice in accordance with this Paragraph 14.

- 15. Waiver.** No provision of this Agreement may be waived except by written document executed by the Parties. No waiver of a provision shall be deemed to be or shall constitute a waiver of any other provision of this Agreement. A waiver shall be effective only in the specific interest and for the purpose for which it was given, and shall not constitute a continuing waiver. No failure on the part of either Party at any time to require the performance by the other Party of any term of this Agreement shall be taken or held to be a waiver of such term or in any way affect the waiving Party's right to enforce such term.
- 16. Severability.** If any provision of this Agreement shall be held to be void, invalid, illegal or unenforceable in any respect by a court of competent jurisdiction, the same shall not affect any other provision of this Agreement, and the remaining provisions shall remain in full force and effect.

17. Default and Remedies.

17.1 Default of the Town.

17.1.1 Any of the following shall be deemed an event of Default by the Town.

17.1.1(a) Failure of the Town to timely pay any amount due to Citizens Water under this Agreement;

17.1.1(b) Failure of the Town to perform or comply with any other term, requirement or condition of this Agreement to be performed or observed by the Town which, if curable, continues for more than ten days after notice thereof is given to the Town. If not curable, a failure to perform or observe any other term, covenant or condition of this Agreement to be performed or observed by the Town shall be immediately actionable by Citizens Water.

17.1.2 Upon the occurrence of any event of Default by the Town, Citizens Water shall have the right to terminate this Agreement at any time upon the date specified in a notice to the Town, and the right to seek all

damages and/or other relief, including injunctive relief available under applicable law and including but not limited to those remedies prescribed in any applicable rules as filed with the IURC, such as disconnection from the Citizens Water system. All remedies for breach by the Town shall be available to Citizens Water, including those available to recover delinquent payments under this Agreement, to the extent such remedies are not explicitly prohibited by law. All of Citizens Water's rights and remedies shall be cumulative and non-exclusive.

17.1.3 In the event of non-payment such that Citizens Water is required to apply effort to obtain payment for water service to be supplied hereunder, or other payments due hereunder, and prevails on such claim for payment whether or not litigation is commenced, then Citizens Water shall be entitled to recover its reasonable attorneys' fees incurred in that effort.

17.2 Default by Citizens Water.

17.2.1 In the event of any act or omission which would give the Town the right claim any breach of this Agreement, the Town shall not make such claim or exercise such right until it has given written notice of such act or omission to Citizens Water, and only after thirty days have elapsed following the giving of such notice, during which Citizens Water has not commenced diligently to remedy such act or omission or to cause the same to be remedied.

17.2.2 In the event Citizens Water fails to supply water service as required by this Agreement, Citizens Water shall not be liable for consequential damages of the Town, and the liability of Citizens Water, if any, shall be limited as is set forth in the Citizens Water's Terms and Conditions.

17.2.3 Regardless, it is specifically agreed by the Parties that none of Citizens Water's officers, directors, employees, trustees, owners, agents, representatives or managers shall have personal liability with regard to any provision of this Agreement, or any liability arising from or in connection with this Agreement, or any liability arising from or in connection with this Agreement in the event of a breach or Default by Citizens Water of any of its obligations.

17.2.4 The Town hereby acknowledges and agrees that the obligations and liabilities of Citizens Water (if any) are payable only from the revenues and assets of the Citizens Water System and no other assets or revenues with respect to any other business, system or division owned by or

affiliated with Citizens Energy Group shall be a source of payment or satisfaction of any remedy hereunder.

18. **Entire Agreement.** This Agreement constitutes the entire agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, oral and written, between the Parties.
19. **No Third-Party Beneficiaries.** Nothing in this Agreement is intended, nor shall be deemed, to confer rights or remedies upon any person or legal entity not a party to this Agreement.
20. **Counterparts.** This Agreement may be executed in one or more counterparts, any of which shall be regarded for all purposes as an original and all of which constitute but one and the same instrument.

[This space intentionally left blank. Signature page to follow.]

IN WITNESS WHEREOF, the undersigned certify that they are duly authorized and empowered to execute this Agreement and thus bind the entity in whose behalf they sign as of the Effective Date shown above.

"Citizens Water"

"Town"

By: *Jeffrey A. Willman*

By: *Lise K. Crowell*

Printed: *Jeffrey A. Willman*

Printed: *Lise K. Crowell*

Title: *Vice President*

Title: *President-Council*

EXHIBIT A



Connection Point for Lizton at the Existing Water Line Termination Location on
the South Side of U.S. Highway 136

APPENDIX G

Agreement with INDOT

AGREEMENT
Between
THE INDIANA DEPARTMENT OF TRANSPORTATION
And
THE TOWN OF LIZTON
For
WATER LINE EXTENSION

EDS # _____

THIS AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 2019, by and between the State of Indiana, acting through the Indiana Department of Transportation (hereinafter "INDOT"), and the Town of Lizton, Indiana (hereinafter "TOWN"), collectively referred to herein as the "Parties" and individually as a "Party."

WITNESSETH:

WHEREAS, INDOT owns, operates and maintains the Eastbound and Westbound Lizton Rest Areas (the "Rest Areas") located at mile marker 56 on I-74 and a Maintenance Unit located at 8961 North SR 39 in the TOWN (the "Unit"), collectively the "Facilities;" and

WHEREAS, the TOWN will own, operate and maintain a water system; and will be designing, permitting and constructing water mains to serve the TOWN; and

WHEREAS, INDOT desires to have water mains extended to connect the Facilities to the TOWN's water system, and the TOWN has agreed to include extending water mains in the water distribution project to the Facilities to serve INDOT; and

WHEREAS, the Parties have agreed to set forth the costs and responsibilities pursuant to this Agreement;

NOW THEREFORE, in consideration of the promises and the mutual agreements and covenants herein contained (the adequacy of which consideration as to each of the Parties to this Agreement is hereby mutually acknowledged), and other good and valuable consideration, the receipt of which is hereby acknowledged, and intending to be legally bound, INDOT and the TOWN hereby covenant and agree as follows:

ARTICLE I
SPECIFIC PROVISIONS

1.1 The TOWN shall design, engineer and construct a water line and all other appurtenances in accordance with all applicable State laws, requirements of the TOWN and plans to include water mains as part of the TOWN's water system to the Facilities (the "Project"). The water mains shall provide functional operating water service to the Facilities on a 24 hours a day, seven

days a week basis. Service shall maintain a minimum of 55 pounds of static pressure at the Facilities' service points at all time as well as minimum volume availability of 15,000 gallons per day for each of the Facilities. Size of water mains, volume capacities to the Facilities, and materials utilized shall be approved by INDOT during the design phase of this Project.

1.2 The TOWN shall competitively bid the construction portion of the Project.

1.3 The TOWN shall obtain all right-of-way and easements necessary for construction of the Project. The TOWN shall be responsible for the necessary surveys and for writing and recording the legal descriptions for any easements, if any. The TOWN shall construct the Project in accordance with any permit where necessary within INDOT right-of-way, more specifically the I-74 right-of-way. The TOWN, or its contractor, shall obtain all necessary permits for construction of the Project. The TOWN shall construct the Project in accordance with the design and engineering approved by INDOT. Any additional capacity or sizing for growth needed on the water line to accommodate customers other than INDOT will be the TOWN's responsibility and cost.

1.4 INDOT shall only provide funding to the TOWN for the portion of the Project's water lines that service the Rest Areas, as depicted in Exhibit A and herein incorporated by reference. Funding for all other infrastructure associated with this Project, including the connection to the Unit, shall be the responsibility of the TOWN.

1.5 On or after July 1, 2019, the TOWN shall send an invoice to INDOT on a monthly basis for the Project's costs associated with serving the Rest Areas. The invoice shall be in the amount equal to the Project's monthly costs for work done the prior month. Appropriate supporting documentation shall accompany the invoice. The amount of INDOT's contribution for Project costs shall not exceed \$2,000,000.00. INDOT shall pay the TOWN the amount of the invoice within thirty-five (35) days of the date of receipt of the invoice. INDOT's contribution is to be used solely for any portion of the Project that facilitates service to the Rest Areas. The TOWN shall be responsible for costs that exceed \$2,000,000.00.

1.6 The TOWN shall prepare for, coordinate and conduct monthly progress meetings at a location provided by the TOWN. The TOWN or its engineering consultant shall prepare and distribute minutes at the monthly progress meetings. The progress meetings shall coincide with the monthly submission of the invoice described in Section 1.5. The progress meetings shall include attendance of all appropriate entities involved with the Project's current progress or in planning, coordination, or performance of future activities. All participants at the progress meetings shall be familiar with the Project and authorized to conclude matters relating to the Project, including review of the construction schedule and other items of significance that could affect the Project's progress.

1.7 The TOWN shall waive all of INDOT's hookup and connection fees to the water system in exchange for INDOT's contribution for Project costs.

After initial construction and acceptance of the Project, for non-emergency repairs, if the TOWN wishes to conduct maintenance activities that will require access to state owned or controlled

right-of-way, the TOWN shall obtain prior written approval from INDOT and apply for a permit prior to needing access. The permit application shall be submitted at least thirty (30) calendar days before access is needed. This Agreement in no way binds INDOT to the issuance of any permit. INDOT agrees, however, in good faith, to review the TOWN's application and, if appropriate, issue a permit to the TOWN.

For emergency repairs, if the TOWN wishes to conduct maintenance activities that will require access to state owned or controlled right-of-way, an informed representative of the TOWN shall contact the Crawfordsville District Permit Division prior to beginning repairs. An emergency is a situation or occurrence of a serious nature, developing suddenly and unexpectedly that demands immediate reaction to protect life or property.

If an emergency occurs during non-business hours and the Crawfordsville District Permit Division cannot be reached, the TOWN shall contact INDOT via its toll-free number (currently 1-855-463-6848) to report the emergency issue prior to beginning repairs. The TOWN shall not conduct any emergency repairs until INDOT has been notified. The TOWN shall notify the Crawfordsville District Permit Division of the emergency repairs at the beginning of the next business day.

1.8 The TOWN agrees, for a period not to exceed fifteen (15) years from the date of final signature, to reimburse INDOT for any subsequent connections to the water system in excess of the TOWN's initial 209 customers, listed in **Exhibit B** and herein incorporated by reference, subject to the rules of the TOWN and notwithstanding any other law relating to the functions of local government entities. Prior to the letting of construction contracts for the water line by the TOWN, the TOWN shall adopt a written procedure for the recovery of costs, or reasonable portions thereof, incurred by INDOT through participation fees charged to other users of the installed lines. The TOWN shall contact INDOT's Facilities Management Division in writing a minimum of thirty (30) calendar days prior to any person or entity being permitted to tap into the Project.

1.9 Reimbursement, if any, will be paid by the TOWN to INDOT within ninety (90) calendar days of any connection by a subsequent connector provided that:

A. Reimbursement shall not be payable until the water service is initiated for the Project.

Reimbursement shall be submitted to INDOT's Facilities Management Division and reference the Executive Document Summary ("EDS") number on page one (1) of this Agreement.

1.10 In calculating the reimbursement to be made under the provisions contained above, the Parties agree that the following shall be applicable:

A. The TOWN will enact a "Water Capacity Fee" in its Rates and Charges Water Ordinance. The "Water Capacity Fee" will be calculated based on the Equivalent Dwelling Unit ("EDU") of the subsequent connector. The TOWN shall reimburse INDOT **\$750.00** per EDU of any subsequent connector to the Lizton Water System.

B. In no event shall the reimbursement exceed **\$777,711.00**.

1.11 At the expiration of fifteen (15) years from the date this Agreement becomes effective, any balance of the funds provided by INDOT not reimbursed or subject to reimbursement hereunder shall, subject to applicable law, become the property of the TOWN.

1.12 Following the Project's completion, the TOWN will own and take responsibility for operation, maintenance and upkeep of the Project's infrastructure up to and including the valve or water meter pit located within the existing fence line of the Facilities.

Following the Project's completion, INDOT shall own and will take responsibility for maintenance and upkeep of the Project's infrastructure at the Facilities from the valve or water meter pit to the Facilities' buildings.

1.13 The TOWN shall invoice INDOT for usage of the Facilities' water system on a monthly basis in the usual and customary manner for all customers. INDOT shall pay the TOWN the amount of the invoice within thirty-five (35) days of the date of receipt of the invoice.

1.14 If INDOT is required to repay the Federal Highway Administration the sums of federal funds relating to this Agreement, through the actions or inactions of the TOWN, then the TOWN will promptly repay INDOT such sum or sums upon receipt of a billing from INDOT. The TOWN and INDOT shall come to an agreement as to a repayment schedule. In the event that the TOWN and INDOT cannot come to an agreement for a repayment schedule that meets the budget limitation of the TOWN, INDOT may proceed in accordance with IC §8-14-1-9 to compel the Auditor of the State of Indiana to make a mandatory transfer of funds for the TOWN's allocation of the Motor Vehicle Highway Account to INDOT's account until the amount due has been repaid.

1.15 This Agreement shall become effective on the date of final signature for a fifteen (15) year period.

ARTICLE II GENERAL PROVISIONS

2.1 **Access to Records.** The TOWN shall maintain all books, documents, papers, correspondence, accounting records and other evidence pertaining to the costs incurred under this Agreement, and shall make such materials available at their respective offices at all reasonable times during the period of this Agreement and for three (3) years from the date of final payment under the terms of this Agreement, for inspection or audit by INDOT, or its authorized representative, and copies thereof shall be furnished free of charge, if requested by INDOT. The TOWN agrees that, upon request by any agency participating in federally-assisted programs with whom the TOWN has agreed to or seeks to agree to, INDOT may release or make available to the agency any working papers from an audit performed by INDOT of the TOWN in connection with this Agreement, including any books, documents, papers, accounting records and other documentation which support or form the basis for the audit conclusions and judgments.

2.2 **Assignment; Successors.** The TOWN binds its successors and assignees to all the terms

and conditions of this Agreement. The TOWN shall not assign or subcontract the whole or any part of this Agreement without INDOT's prior written consent. The TOWN may assign its right to receive payments to such third parties as the TOWN may desire without the prior written consent of INDOT, provided that the TOWN gives written notice (including evidence of such assignment) to INDOT thirty (30) days in advance of any payment so assigned. The assignment shall cover all unpaid amounts under this Agreement and shall not be made to more than one party.

2.3 Assignment of Antitrust Claims. As part of the consideration for the award of this Agreement, the TOWN assigns to the State all right, title and interest in and to any claims the TOWN now has, or may acquire, under state or federal antitrust laws relating to the products or services which are the subject of this Agreement.

2.4 Audits. The TOWN acknowledges that it may be required to submit to an audit of funds paid through this Agreement. Any such audit shall be conducted in accordance with IC §5-11-1, *et. seq.*, and audit guidelines specified by the State.

2.5 Authority to Bind the TOWN. The signatory for the TOWN represents that he/she has been duly authorized to execute this Agreement on behalf of the TOWN and has obtained all necessary or applicable approvals to make this Agreement fully binding upon the TOWN when his/her signature is affixed, and accepted by the State.

2.6 Changes in Work. The TOWN shall not commence any additional work or change the scope of the work until authorized in writing by the State. The TOWN shall make no claim for additional compensation in the absence of a prior written approval and amendment executed by all signatories hereto. This Agreement may only be amended, supplemented or modified by a written document executed in the same manner as this Agreement.

2.7 Certification for Federal-Aid Contracts Lobbying Activities. The TOWN certifies, by signing and submitting this Agreement, to the best of its knowledge and belief that the TOWN has complied with Section 1352, Title 31, U.S. Code, and specifically, that:

- A. No federal appropriated funds have been paid or will be paid, by or on behalf of the TOWN, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal agreements, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal agreement, grant, loan, or cooperative agreement.
- B. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with such federal agreement, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard

Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

- C. The TOWN also agrees by signing this Agreement that it shall require that the language of this certification be included in all contractor agreements including lower tier subcontracts, which exceed \$100,000, and that all such sub recipients shall certify and disclose accordingly. Any person who fails to sign or file this required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each failure.

2.8 Compliance with Laws.

- A. The TOWN shall comply with all applicable federal, state and local laws, rules, regulations and ordinances, and all provisions required thereby to be included herein are hereby incorporated by reference. The enactment or modification of any applicable state or federal statute or the promulgation of rules or regulations thereunder after execution of this Agreement shall be reviewed by INDOT and the TOWN to determine whether the provisions of this Agreement require formal modification.
- B. The TOWN and its agents shall abide by all ethical requirements that apply to persons who have a business relationship with the State as set forth in IC §4-2-6, *et seq.*, IC §4-2-7, *et seq.* and the regulations promulgated thereunder. **If the TOWN has knowledge, or would have acquired knowledge with reasonable inquiry, that a state officer, employee, or special state appointee, as those terms are defined in IC §4-2-6-1, has a financial interest in the Agreement, the TOWN shall ensure compliance with the disclosure requirements in IC §4-2-6-10.5 prior to the execution of this Agreement.** If the TOWN is not familiar with these ethical requirements, the TOWN should refer any questions to the Indiana State Ethics Commission, or visit the Inspector General's website at <http://www.in.gov/ig/>. If the TOWN or its agents violate any applicable ethical standards, the State may, in its sole discretion, terminate this Agreement immediately upon notice to the TOWN. In addition, the TOWN may be subject to penalties under IC §§4-2-6, 4-2-7, 35-44.1-1-4, and under any other applicable laws.
- C. [OMITTED – NOT APPLICABLE]
- D. The TOWN warrants that it has no current, pending or outstanding criminal, civil, or enforcement actions initiated by the State, and agrees that it will immediately notify the State of any such actions. During the term of such actions, the TOWN agrees that the State may delay, withhold, or deny work under any supplement, amendment, change order or other contractual device issued pursuant to this Agreement.
- E. [OMITTED – NOT APPLICABLE]
- F. The TOWN warrants that the TOWN and its subcontractors, if any, shall obtain and maintain all required permits, licenses, registrations, and approvals, and shall comply with all health, safety, and environmental statutes, rules, or regulations in the

performance of work activities for the State. Failure to do so may be deemed a material breach of this Agreement and grounds for immediate termination and denial of further work with the State.

G. [OMITTED – NOT APPLICABLE]

H. As required by IC §5-22-3-7:

- (1) The TOWN and any principals of the TOWN certify that:
 - (A) the TOWN, except for de minimis and nonsystematic violations, has not violated the terms of:
 - (i) IC §24-4.7 [Telephone Solicitation of Consumers];
 - (ii) IC §24-5-12 [Telephone Solicitations]; or
 - (iii) IC §24-5-14 [Regulation of Automatic Dialing Machines];in the previous three hundred sixty-five (365) days, even if IC §24-4.7 is preempted by federal law; and
 - (B) the TOWN will not violate the terms of IC §24-4.7 for the duration of the Agreement, even if IC §24-4.7 is preempted by federal law.
- (2) The TOWN and any principals of the TOWN certify that an affiliate or principal of the TOWN and any agent acting on behalf of the TOWN or on behalf of an affiliate or principal of the TOWN, except for de minimis and nonsystematic violations,
 - (A) has not violated the terms of IC §24-4.7 in the previous three hundred sixty-five (365) days, even if IC §24-4.7 is preempted by federal law; and
 - (B) will not violate the terms of IC §24-4.7 for the duration of the Agreement, even if IC §24-4.7 is preempted by federal law.

2.9 Condition of Payment. All services provided by the TOWN under this Agreement must be performed to the State's reasonable satisfaction, as determined at the discretion of the undersigned State representative and in accordance with all applicable federal, state, local laws, ordinances, rules and regulations. The State shall not be required to pay for work found to be unsatisfactory, inconsistent with this Agreement or performed in violation of federal, state or local statute, ordinance, rule or regulation.

2.10 Confidentiality of State Information. [OMITTED – NOT APPLICABLE]

2.11 Continuity of Services. [OMITTED – NOT APPLICABLE]

2.12 Debarment and Suspension. [OMITTED – NOT APPLICABLE]

2.13 Default by State. [OMITTED – NOT APPLICABLE]

2.14 Disputes. [OMITTED – NOT APPLICABLE]

2.15 Drug Free Workplace Certification. As required by Executive Order No. 90-5 dated April 12, 1990, issued by the Governor of Indiana, the TOWN hereby covenants and agrees to make a good faith effort to provide and maintain a drug-free workplace. The TOWN will give

written notice to the State within ten (10) days after receiving actual notice that the TOWN, or an employee of the TOWN in the State of Indiana, has been convicted of a criminal drug violation occurring in the workplace. False certification or violation of this certification may result in sanctions including, but not limited to, suspension of contract payments, termination of this Agreement and/or debarment of contracting opportunities with the State for up to three (3) years.

In addition to the provisions of the above paragraph, if the total amount set forth in this Agreement is in excess of \$25,000.00, the TOWN certifies and agrees that it will provide a drug-free workplace by:

- A. Publishing and providing to all of its employees a statement notifying them that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the TOWN's workplace, and specifying the actions that will be taken against employees for violations of such prohibition;
- B. Establishing a drug-free awareness program to inform its employees of (1) the dangers of drug abuse in the workplace; (2) the TOWN's policy of maintaining a drug-free workplace; (3) any available drug counseling, rehabilitation and employee assistance programs; and (4) the penalties that may be imposed upon an employee for drug abuse violations occurring in the workplace;
- C. Notifying all employees in the statement required by subparagraph (A) above that as a condition of continued employment, the employee will (1) abide by the terms of the statement; and (2) notify the TOWN of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction;
- D. Notifying the State in writing within ten (10) days after receiving notice from an employee under subdivision (C)(2) above, or otherwise receiving actual notice of such conviction;
- E. Within thirty (30) days after receiving notice under subdivision (C)(2) above of a conviction, imposing the following sanctions or remedial measures on any employee who is convicted of drug abuse violations occurring in the workplace: (1) taking appropriate personnel action against the employee, up to and including termination; or (2) requiring such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state or local health, law enforcement, or other appropriate agency; and
- F. Making a good faith effort to maintain a drug-free workplace through the implementation of subparagraphs (A) through (E) above.

2.16 Employment Eligibility Verification. As required by IC §22-5-1.7, the TOWN swears or affirms under the penalties of perjury that the TOWN does not knowingly employ an unauthorized alien. The TOWN further agrees that:

- A. The TOWN shall enroll in and verify the work eligibility status of all its newly hired employees through the E-Verify program as defined in IC §22-5-1.7-3. The TOWN is

not required to participate should the E-Verify program cease to exist. Additionally, the TOWN is not required to participate if the TOWN is self-employed and does not employ any employees.

- B. The TOWN shall not knowingly employ or contract with an unauthorized alien. The TOWN shall not retain an employee or contract with a person that the TOWN subsequently learns is an unauthorized alien.
- C. The TOWN shall require its subcontractors, who perform work under this Agreement, to certify to the TOWN that the subcontractor does not knowingly employ or contract with an unauthorized alien and that the subcontractor has enrolled and is participating in the E-Verify program. The TOWN agrees to maintain this certification throughout the duration of the term of a contract with a subcontractor.

The State may terminate for default if the TOWN fails to cure a breach of this provision no later than thirty (30) days after being notified by the State.

2.17 Employment Option. [OMITTED – NOT APPLICABLE]

2.18 Force Majeure. In the event that either Party is unable to perform any of its obligations under this Agreement or to enjoy any of its benefits because of natural disaster or decrees of governmental bodies not the fault of the affected Party (hereinafter referred to as a “Force Majeure Event”), the Party who has been so affected shall immediately or as soon as is reasonably possible under the circumstances give notice to the other Party and shall do everything possible to resume performance. Upon receipt of such notice, all obligations under this Agreement shall be immediately suspended. If the period of nonperformance exceeds thirty (30) days from the receipt of notice of the Force Majeure Event, the Party whose ability to perform has not been so affected may, by giving written notice, terminate this Agreement.

2.19 Funding Cancellation. As required by Financial Management Circular 2007-1 and IC §5-22-17-5, when the Director of the State Budget Agency makes a written determination that funds are not appropriated or otherwise available to support continuation of the performance of this Agreement, this Agreement shall be canceled. A determination by the Director of the State Budget Agency that funds are not appropriated or otherwise available to support continuation of performance shall be final and conclusive.

2.20 Governing Law. This Agreement shall be governed, construed, and enforced in accordance with the laws of the State of Indiana, without regard to its conflict of laws rules. Suit, if any, must be brought in the State of Indiana.

2.21 HIPAA Compliance. [OMITTED – NOT APPLICABLE]

2.22 Indemnification. The TOWN agrees to exculpate and hold harmless the State of Indiana, INDOT, and their officials and employees from any liability due to loss, damage, injuries, or other casualties of whatever kind, to the person or property of anyone arising out of, or resulting from the performance of this Agreement or the work connected therewith, or from the installation, existence, use, maintenance, condition, repairs, alteration or removal of any

equipment or material, to the extent such liability is caused by the negligence of the TOWN, including any claims arising out the Worker's Compensation Act or any other law, ordinance, order or decree. INDOT shall **not** provide such indemnification to the TOWN. The TOWN agrees to pay all reasonable expenses and attorney's fees incurred by or imposed on the State and INDOT in connection herewith in the event that the TOWN shall default under the provisions of this Section.

2.23 Independent Entity; Workers' Compensation Insurance. The TOWN is performing as an independent entity under this Agreement. No part of this Agreement shall be construed to represent the creation of an employment, agency, partnership or joint venture agreement between the Parties. Neither Party will assume liability for any injury (including death) to any persons, or damage to any property, arising out of the acts or omissions of the agents, employees or subcontractors of the other Party. The TOWN shall provide all necessary unemployment and workers' compensation insurance for the TOWN's employees, and shall provide the State with a Certificate of Insurance evidencing such coverage prior to starting work under this Agreement.

2.24 Indiana Veteran Owned Small Business enterprise Compliance. [OMITTED – NOT APPLICABLE]

2.25 Information Technology Enterprise Architecture Requirements. [OMITTED – NOT APPLICABLE]

2.26 Insurance.

A. The TOWN shall cause and require its contractors to secure and keep in force during the term of this Agreement the following insurance coverages (if applicable) covering the TOWN and naming the State as additional insured for any and all claims of any nature which may in any manner arise out of or result from performance of work on the Project contemplated under this Agreement:

1. Commercial general liability, including contractual coverage, and products or completed operations coverage (if applicable), with minimum liability limits not less than \$700,000 per person and \$5,000,000 per occurrence unless additional coverage is required by the State. The State is to be named as an additional insured on a primary, non-contributory basis for any liability arising directly or indirectly under or in connection with this Agreement.
2. Automobile liability for owned, non-owned and hired autos with minimum liability limits of \$700,000 per person and \$5,000,000 per occurrence. The State is to be named as an additional insured on a primary, non-contributory basis.
3. Errors and Omissions liability with minimum liability limits of \$1,000,000 per claim and in the aggregate. Coverage for the benefit of the State shall continue for a period of two (2) years after the date of service provided under this Agreement.
4. Fiduciary Liability is required if the TOWN is responsible for the management

and oversight of various employee benefit plans and programs such as pensions, profit-sharing and savings, among others. These contractors face potential claims for mismanagement brought by plan members. Limits should be no less than \$700,000 per cause of action and \$5,000,000 per occurrence.

5. Valuable Papers coverage, available under an Inland Marine policy, is required when any plans, drawings, media, data, records, reports, billings and other documents are produced or used under this agreement. Insurance must have limits sufficient to pay for the re-creation and reconstruction of such records.
 6. The TOWN shall secure the appropriate Surety or Fidelity Bond(s) as required by the state department served or by applicable statute.
 7. The TOWN shall provide proof of such insurance coverage by tendering to the undersigned State representative a certificate of insurance prior to the commencement of this Agreement and proof of workers' compensation coverage meeting all statutory requirements of IC §22-3-2. In addition, proof of an "all states endorsement" covering claims occurring outside the State is required if any of the services provided under this Agreement involve work outside of Indiana.
- B. The TOWN's insurance coverage must meet the following additional requirements:
1. The insurer must have a certificate of authority or other appropriate authorization to operate in the state in which the policy was issued.
 2. Any deductible or self-insured retention amount or other similar obligation under the insurance policies shall be the sole obligation of the TOWN.
 3. The State will be defended, indemnified and held harmless to the full extent of any coverage actually secured by the TOWN in excess of the minimum requirements set forth above. The duty to indemnify the State under this Agreement shall not be limited by the insurance required in this Agreement.
 4. The insurance required in this Agreement, through a policy or endorsement(s), shall include a provision that the policy and endorsements may not be canceled or modified without thirty (30) days' prior written notice to the undersigned State agency.
 5. The TOWN waives and agrees to require their insurer to waive their rights of subrogation against the State of Indiana.
- C. Failure to provide insurance as required in this Agreement may be deemed a material breach of contract entitling the State to immediately terminate this Agreement. The TOWN shall furnish a certificate of insurance and all endorsements to the State before the commencement of this Agreement.

2.27 Key Person(s). [OMITTED – NOT APPLICABLE]

2.28 Licensing Standards. The TOWN, its employees and subcontractors shall comply with all applicable licensing standards, certification standards, accrediting standards and any other laws, rules, or regulations governing services to be provided by the TOWN pursuant to this Agreement. The State will not pay the TOWN for any services performed when the TOWN, its employees or subcontractors are not in compliance with such applicable standards, laws, rules, or regulations. If any license, certification or accreditation expires or is revoked, or any disciplinary action is taken against an applicable license, certification, or accreditation, the TOWN shall notify the State immediately and the State, at its option, may immediately terminate this Agreement.

2.29 Merger & Modification. This Agreement constitutes the entire agreement between the Parties. No understandings, agreements, or representations, oral or written, not specified within this Agreement will be valid provisions of this Agreement. This Agreement may not be modified, supplemented, or amended, except by written agreement signed by all necessary Parties.

2.30 Minority and Women’s Business Enterprises Compliance. [OMITTED – NOT APPLICABLE]

2.31 Nondiscrimination.

A. This Agreement is enacted pursuant to the Indiana Civil Rights Law, specifically including IC §22-9-1-10, and in keeping with the purposes of the Civil Rights Act of 1964 as amended, the Age Discrimination in Employment Act, and the Americans with Disabilities Act. Breach of this covenant may be regarded as a material breach of this Agreement, but nothing in this covenant shall be construed to imply or establish an employment relationship between the State and any applicant or employee of the TOWN or any subcontractor.

Under IC §22-9-1-10 the TOWN covenants that it shall not discriminate against any employee or applicant for employment relating to this Agreement with respect to the hire, tenure, terms, conditions or privileges of employment or any matter directly or indirectly related to employment, because of the employee’s or applicant’s race, color, national origin, religion, sex, age, disability, ancestry, or status as a veteran.

B. The TOWN understands that INDOT is a recipient of federal funds. Pursuant to that understanding, the TOWN agrees that if the TOWN employs fifty (50) or more employees and does at least \$50,000.00 worth of business with the State and is not exempt, the TOWN will comply with the affirmative action reporting requirements of 41 CFR 60-1.7. The TOWN shall comply with Section 202 of executive order 11246, as amended, 41 CFR 60-250, and 41 CFR 60-741, as amended, which are incorporated herein by specific reference. Breach of this covenant may be regarded as a material breach of this Agreement.

It is the policy of INDOT to assure full compliance with Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act and related statutes and regulations in all programs and activities. Title VI and related statutes require that no person in the United States shall on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. (INDOT's nondiscrimination enforcement is broader than the language of Title VI and encompasses other State and Federal protections. INDOT's nondiscrimination enforcement shall include the following additional grounds: sex, sexual orientation, gender identity, ancestry, age, income status, religion, disability, limited English proficiency, or status as a veteran.)

- C. During the performance of this Agreement, the TOWN, for itself, its assignees and successors in interest (hereinafter referred to as the "TOWN") agrees to the following assurances under Title VI of the Civil Rights Act of 1964:
1. Compliance with Regulations: The TOWN shall comply with the regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation, Title 49 CFR Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Agreement.
 2. Nondiscrimination: The TOWN, with regard to the work performed by it during the Agreement, shall not discriminate on the grounds of race, color, sex, sexual orientation, gender identity, national origin, religion, disability, ancestry, or status as a veteran in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The TOWN shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulation, including employment practices when the Agreement covers a program set forth in Appendix B of the Regulations.
 3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the TOWN for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the TOWN of the TOWN's obligations under this Agreement, and the Regulations relative to nondiscrimination on the grounds of race, color, sex, sexual orientation, gender identity, national origin, religion, disability, ancestry, income status, limited English proficiency, or status as a veteran.
 4. Information and Reports: The TOWN shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by INDOT and the Federal Highway Administration ("FHWA") to be pertinent to ascertain compliance with such

Regulations, orders and instructions. Where any information required of the TOWN is in the exclusive possession of another who fails or refuses to furnish this information, the TOWN shall so certify to INDOT or FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of the TOWN's noncompliance with the nondiscrimination provisions of this Agreement, INDOT shall impose such contract sanctions as it or FHWA may determine to be appropriate, including, but not limited to: (a) withholding payments to the TOWN under the Agreement until the TOWN complies, and/or (b) cancellation, termination or suspension of the Agreement, in whole or in part.
6. Incorporation of Provisions: The TOWN shall include the provisions of paragraphs 1. through 5. in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The TOWN shall take such action with respect to any subcontract or procurement as INDOT or FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance, provided, however, that in the event the TOWN becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the TOWN may request INDOT to enter into such litigation to protect the interests of INDOT, and, in addition, the TOWN may request the United States of America to enter into such litigation to protect the interests of the United States of America.

2.32 Notice to Parties. Whenever any notice, statement or other communication is required under this Agreement, it shall be sent to the following addresses, unless otherwise specifically advised:

A. For INDOT:

Steve McAvoy
Statewide Facilities Director
100 North Senate Avenue, Room N925
Indianapolis, IN 46204
Phone: (317) 232-5510
Email: smcavoy@indot.in.gov

And with copy to:

Chief Legal Counsel and Deputy Commissioner
100 North Senate Avenue, Room N758
Indianapolis, IN 46204
Phone: (317) 232-5012

B. For the TOWN:

Clerk Treasurer
106 North Lebanon Street
Lizton, IN 46149
Phone: (317) 994-5500
Email: ltownhall@gmail.com

2.33 Order of Precedence; Incorporation by Reference. [OMITTED – NOT APPLICABLE]

2.34 Ownership of Documents and Materials. [OMITTED – NOT APPLICABLE]

2.35 Payments.

- A. All payments shall be made thirty-five (35) days in arrears in conformance with State fiscal policies and procedures and, as required by IC §4-13-2-14.8, the direct deposit by electronic funds transfer to the financial institution designated by the TOWN in writing unless a specific waiver has been obtained from the Indiana Auditor of State. No payments will be made in advance of receipt of the goods or services that are the subject of this Agreement except as permitted by IC §4-13-2-20.
- B. If the TOWN has any outstanding balances on any agreement with INDOT, and such outstanding balances due to INDOT are at least sixty (60) calendar days past the due date, INDOT may proceed in accordance with IC §8-14-1-9 to invoke the powers of the Auditor of the State of Indiana to make a mandatory transfer of funds from the TOWN's allocation of the Motor Vehicle Highway Account and the Local Roads and Streets Account, if any, to INDOT's account, or INDOT may withhold or garnish payments otherwise due to the TOWN from INDOT under this or any other agreement to partially or wholly satisfy such outstanding balances. In addition, to satisfy any outstanding balance owed, INDOT reserves the right to withhold any and all distributions of discretionary federal funds normally issued or allocated to the TOWN.

2.36 Penalties, Interest and Attorney's Fees. INDOT will in good faith perform its required obligations hereunder and does not agree to pay any penalties, liquidated damages, interest, or attorney's fees, except as permitted by Indiana law, in part, IC §5-17-5, IC §34-54-8, IC §34-13-1 and IC §34-52-2.

Notwithstanding the provisions contained in IC §5-17-5, any liability resulting from the State's failure to make prompt payment shall be based solely on the amount of funding originating from the State and shall not be based on funding from federal or other sources.

2.37 Progress Reports. The TOWN shall submit progress reports to the INDOT Project Manager on a monthly basis. The report shall be in written form and shall include detailed information and photographic exhibits in a format provided by INDOT. The progress reports shall serve the purpose of assuring INDOT that work is progressing in line with the schedule,

and that completion can be reasonably assured on the scheduled date.

2.38 Public Record. The TOWN acknowledges that the State will not treat this Agreement as containing confidential information, and will post this Agreement on its website as required by Executive Order 05-07. Use by the public of the information contained in this Agreement shall not be considered an act of the State.

2.39 Renewal Option. This Agreement may be renewed under the same terms and conditions, subject to the approval of the Commissioner of Department of Administration and the State Budget Director in compliance with IC §5-22-17-4. The term of the renewed agreement may not be longer than the term of the original Agreement.

2.40 Severability. The invalidity of any section, subsection, clause or provision of this Agreement shall not affect the validity of the remaining sections, subsections, clauses or provisions of this Agreement.

2.41 Status of Claims. The TOWN shall be responsible for keeping INDOT currently advised as to the status of any claims made for damages against the TOWN resulting from services performed under this Agreement.

2.42 Substantial Performance. This Agreement shall be deemed to be substantially performed only when fully performed according to its terms and conditions and any written amendments or supplements.

2.43 Taxes. The State is exempt from most state and local taxes and many federal taxes. The State will not be responsible for any taxes levied on the TOWN or its contractors as a result of this Agreement.

2.44 Termination for Convenience. [OMITTED – NOT APPLICABLE]

2.45 Termination for Default. [OMITTED – NOT APPLICABLE]

2.46 Travel. [OMITTED – NOT APPLICABLE]

2.47 Waiver of Rights. No right conferred on either Party under this Agreement shall be deemed waived, and no breach of this Agreement excused, unless such waiver is in writing and signed by the Party claimed to have waived such right. Neither the State's review, approval or acceptance of, nor payment for, the services required under this Agreement shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and the TOWN shall be and remain liable to the State in accordance with applicable law for all damages to the State caused by the TOWN's negligent performance of any of the services furnished under this Agreement.

2.48 Work Standards. The TOWN shall execute its responsibilities by following and applying at all times the highest professional and technical guidelines and standards (or by ensuring that its contractors do the same). If the State becomes dissatisfied with the work product

of or the working relationship with those individuals assigned to work on this Agreement, the State may request in writing the replacement of any or all such individuals, and the TOWN shall grant such request.

2.49 State Boilerplate Affirmation Clause. [OMITTED – NOT APPLICABLE]

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Non-Collusion and Acceptance

The undersigned attests, subject to the penalties for perjury, that the undersigned is the TOWN, or that the undersigned is the properly authorized representative, agent, member or officer of the TOWN. Further, to the undersigned's knowledge, neither the undersigned nor any other member, employee, representative, agent or officer of the TOWN, directly or indirectly, has entered into or been offered any sum of money or other consideration for the execution of this Agreement other than that which appears upon the face hereof. **Furthermore, if the undersigned has knowledge that a state officer, employee, or special state appointee, as those terms are defined in IC §4-2-6-1, has a financial interest in the Agreement, the TOWN attests to compliance with the disclosure requirements in IC §4-2-6-10.5**

In Witness Whereof, the Parties have, through their duly authorized representatives, entered into this Agreement. The Parties, having read and understood the foregoing terms of this Agreement, do by their respective signatures dated below agree to the terms thereof.

LIZTON TOWN COUNCIL

**STATE OF INDIANA
Indiana Department of Transportation**

Executed by:

Recommended for approval by:

Lise Crouch, President

Shane Spears, Crawfordsville
District Deputy Commissioner

Bob Uhrick, Member

Date: _____

Bob Fisher, Member

Executed By:

Date: _____

Joseph McGuinness, Commissioner (for)

Attest:

Date: _____

Tonya Perry, Clerk-Treasurer

Date: _____

APPROVALS
STATE OF INDIANA

State Budget Agency

_____ (for)
Jason D. Dudich, Director

Date: _____

Department of Administration

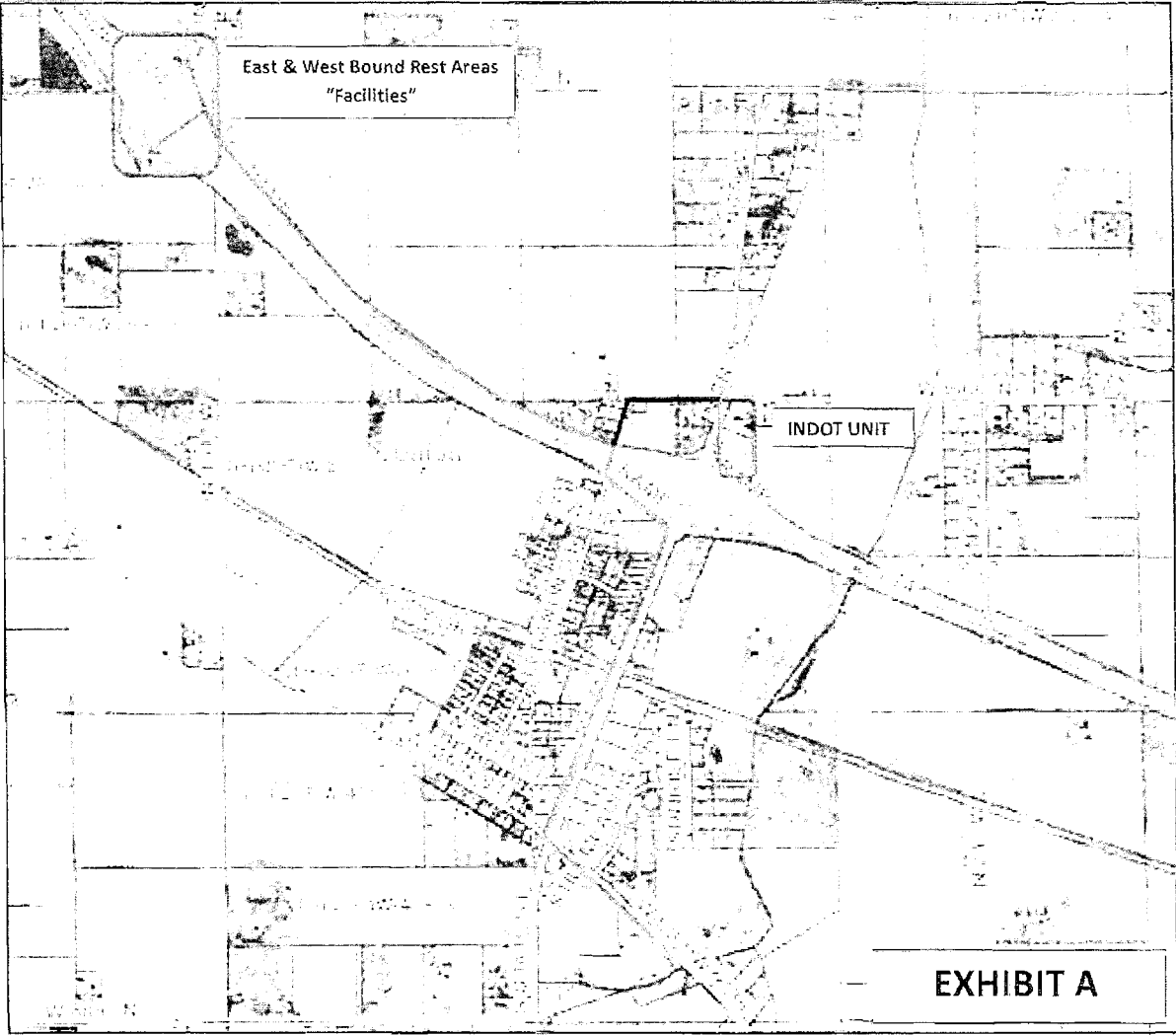
_____ (for)
Lesley A. Crane, Commissioner

Date: _____

Approved as to Form and Legality:

_____ (for)
Curtis T. Hill, Jr., Attorney General

Date: _____



APPENDIX H

Operator Requirements and Qualifications

TOWN OF LIZTON JOB DESCRIPTION

Position Title: Water System Operator
Department: Public Works
Reports To: Town Council
Date Written: October 2018
Date Revised:

General Summary:

Operates, monitors, and maintains the water distribution system. Manages and operates the utility in accordance with all applicable local, state and federal laws, regulations, and permits. Qualified candidate must have a minimum of a Class DSS or DSM distribution license. This is a *part-time position* requiring approximately 10 to 15 hours per week.

Essential Job Functions:

	<u>% of Time:</u>
1. Sampling and testing of water system. Performs lab tests and analysis. Compiles daily and monthly reports of operations. Performs all daily operational and maintenance tasks as required by permits and standards. Maintains all records of the operation and maintenance of facilities.	25%
2. Coordinate and perform system maintenance, emergency response, equipment calibrations, orders, and delivery. Perform specialized maintenance such as water system flushing and equipment installation. Consult and correspond with regulatory agencies when necessary including facility inspections.	20%
3. Monitors, controls and/or directs the operation of equipment and structures, residual testing, and water distribution system processes	15%
4. Perform inspections, installations, maintenance and repair of the physical structures and components.	15%
5. Collect and analyze meter data, respond to customer trouble reports, issue/cancel water boil notices. Process new service and disconnect orders	10%
6. Maintain buildings and grounds around water facilities and other maintenance duties as assigned.	10%
7. Serves on 24-hour call for emergencies.	5%

* Perform other duties as needed.

*These tasks do not meet the Americans with Disabilities Act definition of essential job functions and are usually less than 5% of time spent. However, these tasks still constitute important performance aspects of the job.

Working Conditions:

Working conditions will vary considerably depending upon weather and surroundings. This position would include possible exposure to extreme weather conditions, chemicals, airborne particles, wastewater, contaminants, noise, wetness, fumes, dirt, dust, electrical shock, and vibration. Must be available to work additional hours as necessary.

Testing Duties

- Develop System Site Sampling Plan;
- Daily Distribution Disinfection Residual Testing;
- Collect one (1) Total Coliform Sample per Month;
- Collect Two (2) TTHM & HAA5 Samples per Year;
- Collect Ten (10) Lead & Copper Samples every Three (3) Years.

Operations:

- Read and Record Master Meter Flow;
- Coordinate With Town Council for Repairs and Maintenance;
- Prepare and Submit Monthly Reports of Operation;
- Complete and Submit Distribution System Residual Form;
- Complete and Deliver Consumer Confidence Report Annually;
- Maintain Records and Reports as Required.

Knowledge, Skills, and Abilities:

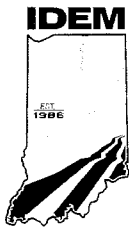
- Knowledge of:
 - Local, state, and federal regulatory requirements for a water distribution system
 - Sampling and testing procedures.
 - Proper system operation methods
 - Equipment functions and maintenance
 - Plumbing
 - Electricity
- Skill in:
 - Troubleshooting mechanical equipment
 - Problem solving, identifying problems and resolutions.
 - Creating and maintaining records in a timely manner
 - Oral and written communication.
 - Completing multiple tasks at once.
 - Operating various personal computer equipment such as various software programs (such as Word, Excel), printers, copier, and telephones.
- Ability to:
 - Communicate with coworkers and vendors in a professional manner.
 - Pay close attention to detail.
 - Work independently to make decisions and meet deadlines.
 - Think creatively and analytically, and make suggestions for improvement.
 - Maintain a clean and professional appearance in accordance with Town standards.
 - Travel in and out of state for training and industry meetings.
 - Maintain a valid Indiana driver's license.
 - Plan and organize
 - Establish good working relationships with employees, officials, and the public.
 - Oversee the work of others

Education and Experience:

Minimum of high school diploma or equivalent is required. Prefer a minimum of 3 years experience with water and/or wastewater facilities. A class DSS or DSM distribution license is required and must be obtained within six months of employment. Operator will be required to keep license current and to complete the continuing education requirements of the State.

Physical Requirements:

PHYSICAL REQUIREMENTS	0-24%	25-49%	50-74%	75-100%
Seeing: Must be able to read reports and use computer.				X
Hearing: Must be able to hear well enough to communicate with co-workers.				X
Standing/Walking:				X
Climbing/Stooping/Kneeling:				X
Lifting/Pulling/Pushing (up to 75 lbs.):				X
Fingering/Grasping/Feeling: Must be able to write, type, and use phone system.				X

TECHNICAL GUIDANCE DOCUMENT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Drinking Water Operator Continuing Education Requirements Office of Water Quality

(317) 233-8488 • (800) 451-6027

www.idem.IN.gov

100 N. Senate Ave., Indianapolis, IN 46204

327 IAC 8-12-7.5 Continuing Education Requirements:

- All water treatment plant and water distribution system certified operators shall fulfill continuing education requirements:
 - During each three year period following the issuance of the certification card; and,
 - Before having that certification card renewed.
- Continuing education credits required for certification card renewal in the grades of water treatment plant and water distribution system certified operators are listed in the following table:

Continuing Education Requirements	
<i>Certified Operator Grades, Water Distribution System, and Water Treatment Plant</i>	<i>Continuing Education Credits Required for Renewal</i>
Grade O.I.T.	Contact hours shall match those required for the classification where operator is in training; certification card not renewable.
Grade DSS	10 contact hours
Grade DSM	15 contact hours
Grade DSL	15 contact hours
Grade WT 1	10 contact hours
Grade WT 2	15 contact hours
Grade WT 3	25 contact hours
Grade WT 4	30 contact hours
Grade WT 5	30 contact hours
Grade WT 6	30 contact hours

- According to 327 IAC 8-12-7.5, continuing education credits required according to the table above must adhere to the distribution of subject matter according to the following:
 - A minimum of 70 percent of the required continuing education contact hours shall be obtained from the technical category of approved continuing education courses.
 - Not more than 30 percent of the required continuing education contact hours shall be obtained from the non-technical subject matter category of approved continuing education courses.
- A person having a valid certification card in more than one classification of water treatment plant or water distribution system:
 - May be given duplicate continuing education credit from a single approved continuing education course for each water treatment plant and water distribution system certification to which the subject matter is applicable; and
 - Must obtain the greatest number of continuing education contact hours required by the various certifications held within the shared time period of overlap in order not to be required to obtain continuing education for each certificate held.

Drinking Water Operator Continuing Education Technical Hours versus Non-Technical (General) Hours:



Definitions: 327 IAC 8-12-7.1 (a) (2) (A)

- Technical: "(i) Technical matters related directly to water distribution or water treatment." These courses deal with water distribution operations or water treatment operations. The course descriptions clearly state the water works technical subject matter being taught. Examples include courses in pumps, water line installation, repairs, sampling, cross connection control, etc.
- General: "(ii) General matters related to the responsibilities of a certified operator." This category contains non-technical subjects that an operator needs to know, such as OSHA training, first aid/CPR, laboratory safety, supervision/communications, etc. The subject matter of these courses is relevant to the work done by water distribution or water treatment operators, but these courses *do not deal with specific technical matters* in water distribution or water treatment.

TECHNICAL

Sampling Methods/Techniques/Regulations
Line Locations
Tank Maintenance
Leak Repairs/Detection
Pumps, Installation, Repairs
Meters
SDWA Updates
Monitoring Procedures/Schedules
Forklift Training Certification (not safety)
Pipe Installation
Laboratory Procedures
Coagulation, Flocculation & Sedimentation Basics
Filtration Basics
Water Treatment Plant Operations
Water Distribution System Operations
Disinfection Basics
Distribution System Materials & Equipment
Hydraulics
Coliform & Bacteriological Testing
Mathematics
Cross Connection Control
System Design & Flow Configuration
Hydrant & Valve Inspection, Operation and Maintenance
Water Conservation
Drinking Water Ion Exchange Softening

NON-TECHNICAL

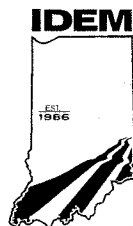
OSHA 10-Hour Safety Courses
Confined Space Entry
Chlorine Handling Safety
Lockout/Tagout
Pipeline Safety
Hazwoper
Laboratory Safety
Fire Prevention
Ladder Safety
Defensive Driving
Power Tool Safety
Trenching & Excavation Safety
Leadership/Supervision
Accident Investigation
Basic Safety Fundamentals for Distribution System Operator
Construction Safety for Water Utility Job Sites
Traffic Control & Work Zone Safety
Effective Communication: Managing Conflicts in the Workplace
First Aid & CPR

More Information:

For more information on Operator Certification, please contact IDEM's Drinking Water Branch at (317) 234-7430 or, toll free, at (800) 451-6027, ext. 4-7430.

This technical guidance is intended solely as guidance and does not have the effect of law or represent formal Indiana Department of Environmental Management (IDEM) decisions or final actions. This guidance document shall be used in conjunction with applicable rules and statutes. It does not replace applicable rules and statutes, and if it conflicts with these rules and statutes, the rules and statutes shall control.



TECHNICAL GUIDANCE DOCUMENT**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

Drinking Water Operator Certification Rule

Office of Water Quality

(317) 233-8488 • (800) 451-6027 www.idem.IN.gov 100 N. Senate Ave., Indianapolis, IN 46204

Public water supplies that must have a certified operator:

All community public water systems, all nontransient noncommunity public water systems, and any transient noncommunity public water systems that are using surface water or groundwater under the direct influence of surface water, and any transient noncommunity public water systems that employ complex treatment.

The different types of water distribution systems and what they mean:

- Distribution system small (Class DSS) – Distribution systems that serve a population less than 3,301 people and have no components other than pressure tanks or storage tanks, or are nontransient noncommunity public water systems serving a population less than 501 people utilizing no treatment other than ion exchange or inline filtration.
- Distribution system medium (Class DSM) – Distribution systems that serve a population greater than 3,300 but less than 10,001 people and have no mechanical means of movement of water other than pressure tanks or storage tanks, or booster pumps to storage tanks, or distribution systems that serve a population less than 3,301 people and consist of pumps, not including well pumps, before the entry point to the distribution system or booster pumps to storage tanks.
- Distribution system large (Class DSL) – Distribution systems that serve a population greater than 10,000 people or serve a population less than 10,001 people and consist of booster pumps in the distribution system other than booster pumps to storage tanks or mechanical devices for movement of water beyond storage.

The different types of water treatment systems and what they mean:

- Water treatment 1 (Class WT1) – Water treatment plants that serve a population of less than 501 people, are a community water system, acquire water from ground water or purchase, and have ion exchange softening process for cation removal and/or an inline filtration device with no chemical treatment.
- Water treatment 2 (Class WT2) – Water treatment plants, with no population limitations, that acquire water from ground water or purchase and utilize a chemical feed to achieve disinfection or fluoride standardization or water stabilization; or water treatment plants that serve a population greater than 500 people and less than 3,301 people that use an ion exchange softening process for cation removal and/or an inline filtration device.
- Water treatment 3 (Class WT3) – Water treatment plants that acquire water from ground water or purchase, utilize a chemical feed, and have one of the following:
 - Pressure or gravity filtration.
 - Ion exchange processes (if the population served is greater than 3,300 people).
 - Lime soda softening.
 - Reverse osmosis.
 - Inline filtration, if the population is greater than 3,300 people.
- Water treatment 4 (Class WT4) – Water treatment plants that serve a population less than 10,001 people and acquire water from surface water and/or ground water under the direct influence of surface water.
- Water treatment 5 (Class WT5) – Water treatment plants that serve a population greater than 10,000 people and acquire water from surface water and/or ground water under the direct influence of surface water.
- Water treatment 6 (Class WT6) – Water treatment plants that utilize newly emerging treatment technology not commonly in use for drinking water treatment in Indiana, as determined by the IDEM Commissioner.



Who administers the certification of water operators:

Indiana Department of Environmental Management
Office of Water Quality, Drinking Water Branch
Indianapolis, IN 46204-2251
Contact: Ruby Keslar
Telephone: (317) 234-7431

Requirements to become a certified operator:

- All individuals for each class must pass an examination, unless exempted by statute or rule, have a high school education or its equivalent and possess educational skills necessary to:
 - make simple computations with fractions and decimals;
 - read a linear scale;
 - calculate volumes of simple shapes;
 - make simple computations of multiplication and division;
 - keep records;
 - read and write the English language to the extent of interpreting service manuals and work orders, and submitting written reports; and,
 - understand basic principles of sanitation and science.
- Each grade of water works operator certification requires a specific amount of acceptable work experience that has been obtained under the supervision of an appropriately certified operator.

Continuing Education Units (CEUs):

- All certified operators are required to obtain a designated number of continuing education contact hours during their three-year renewal period. Continuing Education Units (CEUs) are broken down into contact hours, which are 50 to 60 minute instructional sessions involving a qualified instructor or lecturer. Ten contact hours equals one CEU. Each grade of operator must complete a specific amount of contact hours in order to renew their certification. The following shows the contact hours needed for each Certified Operator Class for every three-year renewal:
 - DSS 10 contact hours
 - DSM 15 contact hours
 - DSL 15 contact hours
 - WT1 10 contact hours
 - WT2 15 contact hours
 - WT3 25 contact hours
 - WT4 30 contact hours
 - WT5 30 contact hours
 - WT6 30 contact hours

More Information:

- For more information on Operator Certification, please contact IDEM's Drinking Water Branch at (317) 234-7430 or, toll free, at (800) 451-6027, ext. 4-7430.
- For information on federal drinking water standards, please contact the United States Environmental Protection Agency's (U.S. EPA's) Safe Drinking Water Hotline at (800)426-4791.

This technical guidance is intended solely as guidance and does not have the effect of law or represent formal Indiana Department of Environmental Management (IDEM) decisions or final actions. This guidance document shall be used in conjunction with applicable rules and statutes. It does not replace applicable rules and statutes, and if it conflicts with these rules and statutes, the rules and statutes shall control.

APPENDIX I

Utility Clerk Requirements

Town of Lizton Job Description

Position Title: Utility Billing, Receivables and Finance Clerk
Department: Public Works
Reports To: Town Council
Date Written: October 2018
Date Revised:

General Summary and Scope of Position

This position is responsible for the monthly billing of the water utility's customers, the maintenance of billing records, the accounting for billing receipts, collections and payables and the daily administration of the customer billings and collection and the management of the computerized billing and financial software systems and preparing monthly reports for the Town summarizing the months billing, collections and financial activity.

The Town Council establishes the Utility's policies and the Clerk Treasurer directs the day-to-day operations.

The position requires a high school diploma or equivalent supplemented by three (3) years of experience performing administrative support, clerical duties, utility billing and the operation of computerized financial software, or any equivalent combination of education, training and or experience which provides the requisite knowledge, skills and abilities for this job. Any knowledge of the Indiana Gateway portal is preferred.

This is a part-time position requiring approximately 10 to 15 hours per week with a salary range dependent upon qualifications and experience, plus a benefits package.

Duties and Responsibilities:

- Prepare monthly billing.
- Perform monthly meter reading
- Maintain the computerized billing system which includes maintaining a customer name and address list, sending out late notices, and filing tax levies.
- Collect payments.
- Prepare receipts and deposits.
- Maintain the accounts receivable ledger.
- Resolve customer service and payment disputes.
- Maintains the financial software program including entering all monthly receipts and disbursements.
- Prepares monthly reports to the Council on billings, collections, receipts and monthly disbursements.
- Coordinates with the Clerk Treasurer.
- Provides other duties as directed.

The candidate must be able to be bonded.

APPENDIX J

Rules, Regulations, and Rate Charges

Rules, Regulations, Charges



Chapter 2 - Water

CHAPTER 2 - WATER

Rules, Regulations, and Charges

Section

2.01	Establishing New Service
2.02	Deposits
2.03	Schedule of Rates and Charges
2.04	Billing
2.05	Delinquent Payments
2.06	Disconnection
2.07	Voluntary Service Discontinuation
2.08	Reconnections
2.09	Financial Responsibility for Payment of Bills
2.10	Additional Service Fees
2.11	Methods of Payments
2.12	Line Extensions
2.13	Interconnections and Backflow
2.14	Water Conservation and Emergency Measures
2.15	Penalties
2.16	Complaints

2.01 ESTABLISHING NEW SERVICE

Anyone that desires to establish water and/or sewer service through the Town public utility services must first provide each of the following:

- (A) A complete, accurate and executed utility service agreement in a form and manner presented by the Town. Said form(s) shall be made available at the Town Hall and/or on the Town's website.
- (B) A valid, state-issued photo identification card or driver's license, or valid passport, a copy of which shall be maintained by the Town.
- (C) Written legal documentation demonstrating the individual's interest in the property for which the service is to be provided. This may be secured through a written and executed lease/rental agreement, a form provided by the utility office, the title to the property, a closing statement secured in the purchase of the property, a tax assessment statement, or other properly recorded legal document verifying the individual's interest in and/or ownership of the property.
- (D) Full payment of any required deposit.
- (E) Payment in full of any prior unpaid delinquencies due and payable to the Town for prior utility services.
- (F) For rental and non-owner occupied properties, the Town reserves the right to require the owner of the property to complete the requirements for establishing new service.

2.02 DEPOSITS

- (A) A water security deposit shall be paid for all new accounts at the same time service is established. Security deposits shall not accrue interest. (See current rate policy for amount.)
- (B) The deposits shall be applied towards the final bill for utility services rendered. Any unused portion of the deposit shall be refunded to the account holder within 30 days of the final billing statement. Refunds shall be mailed to the last known address which was provided by the account holder to the Town.
- (C) If the account holder is moving from one property within the Town's service area and establishing service at another property within the Town's service area, the deposit(s) may be applied to any required deposit(s) for the new service address.

- (D) 1. The deposit, less any outstanding penalties and service fees, shall be refunded to the depositor after a notarized statement from the depositor that as of a certain date the property being served:
- (a) Has been conveyed or transferred to another person; or
 - (b) A structure has been removed and is no longer connected to any part of the municipal sewage system.
2. A statement under division (1) must include the name and address of the person to whom the property is conveyed or transferred
- (E) Deposits that remain unclaimed by the depositor for more than seven years after the termination of the services for which the deposit was made become the property of the Town. Indiana Code § 32-34-1 (unclaimed property) does not apply to this deposit.
- (F) If a depositor fails to satisfy costs and fees within 60 days after the termination of the depositor's use or ownership of the property served, the depositor forfeits the deposit and all accrued interest. The forfeited amount shall be applied to the depositor's outstanding fees. Any excess that remains unpaid may be collected by the Town as allowed by law.
- (G) The Town Council shall establish the deposit required as described under this section. (See current rate policy for amount.)
- (H) The owner of a property may have the water turned for a period of five business days for inspection and maintenance of the property. A security deposit will not be required in this instance; however, the property owner will be responsible for the cost of service and the turn on fee.

2.03 SCHEDULE OF RATES AND CHARGES

(A) Monthly Usage

	Rate Per 1,000 Gallons
First 5,000 gallons	\$14.50
Next 5,000 gallons	\$ 8.50
Next 20,000 gallons	\$ 6.75
Over 30,000 gallons	\$ 5.50

(B) Minimum Monthly Charge:

Size of Meter	Ratio	Gallons	Rate Per Month
5/8"	1.0	4,000	\$ 58.00
3/4"	1.0	4,000	\$ 58.00
1"	2.5	10,000	\$ 115.00
1-1/2"	5.8	23,200	\$ 204.10
2"	10.0	40,000	\$ 305.00
3"	23.0	92,000	\$ 591.00
4"	40.0	160,000	\$ 965.00
6"	91.0	364,000	\$2,087.00

(C) Fire Protection

Rate Per Annum

1. Municipal Fire Hydrant (per hydrant) N/A
2. Private Fire Hydrant (per hydrant) \$ 750.00
3. Private Fire Protection

Connection Size

Rate Per Annum

2" and under	\$ 85.00
3"	\$ 187.50
4"	\$ 335.00
6"	\$ 750.00
8"	\$1,335.00

(D) Fire Protection Surcharge for Customers outside of Town within 1,000 feet of a
 of a Public Fire Hydrant

Size of Meter

Rate Per Month

5/8" or 3/4"	\$ 8.25
1"	\$ 20.65
1-1/2"	\$ 47.85
2"	\$ 82.50
3"	\$ 189.75
4"	\$ 330.00
6"	\$ 750.00

(E) Automatic Sprinklers

The annual charge for automatic sprinklers shall be based on the size (inches) of the connection.

(F) Meter Deposit

1. Deposit for less than a 2" meter shall be \$75.
2. The deposit for a meter of 2" or more shall be \$90.
3. The charge for special meter reading shall be \$25.

(G) Meter Taps/Connection Charge

1. At the time of connection with the waterworks system, each user shall pay a charge to cover the costs of excavating and tapping the main, furnishing and installing the service pipe from the main to the lot line, and furnishing and installing corporation and stop cocks, meter cock (if outside), yoke, meter box, and meter.
2. The charge for a 5/8" meter tap shall be \$1,100.00. The charge for a tap larger than 5/8" will be the cost of labor and materials with a minimum charge of \$1,100.00.

(H) Reconnection Charge

When the service is turned off for nonpayment, or whenever for any reason beyond the control of the water works, a reestablishment of service is required by any one customer, this charge will be made by the waterworks to cover the cost of discontinuing and re-establishing service.

The charge, together with any arrears due the waterworks shall be paid by the customer before service will be re-established. The minimum charge shall be \$25.00 if the reconnection is made during working hours and \$50.00 if the reconnection is made outside of the regular working hours of the utility.

(I) Late Payment Charge

All bills for water service not paid by the 10th day after the bill is mailed shall be subject to a late payment charge of 10% of the first \$3.00 and 3% of the balance.

(J) Bad Check Charge

The cost of a bad check shall be \$25.00

(K) System Development Charge

A System Development Charge shall mean the payment required for the benefit or privilege of making a connection, directly or indirectly, to the Utility's water system. A Developer shall mean an owner, or a person acting on behalf of an owner, to develop property to be served by the water utility.

Prior to connecting to the water facilities, a developer/owner shall be required to pay a System Development Fee of \$1,200.00 per EDU. These fees are in addition to the tap fee and the user fees.

System Development Charges shall be due and payable at the time of the request for allocation of capacity or an application for service (whichever comes first) and prior to connection to the system. No connection to the water utility will be allowed prior to the receipt by the Utility of all Development and Connection Fees.

2.04 BILLING

(A) All bills for payment of utility service and/or fees shall contain the following:

- (1) Contact information for the utility office in clear and visible format;
- (2) The amount due for water;
- (3) The Due date;
- (4) The amount due for late charges;
- (5) The following notice: Immediate water disconnect if not paid in full by (date).

(B) All meters shall be read no later than the twentieth of each month. All bills shall be mailed no later than the first business day of the month following the reading and shall be payable in full by the due date noted.

2.05 DELINQUENT PAYMENTS

Bills paid after the due date shall be assessed a late charge. (See current rate policy Section 2.03 for amount.) Late fees shall not be assessed until the open of business on the due date noted if the bill has not otherwise been received at that time.

2.06 DISCONNECTION

Discontinuation of service due to nonpayment shall be made on or as soon as reasonably possible after the disconnection date. Discontinuation of service due to nonpayment shall be made no earlier than the date set forth on the billing statement. Notice as provided on the billing statement of the discontinuation of service shall be sufficient and no additional notice shall be necessary prior to discontinuation of service.

Water service may be disconnected for payment by check that is returned for insufficient funds.

As a courtesy, reasonable effort should be made to send a letter to the property owner, notifying the owner that service has been disconnected within 30 days of the actual disconnection. Further notice need not be given if service is reinstated.

2.07 VOLUNTARY SERVICE DISCONTINUATION

- (A) Any account holder that desires to discontinue utility service, or otherwise remove themselves from financial responsibility of further usage and charges must accurately complete and sign a discontinue request in a form and manner presented by the Town.
- (B) Said forms shall be made available at the front office of the public utility administrative building.
- (C) Discontinuation of services shall not prevent the Town from seeking collection of any unpaid fees for services rendered by the utility.
- (D) If an account holder has a deposit held by the Town, it shall be applied to the final bill.

2.08 RECONNECTIONS

- (A) Utility service may not be reconnected outside of normal business hours if the discontinuation of service resulted from nonpayment, bad check, or delinquent payment of an account.

- (B) Reconnection of services shall be made as soon as reasonably possible after payment of all outstanding delinquencies of water service and/or sewer service bills, service fees, bad check fees and deposits, as may be applicable.
- (C) Payment for outstanding delinquencies, service fees, bad check fees and deposits shall be made during normal business hours at the administrative building of the utility.
- (D) Utility service shall not be reconnected for partial payment of combined amount due for water, sewer and storm water service bills. All fees and delinquencies shall be paid in full before service may be reinstated.
- (E) Subject to an “after hour service fee” referenced and paid as described above, utility service which is discontinued for reasons other than nonpayment, bad check or delinquent payment, may be reconnected outside of normal business hours, as soon as reasonably possible, providing that an employee of the utility department authorized to perform such duty is available to perform the task.

2.09 FINANCIAL RESPONSIBILITY FOR PAYMENT OF BILLS

- (A) For all water service furnished within the corporate limits of the Town, the current property owner of record of the premises to which water service was supplied is responsible for payment of the bill, irrespective of who incurred such unpaid bills or when such bills were incurred, or who owned or occupied the property at the time the bills were incurred.
- (B) Without relieving the property owner of the responsibility for payment of all water bills for service furnished within the corporate limits and in all cases where service is furnished outside the corporate limits, the Town reserves the right to require a suitable deposit to secure payment of water bills.
- (C) Financial responsibility may only be transferred with written verification evidencing the valid and legal transfer of ownership of the property.
- (D) The Town shall make an effort to collect any fees for public works services from the named account holder; however, the Town reserves the right to reject the transfer of the ultimate legal financial responsibility for such services absent verification of legal transfer of ownership of the property.
- (E) The Town authorizes the utility clerk to file a lien on unpaid public services pursuant to the rules and procedures set forth under Indiana Code.
- (F) Financial responsibility may only be transferred with written verification evidencing the valid and legal transfer of ownership of the property.

- (G) The Town shall make an effort to collect any fees for public works services from the named account holder; however, the Town reserves the right to reject the transfer of the ultimate legal financial responsibility for such services absent verification of legal transfer of ownership of the property.
- (H) The Town authorizes the Utility Clerk to file a lien on unpaid Public Works Services pursuant to the rules and procedures set forth under Indiana Code. Notice shall be sent to the property owner, if the property is not occupied by the owner, stating that a lien shall be placed on the property for the unpaid sewer bill.

2.10 ADDITIONAL SERVICE FEES

- (A) A “reconnection fee” for both water service and sewer service shall be charged if utility service is discontinued due to nonpayment, bad check, or delinquent payment. A “reconnection fee” for just water service shall be charged if utility service was discontinued for any other reason, not specifically identified herein. No “reconnection fee” shall be charged if utility service was discontinued for purpose of maintenance/service/repair of the utility by the Town. Reconnection fees must be paid in full during normal business hours at the administrative building of the utility, before service will be re-established.
- (B) An “after hour service fee” shall be charged if a service call is performed outside of normal business hours. After hour service fees shall be assessed on the next billing cycle.
- (C) A “bad check fee” shall be charged if a check for payment of any utility service is not honored, for any reason, by the bank upon which the check was written. Bad check fees must be paid during normal business hours at the administrative building of the utility, before service is re-established, or as otherwise described below.
- (D) A “meter test fee” shall be charged if a meter test is requested by an account holder or property owner and the results indicate that the meter is functioning within industry standards as defined under the AWWA standards. No meter test charge shall be assessed if a meter test is conducted by request or otherwise and the meter is not functioning within industry standards as defined under AWWA standards. Meter test charges shall be assessed on the next billing cycle if requested by the account holder. If requested by the property owner and that person is not also the account holder, a separate bill shall be sent to the property owner and payable within 30 days of the billing statement.
- (E) To the extent any customer violates a Town ordinance regarding damage to or obstruction of any water, sewer, or storm sewer system, the customer shall be cited for an ordinance violation and fined accordingly.

2.11 METHODS OF PAYMENT

- (A) The Town may accept payment for utility services and fees in the form of check, cash, money order, certified check, cashier's check, credit/debit cards, or electronic funds transfer once such a system is established for electronic fund transfers, except as set forth under this section.
- (B) The Town shall not accept payment in the form of coins in an amount in excess of \$5.00.
- (C) The Town shall not accept payment for utility services and/or fees in the form of a check from any account holder or property owner who has issued two or more checks for any property which have not been honored by the bank within any 12-month period, until such time as the account holder or property owner has made 12 consecutive timely payments.

2.12 LINE EXTENSIONS

Water lines may be available to be extended for the benefit of serving additional properties. The cost shall be prorated to the benefitted property owners in a manner consistent with the Barrett Law or other assessment procedures provided by state statute or the Town. Developers shall be responsible for the cost and installation of water lines for new land development projects, such as housing, commercial or industrial subdivisions with the intent of dedicating such systems to the Town.

2.13 INTERCONNECTIONS AND BACKFLOW

- (A) A **CROSS CONNECTION** shall be defined as any physical connection or arrangement between two otherwise separate systems, one of which contains potable water from the water system and the other from a private source which is considered water of unknown or questionable safety, steam, gases, or chemicals, whereby there may be a flow from one system to the other, with the direction of flow dependent upon the pressure differential between the two systems.
- (B) No person, firm, or corporation shall establish or permit to be established, or maintain or permit to be maintained, any cross connection. No interconnection shall be established whereby potable water from a private, auxiliary, or emergency water supply other than the regular public water supply of the Town may enter the supply or distribution system of the municipality, unless such private auxiliary or emergency water supply, and the method of connection and use of such supply, shall have been approved by the water utility and the Indiana Department of Environmental Management in accordance with 327 IAC 8-10.
- (C) It shall be the duty of the Water Utility to perform inspections of all properties served by the public water system where cross connections with the public water system are deemed possible. The frequency of inspections and re-inspections, based on potential health hazards involved, shall be established by the Water Utility.

- (D) Upon presentation of proper credentials, a representative of the Water Utility shall have the right to request entry at any reasonable time to examine the property served by a connection to the public water system for possible cross connections. On request, the owner, lessee, or occupant of any property so served shall furnish to the inspection agency with any pertinent information regarding the piping system or systems on such property. The refusal of access or refusal of requested pertinent information shall be deemed evidence of the presence of cross connections and could be cause for disconnection.
- (E) The Water Utility is hereby authorized and directed to discontinue water service to any property wherein any connection in violation of this section exists, and to take such other precautionary measures deemed necessary to eliminate any danger of contamination of the public water system. Water service shall be discontinued only after reasonable notice is served on the owner, lessee, or occupants of the property or premises where a violation is found or suspected to exist. Water service to such property shall not be restored until the cross connection(s) has been eliminated in compliance with the provisions of this section.
- (F) If it is determined by the Water Utility that a cross connection or an emergency endangers public health, safety, or welfare and requires immediate action, and a written finding to that effect is filed with the Utility Clerk and delivered to the consumer's premises, service may be immediately discontinued. The consumer shall have an opportunity for a hearing within ten days of such emergency discontinuance.
- (G) All consumers using toxic or hazardous liquids, all hospitals, mortuaries, wastewater treatment plants, laboratories and all other hazardous users shall install and maintain a reduced-pressure, principal backflow preventer in the main water line serving each building on the premises. The backflow preventer must be installed in an easily accessible location not subject to flooding or freezing. The reduced-pressure, principal backflow preventers shall not be installed below ground level.
- (H) This section does not supersede the Indiana Plumbing Code or IDEM Rule 327, or IAC 8-10, but is supplementary to them.
- (I) In addition to IDEM Rule 327 IAC 8-10-4(c), the following customer facilities need a backflow prevention device:
1. Beverage bottling plants, including dairies and breweries;
 2. Canneries, packing houses, and reduction plants;
 3. Car washes;
 4. Chemical, biological, and radiological laboratories, including those in educational and research institutions;
 5. Hospitals, clinics, medical buildings, autopsy facilities, morgues, other medical facilities, and mortuaries;
 6. Metal and plastic manufacturing, fabrication, cleaning, plating, and processing facilities;
 7. Manufacturing plants;

8. Plants that refine, compound, or process fertilizer, film, herbicides, natural or synthetic rubber, pesticides, petroleum or petroleum products, pharmaceuticals, radiological materials, or any chemical that could be a contaminant to the public water supply;
9. Commercial facilities that use herbicides, pesticides, fertilizers or any chemical that could be a contaminant to the public water supply;
10. Plants that process, blend or refine animal, vegetable or mineral oils;
11. Commercial laundries and dye works, excluding coin-operated Laundromats;
12. Sewage, storm water, and industrial waste treatment plants and pumping stations;
13. Industrial facilities that recycle water.

(J) If in the judgment of the Water Superintendent, an approved backflow prevention device is necessary for the safety of the public water system, the Water Superintendent will give notice to the water consumer to install such an approved device immediately. The water consumer shall, at its own expense, install such an approved device at a location and in a manner approved by the Water Superintendent, and shall have inspections and tests made of such approved devices as required by the Water Superintendent and in accordance with IDEM Rule 327 IAC 8-10.

2.14 WATER CONSERVATION AND EMERGENCY MEASURES

(A) Upon determining that the public water utility and system is in imminent danger of a shortage of water or is experiencing a shortage of water or water pressure, the Town Council shall declare a water conservation emergency and establish the appropriate conservation measures and the duration of such measures.

(B) Users shall be requested to reduce water consumption by practicing voluntary conservation techniques. Reasonable and meaningful actions to alleviate existing or potential water shortage or pressure problems will be requested.

(C) During this period users shall be prohibited from using water for the uses listed below, subject to reasonable terms, times, and conditions as the Water Utility shall determine:

1. Sprinkling, watering, or irrigating of shrubbery, trees, grass, groundcover, plants, vines, gardens, vegetables, or any other vegetation;
2. Washing of automobiles, trucks, trailers, mobile homes, railroad cars, or any other type of mobile equipment;
3. Cleaning or spraying of sidewalks, driveways, paved areas, or other outdoor surfaces;
4. Washing and cleaning of any business equipment or machinery;
5. Filling swimming pools, wading pools, and ornamental fountains; and/or
6. Knowingly allowing leakage through defective plumbing.

(D) In addition to mandatory conservation measures identified in item C above, upon declaration of an emergency, users shall be limited to the following water use schedule:

1. Residential use shall be limited to 100 gallons per person, per day;
2. Business, commercial, and industrial users shall be limited to 80% of the volume of water used during the corresponding month of the preceding year. Business, commercial, or industrial users that were not in business and operating in the area served by the municipal water system more than one year prior to the declaration of need shall be restricted to 80% of the average monthly volume used during the number of months since such business, commercial, or industrial user was in business and operating in the public water system area.

(E) The Town reserves the right to establish alternative rationing for the following:

1. Healthcare providers;
2. Use of water to maintain adequate health and sanitary standards; and
3. Industrial or agricultural activities declared to be necessary for the public health and well-being.

(F) Notice of voluntary conservation measures shall be made by publication in a local newspaper of general circulation or other means deemed appropriate by the Water Utility. The notice shall be effective upon publication. Notice of mandatory conservation or rationing shall be by first-class United States mail, or by door-to-door distribution to current users, and by electronic and print media. The notice shall be deemed effective at the conclusion of the door-to-door distribution, or at noon of the third day after depositing the same in the United States mail.

2.15 PENALTIES

Any user who violates this Chapter may be punished by a fine of not more than \$2,500. Each day of violation shall constitute a separate offense. In addition to or as an alternative to a fine, water service may be terminated.

2.16 COMPLAINTS

(A) Complaint. A Customer may complain at any time prior to disconnection to the Utility about any bill, a security deposit, a disconnection notice, or any other matter relating to the Utility's service and may request a conference about such matters. The complaints may be made in person, in writing, or by completing a form available from the Utility at its business office. A complaint shall be considered filed upon receipt by the Utility, except mailed complaints shall be considered filed as of the postmark date. In making a complaint or requesting a conference (hereinafter "complaint"), the Customer shall state his/her name, service address and the general nature of his/her complaint. The Utility will continue service to Customer pending disposition of a complaint in accordance with the terms of this Article.

- (B) Investigation of Complaint and Notification of Proposed Disposition. Upon receiving each such complaint, the Utility will investigate the matter, confer with the Customer when requested and provide notification in writing, of its proposed disposition of the matter. Such written notification will advise the Customer that he/she may, within seven days following the date on which such notification is mailed, request a review of the Utility's proposed disposition. If the Customer requests a special Meter reading, the first reading of the Customer's Meter by the Utility during its investigation shall not be subject to the charge for a special Meter reading prescribed in the Utility's Rate Schedules. Subsequent readings, however, if requested by the Customer, will be subject to the charge.
- (C) Service During Review of Complaint. If the Customer is receiving service at the time the complaint is received by the Utility, service will not be disconnected until at least ten days after the date on which the Utility mails the notification of its proposed disposition of the matter to the Customer.
- (D) If the Customer desires review of the Utility's proposed disposition, he/she must submit a written request.
- (E) This rule does not preclude the right to file a complaint with the IURC as permitted by the Commission's Rules and/or by the statute.

APPENDIX K
Design and Construction Standards

TOWN OF LIZTON
HENDRICKS COUNTY, INDIANA
WATER STANDARDS



Prepared by:

*Triad Associates, Inc.
5835 Lawton Loop East Drive
Indianapolis, Indiana 46216
317-377-5230*

**Town of Lizton, Indiana
Water Standards**

FOREWORD

The enclosed Standard Construction Details and Specifications are provided to outline the Town of Lizton's minimum Standards for water construction. All infrastructure projects which are to connect to or become part of the Town's system shall conform to these Standards. Construction drawings and specifications must be approved by the Town and a written permit obtained in accordance with existing ordinances prior to the start of construction.

The Owner/Developer is responsible for obtaining required permits and approvals from all applicable and associated governing agencies.

Construction observation shall be provided by the Town to assure compliance with these Standards. A minimum of 48 hours notice shall be given prior to starting construction. The Contractor is responsible for notifying applicable utilities to request locating services.

These Standards were prepared with the intent of obtaining the highest quality of construction possible and are consistent with accepted industry practices. The Standards may be revised and updated from time to time in order to incorporate new materials and construction methods.

Copies of the Standards may be obtained from the Town Hall which is located at 106 N. Lebanon, Lizton, Indiana 46149, telephone number 317-994-5500 during regular office hours. These Standards were approved and adopted by the Town Council of the Town of Lizton on _____.

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Section 1 - General Requirements

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Section 1: General Requirement

1.01 DEFINITIONS AND TERMS

Whenever in these Standards or in any documents or instruments where the Standards govern, the following terms, abbreviations, or definitions are used, the intent and meaning shall be interpreted as follows:

A. ABBREVIATIONS

ASTM	American Society of Testing and Materials
AASHTO	American Association of State Highway and Transportation Officials
AWWA	American Water Works Association
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ACI	American Concrete Institute
AREA	American Railway Engineers Association
NEMA	National Electrical Manufacturers Association
INDOT	Indiana Department of Transportation
OSHA	Federal Occupational Safety and Health Act
WPCF	Water Pollution Control Federation

B. DEFINITIONS

1. ACCEPTANCE: The formal written acceptance by the Town of Lizton of an entire project which has been completed in all respects in accordance with the approved Plans, Specifications and these Standards including any previously approved modifications.
2. ANNEXATION: The inclusion of additional property into the Corporate Limits by proper legal procedures.
3. BACKFILL: Earth and/or other material used to replace material removed from trenches during construction which is above the pipe bedding.
4. BEDDING: That portion of the trench backfill which encases the sewer pipe to a minimum depth above and below the bell/barrel of the pipe, as provided in the BEDDING section of these Standards, for the purpose of properly supporting the pipe.
5. BUILDING SEWER (LATERAL): The conduit for transporting waste discharged from the building to the public sewer commencing three (3) feet outside the building walls and ending at and exclusive of the wye or tee fitting at the connection to the public sewer.
6. CONTRACTOR: Any Contractor who meets the Town's requirements to perform the work of installing sewers under the Town's jurisdiction.
7. COUNTY: The County of Hendricks, State of Indiana.

Section 1: General Requirement

8. EASEMENT: Easements are areas along the line of all public water mains which are outside of dedicated water or road easements or rights-of-way, and are recorded and dedicated to the Town granting rights along the line of the water main. Easements shall be exclusively for water mains and no other utilities shall be constructed or encroach upon the easement except with the expressed written approval of the Town.
9. ENGINEER: The Engineer for the Owner or the Town of Lizton.
10. GOVERNING AGENCY/BODIES: Governing Agency having jurisdiction due to location or type of work being performed. Includes at a minimum the Town of Lizton, Hendricks County, and applicable State Agencies such as the Indiana Department of Transportation (INDOT), IDEM Etc.
11. INSPECTOR: A representative of the Town of Lizton assigned to make detailed inspection of any or all portions of the work and materials. The inspector has full authority to reject materials and/or any portion of the work not supplied and installed in accordance with these Standards and to stop work if the work is not proceeding in accordance with these Standards.
12. OTHER SPECIFICATIONS AND MATERIALS: Wherever in these Standards other specifications or regulations are mentioned, it shall be understood that the materials and methods mentioned therewith shall conform to all requirements of the latest revision of the specifications so mentioned.
13. OWNER: Any individual, partnership, firm, corporation or other entity who, as property owner, is initiating the work.
14. PERMITS: Clearance to perform specific work under specific conditions at specific locations. The Owner or his duly authorized representative shall furnish to the Town all necessary plans and documents required by the Town to make application for permits.
15. PLANS: Construction plans, including system maps, water plans, cross sections, utility plans, detailed drawings, etc., or reproductions thereof, approved or to be approved by the Town and the Ingalls Area Plan Commission, which show location, character, dimensions and details of the work to be done.
16. RECORD DRAWING (AS-BUILTS): Plans certified, signed and dated by a professional engineer registered in the State of Indiana, indicating that the Plans have been reviewed and revised, if necessary, to accurately show all as-built construction and installation details including, but not limited to, key elevations, locations and distances. Computer files as specified in Section 1.02 are required.
17. RIGHT-OF-WAY: All land or interest therein which by deed, conveyance, agreement, easement, dedication or process of law is reserved for or dedicated to the use of the general public, within which the Town shall have the right to install and maintain public utilities.

Section 1: General Requirement

18. SEWER: A pipe or conduit for carrying wastewater (sanitary sewer), storm water (storm sewer) or a combination of both (combined sewer).
19. STANDARD DRAWINGS: The drawings of structures, sanitary sewer lines or devices commonly used and referred to on the plans and in these Standards.
20. STANDARDS: The Standards for Design and Construction within the Lizton Area as contained herein and all subsequent additions, deletions or revisions.
21. TEN STATE STANDARDS: Recommended Standards for Sewage Works, latest edition, developed by the Committee of the Great Lakes - Upper Mississippi River board of State Sanitary Engineers.
22. TOWN: The Town of Lizton, the Town Council, or any dully authorized official acting on its behalf.
23. UNIFORM PLUMBING CODE: The Uniform Plumbing code adopted by the International Association of Plumbing and Mechanical Officials, current edition.
24. WORK: All the work to be done under Town's permit, in accordance with the approved Plans, Specifications, these Standards and permit conditions.

1.02 RECORD DRAWINGS

The project Designer shall furnish to the Town two sets of as-built drawings and one set of computer files on compact disc or flash drive in AutoCAD “.DXF” and “.DWG” format for all projects dedicated to the Town and for all multi-family, industrial and commercial sites. All sheets shall have “Record Drawing” boldly printed on them with the date, stamp, and signature of the Professional Design Engineer, who must be registered in the State of Indiana. Drawings and computer files shall clearly differentiate between the original design and changes made to the design during the construction process. Each disk/drive shall be labeled with project name, property name, and date. Any auxiliary design program data files shall also be included and required subdirectory file structure and path relationships shall be maintained. All files shall be in readable format but shall be write protected. If auxiliary lettering fonts (fonts not supplied with standard AutoCAD Program) are used, then all necessary data files to support, import and utilize the applied fonts shall be included on the disk(s). An ASCII text file README.TXT shall be included in the files supplied. This file shall describe all files on the disk(s). This shall include creating program names, versions, and all other necessary details to allow the Town to fully understand and utilize the data files.

Section 1: General Requirement

At a minimum the following information shall be provided on the plans:

1. Building pad elevations if applicable.
2. Structure elevations, pipe sizes and types fitting description, blocking details, hydrants valves.
3. Horizontal alignment of pipes, valves, hydrants and structures to a minimum accuracy of +/- 1 foot.

End of Section 1
General Requirements

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Section 2: Excavation, Trench Safety, Dust Control

2.01 GENERAL

This section provides for all surface removal, excavation and disposal of surplus material within the public right-of-way, trench safety system and dust control. Trench safety is a key and vital issue and Owners should take the necessary steps to ensure that the Contractor they use to construct infra-structure has included trench safety construction techniques and safety systems in the cost proposal.

All trenches or excavations shall be backfilled to the original surface of the ground or such other grades as shown on the design plans or as directed. In general, the backfilling shall be carried along as speedily as possible and as soon as the concrete, mortar, and/or other masonry work and pipe joints have sufficient strength to resist the imposed load without damage.

2.02 SURFACE REMOVAL (Within Public Right-of-Way)

For construction of utilities as indicated on the approved Plans within the Public Right-of-Way, the Contractor shall remove the surface materials only to such widths as will permit a trench to be safely excavated, affording sufficient room for proper efficiency and proper construction. Where sidewalks, driveways, pavements, curb and/or gutters are encountered, care shall be taken to protect such against fracture or disturbance beyond reasonable working limits. All pavements shall be cut with an abrasive saw and concrete streets, driveways, walks, alleys, etc. cut to the nearest joint, and as required by the design plans and the Governing Bodies. Any areas damaged during construction shall be re-sawed to provide a clean surface for rehabilitation.

Excavated topsoil shall be stored in a designated location as approved by the Governing Bodies. The topsoil shall be protected in such a manner as to ensure the preservation of its quality. The topsoil shall be inspected by the Town of Lizton and/or Hendricks County personnel before being backfilled in the work.

2.03 TRENCH SAFETY SYSTEM

The Contractor and the Owner are responsible for ensuring that safe working conditions exist and safety procedures are being followed at the work site. The Contractor shall also be responsible for notifying the Indiana Occupational Safety and Health Administration (IOSHA), Indiana Department of Labor and all other applicable governmental agency requirements.

The Town and/or County's inspector is NOT responsible for policing the Contractor's safety program. If, in the opinion of the observer, an unsafe condition is noted, he will notify the Contractor of this condition and report it to the Owner. If the condition continues to exist the observer shall notify the Owner, document the unsafe condition in writing and/or through a photograph, and leave the job site. The Town and/or County Officials may contact IOSHA and request that they dispatch an inspector immediately.

Section 2: Excavation, Trench Safety, Dust Control

Regarding Trench Safety Systems, the Contractor shall design, install and maintain a "Trench Safety Program" in strict compliance with OSHA (Occupational Safety and Health Administration) Part 1926 of the Code of Federal Regulations and all other applicable federal, state, and local regulations. The contractor shall be responsible to continuously upgrade the Trench Safety Program with changing governmental regulations.

2.04 DUST CONTROL

The Contractor shall be responsible for maintaining the site and adjoining paved surfaces in a dust free condition. Fugitive dust control is the sole responsibility of the Contractor.

2.05 MAGNETIC LOCATOR WIRE

All PVC or non-metallic utilities shall be installed with a #12 locator wire installed on top of the pipe.

End of Section 2
Excavation, Trench Safety, Dust Control

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SECTION 3: Surface Replacement and Site Restoration

3.01 GENERAL

This section pertains to the restoration of areas within the public Right-of-Way and/or acquired easements where infra-structure is being constructed. Surface restoration within the site being developed is per the direction of the Owner.

When the construction is complete, remove all surplus material and rubbish from the site or work. That portion of the surface disturbed by construction shall be rebuilt to as good condition as it was before the commencement of the work. The project site shall be promptly and regularly maintained. Contractor shall be responsible for repairs of unsatisfactory trench backfilling or other unsatisfactory contracted services.

3.02 PAVEMENT, CURB AND GUTTER REPLACEMENTS

In all streets, alleys or other areas that are to be paved, all backfilling shall be well compacted by hand held mechanical compaction machines per the requirements of the Indiana Department of Highways and all other governing bodies. After the trench or excavation has been backfilled, the subgrade for the new paving, curb and/or curb and gutter shall be further compacted by rolling the backfill at subgrade elevation. After examination of the backfill and subgrade compaction by the reviewing agencies, the pavement, curb and/or curb and gutter shall be replaced. Pavement and Drive Patch details are shown on Details 8F through 8J.

All pavements, curbs and/or gutters shall be replaced with the same materials as that removed in accordance with the latest revisions of Standards of the Indiana Department of Highways, Hendricks County, or these standards whichever is applicable.

3.03 TRAFFIC CONTROL

The Contractor shall maintain vehicular and pedestrian traffic during all paving operations, as required per the permit.

The Contractor shall provide flagmen, barricades and warning signs for the safe and expedient movement of traffic through construction zones within the right-of-way. This shall be in accordance with the principles and standards in the Indiana Department of Transportation, Standard Specifications, latest revision.

3.04 LAWN AND GRASS AREA REPLACEMENT

All lawn and grass areas disturbed or damaged during construction shall be restored to original or better condition. Backfills, fills and embankments shall be brought to a subgrade level six (6) inches below finished grade. When subgrades have settled, topsoil shall be placed to a finished depth of at least six (6) inches; fine raked, and prepared for seeding.

SECTION 3: Surface Replacement and Site Restoration

If the backfill, fill or embankment material is sand, an eight (8) inch layer of clay furnished by the Contractor at his expense shall be spread over the subgrade and thoroughly mixed into the sand subgrade. The clay shall be mixed into the sand subgrade, then leveled and smoothed. Topsoil shall be placed and spread to a finished depth of at least two (2) inches, and fine rake.

Commercial fertilizer 6-12-12 or equal shall be uniformly spread over the topsoil by a mechanical spreader and mixed into the soil for a depth of two (2) inches on areas to be seeded. This shall be done at least forty-eight (48) hours before the sowing of any seed at the rate of thirty-five (35) pounds per thousand square feet. The area shall then be lightly raked or harrowed until the surface of the finished grade is smooth, loose and pulverized.

Then, the grass seed shall be sown by a mechanical seeder, and lightly raked into the surface or sown with a standard agricultural drill. The seeded areas shall be thoroughly watered with a fine spray in such a manner as not to wash out the seed. The Contractor shall use care in raking in order to avoid disturbance of the finished grade and seed distribution.

Seeding shall be done only within the seasons extending from August 15 to October 15, and from April 1 to June 1, unless otherwise permitted by the Governing Agencies.

Contractor must submit a seed mixture certificate to the Governing Agencies before using. Grass seed shall be sown at the rate of not less than three (3) pounds per thousand square feet and shall consist of the following mixture:

- 35 parts Kentucky Bluegrass
- 30 parts Perennial Rye
- 30 parts Kentucky 31 Fescue
- 5 parts inert matter

Hydro seeding shall be done in accordance with the Indiana Department of Transportation Specifications, latest revision.

3.05 MULCHING

Adequate mulching material following seeding and fertilizing shall be applied, followed by cultipacking.

Mulch shall consist of:

1. Dry straw or hay of good quality and at the rate of two and one-half (2-1/2) tons per acre; or
2. Wood cellulose or cane fiber mulch at a rate of one thousand (1,000) pounds per acre; or

3. A combination of good quality dry straw or hay free of seeds of competing plants at a rate of two and one-half (2-1/2) tons per acre and wood cellulose or cane fiber mulch at a rate of five hundred (500) pounds per acre; or
4. Manufactured mulch materials such as soil retention blankets, erosion control netting, or others that may be required on special areas of high water concentration or unstable soils. When these materials are used, follow the manufacturer's recommendation for installation. The seeded area shall be watered, maintained and patched as directed by the Governing Agency until the Contractor's work is completed and accepted.

3.06 STAND OF GRASS

The Contractor shall be required to establish a satisfactory stand of grass to be full coverage without bare spots. This is not required for areas subject to agricultural activities.

Within one (1) year after work completion, the Contractor shall be required to correct any defective work, such as bare spots in grass coverage, erosion, gullies, etc. in a timely manner upon notification..

3.07 SODDING

The areas to be sodded shall be as shown on the plans and as required by the Governing Agencies.

The use of sod shall be in accordance with the Indiana Department of Highway Specifications, latest revision. At a minimum, sod shall be fibrous, well rooted bluegrass, or other approved sod, with the grass cut to a height of not more than three (3) inches. Edges of sod shall be cleanly cut, either by hand or machine, to a uniform thickness of not less than one and one-half (1-1/2) inches, to a uniform width of not less than sixteen (16) inches, and in strips of not less than three (3) feet in length.

Sod shall be free from all primary noxious weeds as defined by the Indiana State Seed Law.

Remediation of soils intended for agricultural use shall include the application of necessary macro and micro nutrients, including lime and organic material to return the soil to near pre-construction condition.

End of Section 3
Surface Replacement and Site Restoration

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Section 4: Inspection, Testing and Acceptance

4.01 GENERAL

This section describes the minimum requirements and general procedures for the inspection and testing of domestic water systems to be dedicated to the Town of Lizton.

Water systems shall not be accepted nor will connection permits be issued until all requirements for inspection and testing, including the filing of affidavits and any other paperwork are completed. The Contractor is responsible for notifying applicable utilities prior to construction to request locating services and verify utility locations.

Any section of infra-structure not passing the tests prescribed herein shall be repaired to the satisfaction and approval of the Town, and then retested and re-inspected at the Owner's expense.

4.02 INSPECTION COST AND FEES

Inspection of the construction shall occur throughout installation of the system and prior to the backfilling of the utilities.

A. General

Prior to the issuance of a Construction Permit and the commencement of construction, the Owner shall make arrangements with the Town of Lizton, and Hendricks County, if applicable, for construction inspection services to be provided.

B. Estimated Cost

If inspector services are required by the Town, a letter shall be sent to the Owner stating the estimated amount of payment for inspection services to be rendered by representatives of the Town. The amount provided in the letter shall be seventy-five (75) percent of the total estimated cost of the inspection services based on an estimated project completion time and approved construction plans. The Owner shall be responsible for fees associated with Hendricks County independently. Where a pumping station is involved, additional time for the inspection during construction and final checkout of the station shall be added.

The inspection cost is a pre-construction estimate only. The actual observation time will vary from project to project and may exceed or be less than this estimate based upon actual project duration. Observation time at the site is verified by the Contractor and/or a representative of the Owner. Deviations from approved construction documents or Owner established schedules that create the necessity of additional inspection, shall be at the Owner's expense.

Seventy five (75) percent of the cost shall be remitted prior to issuance of a construction permit. The balance of the cost for observation services, based on total actual observation hours, shall be paid prior to the Town's acceptance of the system.

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C. Inspection Scheduling

Contractor and/or Owner shall provide notice to the Town of the planned commencement of construction at least two (2) weeks prior to such commencement.

Once the construction starts, the Contractor shall be responsible for informing and/or notifying the Inspector assigned of the following:

- Daily work schedule including any changes in schedule,
- Prior notification if work is to be performed on weekends and/or holidays,
- Date tests are to be performed, and
- Date as-built verification is to be performed.

The Town, upon written request of the Contractor and/or Owner, will schedule the Final Inspection.

All testing required shall be performed under the observation of the Town's and/or the County's Inspector(s). It shall be the Contractor's responsibility to schedule the testing with the inspectionn(s). Test results obtained in the absence of the presence of the Town's representative will not be accepted.

D: Inspection of Service Connections

A Connection Permit shall be obtained for any repair, modification or connection of a building sewer or water line to a public utility. Connection permits shall not be issued for connections to sanitary sewers or water distribution systems not yet dedicated to and accepted by the Town.

Following the installation/repair/modification and prior to the backfilling of the Service line, the Contractor/Plumber shall notify the Town that the service line is ready to be inspected. The Town shall then have twenty four (24) hours to make the inspection after which the Contractor/Plumber may backfill the trench. Inspections requested on Fridays or on a day proceeding a holiday may not be completed until the next normal business day.

If notification is not provided and the building sewer is backfilled prior to inspection, at the Town's request the Contractor/Plumber shall be required to re-excavate the trench so that an inspection can be made.

Protection of open trenches and compliance with applicable OSHA Standards is the responsibility of the Contractor/Plumber.

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E. Final Grade

Manholes, water meters, fire hydrants, etc. shall be properly set at final grade. Costs associated with raising or lowering due to grade changes will be charged to the Contractor.

4.03 DOMESTIC WATERMAIN DISINFECTION AND TESTING

All domestic water lines will be pressure tested with the Town's Inspector present. The Owner/Contractor shall notify the Town's Water Department at least 72 hours in advance of testing. The Contractor shall provide all equipment necessary for the testing.

Each section of pipe shall pass a pressure and leakage test in accordance with the most recent requirements of AWWA Standard C600-93, Section 4.1 - Pressure and Leakage Test.

Thrust blocks, if used, shall have been in place for not less than 10 days prior to testing lines.

A. Test Restrictions

Test pressure shall not be less than 1.5 times the working pressure at the lowest point along the test section, or 100 psi, whichever is greater, but shall not exceed the pipe, fitting or thrust-restraint design pressures at any point. Test pressure shall not vary by more than ± 5 psi for the duration of the test.

Valves shall not be operated in either direction at differential pressure exceeding the rated valve working pressure. Use of a test pressure greater than the rated valve pressure can result in trapped test pressure between the gates of a double-disc gate valve. For tests at these pressures, the test setup should include provisions, independent of the valve, to reduce the line pressure to the rated valve pressure on completion of the test. The valve can then be opened enough to equalize the trapped pressure with the line pressure, or opened fully if desired.

Test pressure shall not exceed the rated pressure of the valves when the pressure boundary of the test section included closed, resilient-seated gate valves, or butterfly valves. No test sections shall exceed 5 miles in length without prior approval from the Engineer.

B. Test Procedures

All newly laid pipe or any newly valved section shall be subjected to a hydrostatic pressure of at least 1.5 times the working pressure at the point of testing. The specified test pressure, which is based on the elevation of the lowest point of the line or section being tested as corrected to the elevation of the test gauge, shall be applied by means of a

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pump connection to the pipe in a manner satisfactory to the Town. Allow the system to stabilize at the test pressure before conducting the leakage test.

Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at high points, the Contractor shall install corporation cocks at such points so that air can be expelled as the line is slowly filled with water. After the air has been expelled, the corporation cocks shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and plugged, or left in place if requested by the Town.

All exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damaged components during or after the pressure test shall be repaired at the contractors expense. The test shall be repeated until the results are satisfactory to the Town.

C. Allowable Leakage

Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe or any valved section to maintain pressure within 5 psi of the specified test pressure after the pipe has been filled with water and the air has been expelled. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$\frac{L = SD \sqrt{P}}{133,200}$$

Where:

L = Allowable leakage, in gallons per hour

S = Length of pipe tested, in feet

D = Nominal diameter of the pipe, in inches

P = Average test pressure during leakage test, in pounds per square inch (gauge)

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**ALLOWABLE LEAKAGE PER 1000 FT. OF PIPELINE*
 Nominal Pipe Diameter. In.**

Avg. Test Pressure psi	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48	54
450	0.48	0.64	0.95	1.27	1.50	1.91	2.23	2.56	2.87	3.18	3.82	4.78	5.73	6.69	7.64	8.60
400	0.45	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.60	4.60	5.41	6.31	7.21	8.11
350	0.42	0.56	0.84	1.12	1.40	1.69	1.97	2.25	2.53	2.81	3.37	4.21	5.06	5.90	6.74	7.58
300	0.30	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.50	3.12	3.90	4.68	5.46	6.24	7.02
275	0.37	0.50	0.75	1.00	1.24	1.40	1.74	1.99	2.24	2.40	2.99	3.73	4.48	5.23	5.98	6.72
250	0.36	0.47	0.71	0.95	1.19	1.42	1.56	1.90	2.14	2.37	2.85	3.56	4.27	4.99	5.70	6.41
225	0.34	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.70	3.38	4.05	4.73	5.41	6.03
200	0.32	0.43	0.64	0.85	1.06	1.28	1.48	1.70	1.91	2.12	2.55	3.19	3.82	4.48	5.09	5.73
175	0.30	0.40	0.59	0.80	0.99	1.19	1.39	1.50	1.79	1.98	2.38	2.98	3.68	4.17	4.77	5.36
150	0.28	0.37	0.55	0.74	0.92	1.10	1.29	1.47	1.56	1.84	2.21	2.76	3.31	3.86	4.41	4.97
125	0.25	0.34	0.50	0.87	0.84	1.01	1.18	1.34	1.51	1.68	2.01	2.52	3.02	3.53	4.03	4.53
100	0.23	0.30	0.45	0.50	0.75	0.90	1.05	1.20	1.35	1.60	1.80	2.25	2.70	3.15	3.60	4.05

*If the pipeline under test contains sections of various diameters, the allowable leakage will be the sum of the computed leakage for each size

When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gph/in. of nominal valve size shall be allowed.

When hydrants are in test section, the test shall be made against closed hydrant valves.

D. Acceptance of Testing

If test results disclose leakage greater than allowable limits, the Contractor shall, at his own expense, locate and make approved repairs as necessary until the leakage is within the specified allowance. Additional tests performed after the repairs will be at the Contractors expense. All visible leaks are to be repaired, regardless of the amount of leakage.

E. Disinfection of System

After construction is complete, the newly installed system shall be flushed to remove dirt and foreign material. The lines shall then be disinfected in accordance with procedures outlined by the American Water Works Association Standard AWWA C651.

F. Chlorinating Requirements

Water shall be supplied to the new system at a constant, measured rate. In the absence of a meter, the rate may be approximated by methods such as placing a Pitot gauge in the discharge and measuring the time to fill a container of known volume.

At a point not more than 10 ft. downstream from the beginning of the new main, water entering the new main shall receive a dose of chlorine fed at a constant rate such that the water will have not less than 50 mg/L free chlorine.

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To assure that the correct concentration is provided, measure units shall be taken at regular intervals in accordance with the procedures described in the current edition of Standard Methods for the Examination of Water or Wastewater, AWWA Manual M12, or by using an appropriate chlorine test.

The following table lists the amount of chlorine required for each 100 feet for various diameters of pipe. Solutions of 1-percent chlorine may be prepared with sodium hypochlorite or calcium hypochlorite. A solution using calcium hypochlorite requires 1 lb. per 8 gallons of water.

CHLORINE REQUIRED TO PRODUCE 50 mg/l CONCENTRATION IN 100 FT. OF PIPE BY DIAMETER

Pipe Diameter in.	100-Percent Chlorine lb.	1-Percent Chlorine Solution gal.
4	0.026	0.32
6	0.06	0.72
8	0.108	1.30
10	0.17	2.04
12	0.24	2.88
16	0.434	5.2

While chlorine is being applied, valves shall be positioned so that the strong chlorine solution will not flow into water mains in active service. Chlorine application shall not cease until the entire main is filled with heavily chlorinated water. The chlorinated water shall be retained in the main for at least 24 hours. During this time, all valves and hydrants in the section being treated shall be operated to ensure disinfection of all appurtenances. At the end of this period, the treated water in all portions of the main shall have a residual of not than 10 mg/L free chlorine.

G. Flushing

After the applicable testing period, heavily chlorinated water shall be removed in order to prevent damage to the pipe. The chlorinated water shall be flushed from the main until chlorine measurements show that the concentration in the water leaving the main is greater than 0.5 mg/L but less than 2.0 mg/L.

Chlorinated water shall be properly discharge to an approved sanitary sewer. If no sanitary sewer is available a reducing agent shall be applied to the water to be waste in order to thoroughly neutralize residual. The following table shows the amount of neutralizing chemicals required. Where necessary, federal, state and local regulatory agencies should be contacted to determine if there are special provisions for the disposal of heavily chlorinated water.

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POUNDS OF CHEMICALS REQUIRED TO NEUTRALIZE VARIOUS RESIDUAL CHLORINE CONCENTRATIONS IN 100,000 GALLONS OF WATER*

Residual Chlorine Concentration mg/L ($\text{Na}_2\text{S}_2\text{O}_3 \cdot 5\text{H}_2\text{O}$)	Sulfur Dioxide (SO_2)	Sodium Bisulfate (NaHSO_3)	Sodium Sulfite (Na_2SO_3)	Sodium Thiosulfate
1	0.8	1.2	1.4	1.2
2	1.7	2.5	2.9	2.4
10	8.3	12.5	14.6	12.0
50	41.7	62.6	73.3	60.0

*Except for residual chlorine concentration, all amounts are in pounds.

H. Bacteriological Test

Satisfactory bacteriological test results approved by the Indiana State Board of Health shall be produced for two (2) successive sets of samples, collected at twenty-four (24) hour intervals, before the new mains are accepted for use.

Contractor shall notify the Town when the system and disinfection is complete and the water is ready for bacteriological testing. The Town representative will then collect the sample with the Contractor present. The Town will submit the sample to an independent certified laboratory for bacteriological analysis at the Contractor's expense.

Samples shall be collected from the end of the line, and tested for bacteriological quality in accordance with Standard Methods for the Examination of Water and Wastewater. At least one set of samples shall be collected from the new main and one from each branch. In case of long mains, samples shall be collected along the length of the line, at reasonable intervals, as well as at its end. Samples for bacteriological analysis shall be collected in sterile bottles treated with sodium thiosulfate. No hose or fire hydrant shall be used in the collection of samples.

I. Re-testing and Disinfection

If test results are unsatisfactory, Contractor shall reflush the lines and repeat the disinfection. Testing shall be repeated as noted above until the testing results are satisfactory and the mains are approved for service

End of Section 4
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Section 5: Domestic Water Distribution System

5.01 GENERAL

All Domestic Water mains installed within existing or proposed right-of-ways shall conform to all applicable American Waterworks Association (AWWA) Standards. Any associated requirements of the Indiana Department of Environmental Management (IDEM) will be the responsibility of the developer. Acquisition of all necessary permits will also be the developer's responsibility. No construction will be allowed until the developer delivers copies of all permits to the Town of Lizton for review and approval.

5.02 GENERAL DESIGN STANDARDS

Design of all domestic water systems to be owned and operated by the Town of Lizton will be in accordance with all applicable standards. The Town, along with its Engineer, will dictate the size of the mains as necessary to provide adequate fire protection and to allow for future growth.

Water systems shall be designed and installed with fire hydrants at all intersections and at intervals no greater than 400 feet. Closer hydrant spacing may be required by the Town depending upon the nature of the development.

Systems shall be designed and installed with adequate valves to isolate areas of the system for routine maintenance and repair. Isolation valves will be required at all intersections and at intervals no greater than 600 feet. The Town reserves the right to require smaller valve intervals if it believes that the nature of the development necessitates such.

All domestic watermains shall be design and installed at depths no less than five feet.

5.03 VALVES

Valves shall comply with AWWA C-509 and shall be cast iron body with mechanical joint ends. The valves shall be Resilient Wedge Valves F-6100 as manufactured by Clow Corporation, or an approved equal. The valves shall be designed and constructed to withstand a working pressure of 200 psi shall be hydrostatic tested, without leakage or distortion, under a water pressure of not less than 400 psi.

Plug valves shall be series 100 as manufactured by Dezurik, Homestead Ball centric or an approved equal. Eccentric plug valves shall be non-lubricated with resilient sealing plug surface, or epoxy coated surface having screwed, flanged or mechanical joint ends.

Valve boxes shall be Clow F-2545 screw type two piece or F-2450 three piece cast iron with removable cast iron lid or approved equal. Valve boxes shall be provided for all valves located in the distribution system and in other locations where required or necessary for the operation of the valves.

Valves shall be installed in accordance with Detail 7B included in these Standards.

Section 5: Domestic Water Distribution System

5.04 HYDRANTS

All hydrants shall be 6", three-way Mueller. Hydrants shall conform to AWWA C-502. Threads shall be the National Standard Thread or similar to that existing in the system and shall open in a counter clockwise rotation. See Detail 5C.

Hydrants shall be design so that the valve will remain closed if the upper portion is removed or broken off. The operating nut shall be pentagonal and shall turn counter-clockwise to open. The hose caps shall be secured to the hydrant with a chain. All hydrants shall have drain valves and shall be properly painted before shipment and after installation. Contractor shall provide an operating wrench for every 10 hydrants supplied. The hydrant branch main and watch valve shall be restrained against internal thrust with an approved restraint method.

5.05 MATERIALS

A. Ductile Iron

1. Pipe: All pipe shall be within the following specifications unless approved otherwise by the Town of Lizton. Each length of pipe and fittings shall be plainly stamped or indelibly marked or color coded as to the weight, class, and type thereof, and shall include the manufacturer's trademark or name and the National Sanitation Seal of Approval. Prior to ordering pipe materials, approval of the manufacturer must be obtained from the Town of Lizton.
2. Pipe: Ductile Iron Pipe shall be centrifugal cast and shall conform to AWWA C-151 (ANSI A-21.51). Pipe shall be Pressure Class 250.
3. Lining: The inside surfaces of all pipe and fittings shall be standard cement mortar lined and seal coated with an approved bituminous seal coat in accordance with AWWA C-104 (ANSI A21.4). Coat the exterior surfaces with an approved bituminous coating meeting the requirements of AWWA C 151 (ANSI-21.51).
4. Fittings: Fitting shall be cast iron or ductile iron and standardized for the type of pipe and joint specified. Fittings shall comply with AWWA C-110 (ANSI A21.10).
5. Joints: Mechanical joints or push-on slip joints shall be provided. Mechanical joints and accessories shall conform to AWWA Standard C-111, (ANSI A-21.11). The bolts and nuts shall be corrosion resistant high strength alloy steel. The O-ring gaskets sealing the slip joint shall be made of rubber of special composition having a texture to assure a watertight and permanent seal and shall be the product of a manufacturer having at least five (5) years experience in the manufacturer of rubber gaskets for pipe joints. The gaskets shall be a continuous ring of flexible joint rubber of a composition and texture which is resistant to common ingredients of sewage, industrial waste and groundwater, and which will endure permanently under the conditions likely to be imposed by this service. The gasket shall conform to the requirements of AWWA C-111 (ANSI A-2111).

Section 5: Domestic Water Distribution System

Where indicated on plans for submerged crossings of rivers, lakes or streams, pipe shall be furnished with boltless ball and socket type joints with a pipe pressure class of 350 psi.

Where indicated on plans, restrained joints shall be provided. Restrained joints shall be designed in accordance with AWWA C-111 and shall permit horizontal and/or vertical deflection after assembly, yet adequately restrain the joint at the full design pressure. Restrained joints shall be Lok-Fast, Lok-Tyte, or equal. Pipe connecting to restrained joint fittings shall also have restrained joints.

B. Polyvinyl Chloride Pipe (PVC) SDR Rated

1. Pipe: Polyvinyl chloride pipe SDR rated shall meet the requirements of ASTM D2241. The material used shall conform to ASTM D 1784, Class 12454-B. Pipe shall be SDR-21 (pressure Class 200) unless otherwise approved.
2. Joints: Pipe joints shall be bell end or coupling push-on type. Joints shall meet the requirements of ASTM D 3139 using Flexible Elastomeric Seals. Solvent-cement joints are not permitted. The joint shall be designed to provide for the Thermal expansion and Contractor experienced with a temperature change of 75 deg F in each joint of pipe. Details shall be in accordance with the manufacturer's recommendations. The lubricant shall have no deteriorating effects on the gasket or the pipe. Gaskets shall meet the requirements of ANSI A21.11.

Fittings: Fittings shall be standard radius ductile iron meeting the requirements of AWWA C-110 (ANSI A-21.10). Design and manufacture fittings for a pressure rating of 200 psig.

5.06 SERVICE LINES

Residential service lines shall be constructed using one (1) inch or larger CTS polyethylene flexible pipe from the tap to the meter pit with Mueller 110 compression fittings or an approved equal. Larger service lines may be necessary for larger water consumers.

5.07 METER PITS

The minimum diameter shall be 20" I.D. for single water settings. Lid shall be equipped with a Standard waterworks locking Pentagon nut indicating water service. Pits shall be set at the property line with a bottom depth of 36" and the lid at finish grade to allow easy access for Utility personnel. No. 8 stone bedding or concrete brick shall be utilized below pits to minimize settling.

Pre-manufactured dual meter pits are acceptable where two adjacent properties exist.

Section 5: Domestic Water Distribution System

Single, PSBH-244-18H-48-Q-NA 18" Dia x 48" Bury, Heavy-Wall Pit-str; Ang Ball Valve x Chk Valve for 5/8x3/4 Meter; PVC Brace Pipe; Blk Plastic Ties; C14-33-Q Cplgs Not Assembled (loose).

Double, PDSBH-244-21H-48-Q-NA 21" Dia x 48" Bury, Heavy-Wall (SDR 51) Dual Pit-str; Ang Ball Valve x Chk Valve for 2 - 5/8x3/4 Meters; Parallel PVC Brace Pipes-Perpendicular to Meters; Blk Plastic Ties; C14-44-Q/C14-33-Q Cplgs Not Assembled.

1" single, PSBH-444-21H-48-Q-NA 21" Dia x 48" Bury, Heavy-Wall (SDR 51) Pit-str; Ang Ball Valve x Chk Valve for 1" Meter; PVC Brace Pipe; Blk Plastic Ties; C14-44-Q Cplgs Not Assembled.

Meters shall be Invensys 5/8" x 3/4" SRTRPL

5.08 BACKFLOW PREVENTOR

A backflow prevention device is required to be installed where an auxiliary water supply is connected to the household plumbing, where any water line from an auxiliary water supply enters or passes within one (1) foot of any part of the household, all irrigation systems, or any service connections designated to have a potential cross connection hazard. See Detail 5E. The backflow prevention device shall be a University of Southern California (USC) or other IDEM or Town approved device and shall be installed in a location approved by the Town. The device must be periodically tested by a tester certified in Indiana at intervals determined by IDEM and paid for by the property owner.

5.09 SPECIAL CROSSINGS

Steel Casing pipe shall be used where crossing State Highways, railroads, or where shown elsewhere on plans. The casing pipe shall be welded steel pipe, new and unused material in accordance with current ASTM Specifications A-139 Grade B for "Electric Fusion of Welded Steel Pipe" with a minimum yield of 35,000 psi. The diameter of the casing shall be 24" unless otherwise noted with a wall thickness of 0.407. Installation shall be in compliance with the American Water Works Association Standard C600-93, Section 6.

5.10 INSTALLATION

Pipe shall be laid in accordance with applicable requirements of ANSI/AWWA C600, these standards and the manufacturer's recommendations. If any conflicts exist, the most stringent shall apply.

The Contractor shall provide proper implements, tools, and facilities for the safe and expeditious performance of the work.

Section 5: Domestic Water Distribution System

Every pipe, fitting, and valve shall be cleaned of all debris, dirt, and other foreign material before being laid and shall be kept clean until accepted in the completed work.

The Contractor shall lay and maintain pipe to the lines and grades shown on the approved plans unless otherwise allowed by the Town. Install fittings, valves, and hydrants in the locations shown on the approved drawings.

Where the piping is to be constructed parallel to and close to existing buried utilities, the exact location of which is unknown, adjust the alignment of the piping to least interfere with these utilities.

Piping shall not be laid in water or when the trench or weather conditions are unsuitable for proper installation.

Pipe, fittings, and valves shall be lowered into the trench by hand, by means of hoists or ropes, or by other suitable tools or equipment which will not damage materials, coatings, or linings. Do not drop or dump pipe, fittings, or valves into the trench. Pipe laying shall begin at the lower end. As each length of pipe is placed in the trench, the joint shall be assembled and the pipe brought to correct line and grade. Bell holes shall be excavated in advance of pipe laying so the entire barrel will bear uniformly.

A. Minimum Separation

Potable water piping shall be laid at least ten feet horizontally from any existing sanitary sewer or sewage force main. The distance shall be measured from edge of pipe to edge of pipe. Potable water piping crossing sanitary sewers or sewage force mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the potable water piping and the outside of the sewer force main. The 18-inch separation shall apply whether the potable water piping is over or under the sewer or force main. Lay potable water piping at crossings of sewers and force mains so a full length of pipe is centered on the sewer pass through or come in contact with any part of a sanitary sewer manhole.

B. Depth of Cover

Piping shall be installed so that not less than 5'-0" of cover is provided over pipe, unless approved otherwise in writing by the Town of Lizton. Cover shall be measured as the vertical distance from the top of the pipe to the finish grade elevation.

C. Thrust Restraint

Thrust restraint shall be provided at horizontal and vertical deflection fittings and at tees, caps, reducers, bends, plugs, tapping sleeves, and tapping saddles. General thrust blocking details are given in Detail 5D of these specifications.

Section 5: Domestic Water Distribution System

D. Open Excavation

Open excavation shall be satisfactorily protected at all times. At the end of each day's work, the open ends of all pipes shall be protected against the entrance of animals, children, earth, or debris by bulkheads or stoppers. The bulkheads or stoppers shall be perforated to allow passage of water into the installed pipe line to prevent flotation of the pipe line. Any earth or other material that may find entrance into the water main through any such open end must be removed at the Contractor's expense.

E. Magnetic Locator Wire

A #12 magnetic locator wire shall be installed with all PVC or non-metallic utilities and service lines. Wire will be installed with the pipe and made electrically sound and water tight.

F. Sample Point

The Developer will be required to provide sample points to be installed within the system of the new development in locations and as approved by the Town. Sampling Stations shall be Eclipse No. 88 as manufactured by Kupferle Foundry.

5.11 PIPE BEDDING, HAUNCHING, AND BACKFILL

Each pipe section shall be laid in a firm foundation of bedding material and haunched and backfilled with care. Bedding material shall be carefully brought to grade along the entire length of pipe to be installed. Uniformly compacted clean sand bedding shall be installed below all water mains. Use hand or mechanical tamping to compact the bedding material to a minimum 95% Standard Proctor Density.

Slightly damp material will generally result in a maximum compaction with a minimum of effort. If water is added to improve compaction or if water exists in the trench, take care to avoid saturation of bedding material, which could result in the loss of stability. Check grade of bedding after compaction to assure conformity with plans. In yielding subsoils, the trench bottom shall be undercut to the depth necessary and backfilled with graded, crushed stone to form a firm foundation.

Where excavation occurs in rock or hard shale, the trench bottom shall be undercut and a minimum of 6 inches crushed stone bedding placed prior to typical bedding installation.

Embodiment material, or haunching, shall be placed around flexible pipe. Crushed stone, pea gravel, graded gravel, or sand used as backfill between the bedding material and up to 12 inches over the top of the pipe, shall be hand placed. If fine sand, silt, or clayey gravels are used for initial backfilling over the pipe, it shall be hand placed in 6 to 8 inch layers and hand compacted on both sides of the pipe to an elevation 12 inches over the top of the pipe.

Section 5: Domestic Water Distribution System

Trench widths and bedding requirements shall, conform to manufacturer's recommendation, AWWA/ASTM Standards, and these standards. Where conflicts exist, the most stringent shall apply.

Unless otherwise shown on plans, rigid pipe, such as concrete or ductile iron, shall be backfilled between the bedding material and a plane 12 inches over the top of the pipe with hand placed finely divided earth, free from debris and stones.

Granular backfill shall be used in accordance with INDOT Standard Specifications. Contractor shall place all granular fill in a manner as to achieve not less than 95% of the maximum dry density as determined in accordance with AASHTO T99, Method A (Std. Proctor) for the entire depth of the excavation. The manner in which the contractor achieves proper compaction shall be demonstrated at the beginning of the project (first 1,000 cu. yd.) and this method shall be used for the duration of the project. The contractor shall use an independent testing agency to verify proper compaction.

Backfill and bedding shall be in accordance with Detail 5A of these Standards unless approved in writing by the Town of Lizton.

5.12 PIPE ASSEMBLY

Joints shall be assembled in accordance with the manufacturer's instructions. The manufacturer's lubricant shall be properly applied where applicable. Spigot ends shall be centered in the bell and the pipe pushed home and brought to the correct line and grade. Pipe and fittings which do not allow a sufficient and uniform space for joints shall be removed and replaced with pipe or proper dimensions. Precautions shall be taken to prevent dirt or other materials from entering the joint space.

When it is necessary to deflect pipe from a straight line in either the horizontal or vertical plane, the amount of joint deflection shall not exceed 80% of the allowance recommended by the manufacturer. If alignment results in excess joint deflection, install additional fittings or shorter lengths of pipe. Cutting pipe for insertion of valves, fittings, or closure pieces shall be done in conformance with recommendations of the manufacturer of the pipe and cutting equipment. Cutting shall be done in a safe, workman like manner without creating damage to the pipe lining. An oxyacetylene torch shall not be used. Ends and rough edges shall be ground smooth. The cut ends of push-on joint connections shall be beveled by methods recommended by the manufacturer.

5.13 SERVICE LINE INSTALLATION

All Service lines within the public right-of-way shall be installed in accordance with these Standards. Portions of service lines installed on private property shall be installed in accordance with the latest addition of the *One and Two Family Dwelling Code* and the *Uniform Plumbing Code* and shall utilize polyethylene pipe designed for 200 psi.

Section 5: Domestic Water Distribution System

5.14 HYDRANT INSTALLATION:

A. Placement

Hydrants shall be installed in locations as shown on plan and in such a manner to provide complete accessibility. Placement shall reduce the possibility of damage from vehicles or injury to pedestrians. When placed behind the curb, the hydrant barrel shall be set so that no portion of the hose nozzle cap will be less than 2 feet or more than 6 feet from the gutter face of the curb. When set in lawn space between the curb and the sidewalk, or between the sidewalk and property line, no portion of the hydrant or nozzle shall be within 6" of the sidewalks.

B. Installation

Hydrants shall stand plumb and shall be situated so that side nozzles face the curb at 90 degree angle. If located on private property or a rural road, the nozzle shall point to the nearest roadway. Each hydrant shall be connected to the main with not less than a 6" nominal diameter branch unless otherwise shown on plans.

If hydrant is placed on pervious soil drainage shall be provided by placing coarse gravel or crushed stone mixed with coarse sand from the bottom of the trench to a minimum of 6" above the waste opening in the hydrant elbow.

Hydrants shall be tied to the pipe with suitable steel tie rods, clamps, or restrained joints. Hydrants shall be painted in accordance with AWWA C-502.

C. Restraint

Hydrants and valves shall be installed with a manufactured thrust restraint system, or stainless steel all threads, to stabilize valve and hydrant under all operating conditions including removal and replacement activities.

5.15 TESTING AND DISINFECTION TAPS

All domestic water mains shall be flushed, tested and disinfected in accordance with Section 4.06 of these Standards.

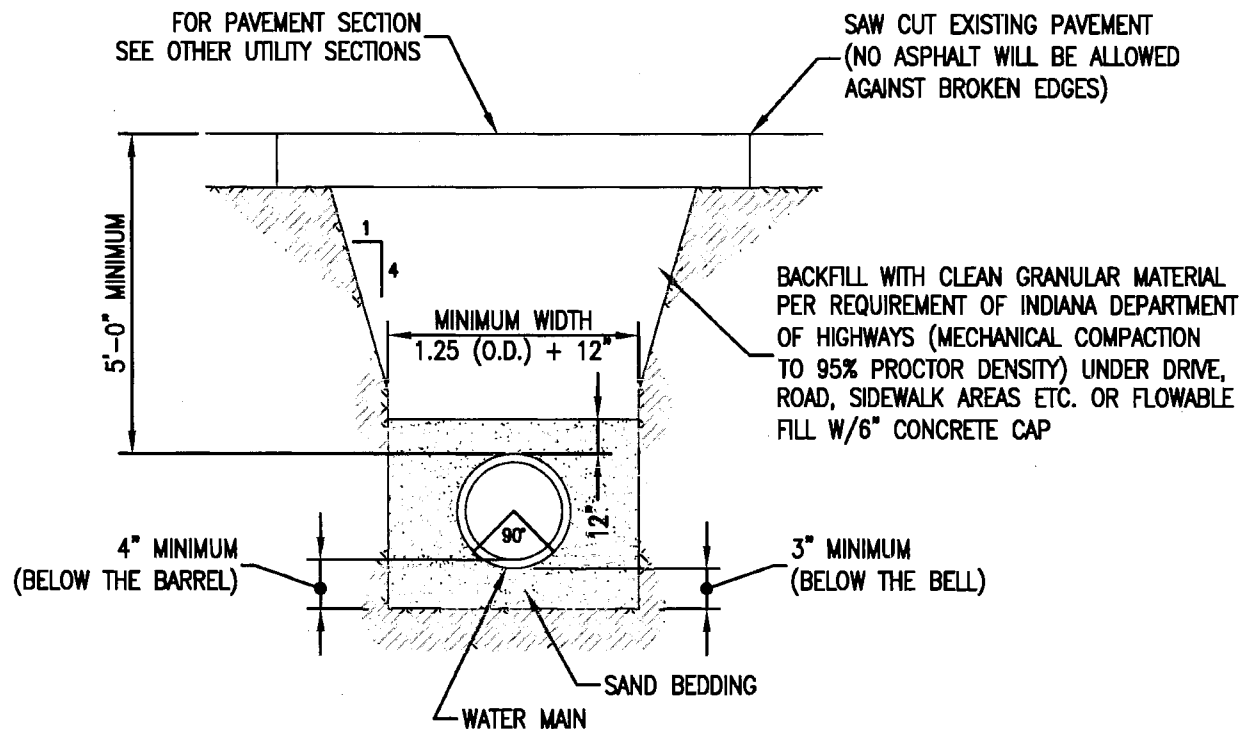
5.16 WET TAPS

Wet Taps will be reviewed and approved by the Town on a case by case basis. Contractor shall obtain all necessary permits from associated governing agencies prior to beginning work. An inspector from the utility must be present during the tap. Appointments must be schedule 48 hours in advance of construction. Contractor shall submit a site plan showing, at a minimum the entrance to the structure, lateral location, sump discharge line, meter pit and location of proposed service line prior to issuance of a permit.

Section 5: Domestic Water Distribution System

Excavation trench must comply with all OSHA requirements. A minimum of 36" shall be provided between the water main and trench wall during installation. The bottom of the trench must be a minimum of 12" below the bottom of the main and 6" behind the main. Stone, sand or pea gravel shall be placed in unstable or wet trench bottoms. Contractor shall use appropriate methods to keep the trench bottom dry and free from water. No fittings or bells shall be installed within 3 pipe diameters of pipe. No taps shall be made within 7 feet of a hydrant. Excavations must be backfilled with sand or pea gravel to 12 inches above the main.

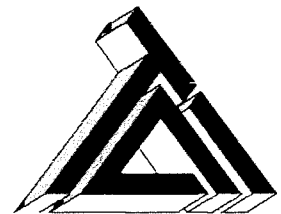
End of Section 5
Domestic Water Distribution System

**NOTE:**

1. BITUMINOUS PAVEMENT TACK COAT SHALL BE PLACED BETWEEN THE #53 STONE SURFACE AND ALONG THE SAW CUTS.
2. CLEAN GRANULAR BACKFILL MAY BE REQUIRED BY THE TOWN IF EXISTING SOIL CONDITIONS REQUIRE.
3. MINIMUM DEPTH TO TOP OF PIPE SHALL BE 5'-0".

TYPICAL WATERMAIN TRENCH DETAIL

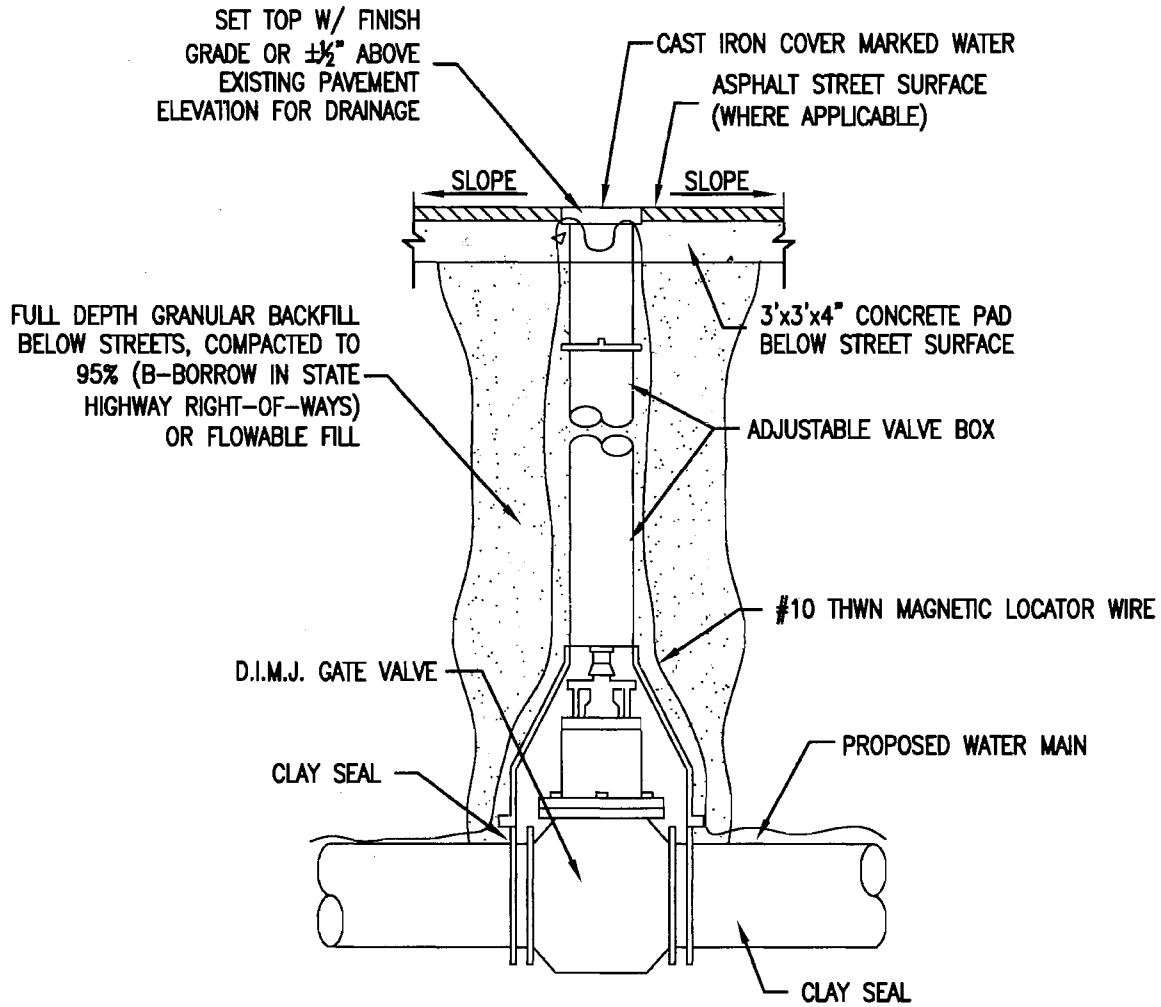
SCALE: NONE



TRIAD ASSOCIATES INC.
5835 LAWTON LOOP EAST DRIVE
INDIANAPOLIS, INDIANA 46216
PHONE: 317-377-5230 FAX: 317-377-5241

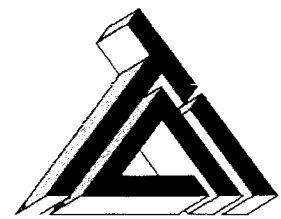
**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5A



VALVE AND BOX DETAIL

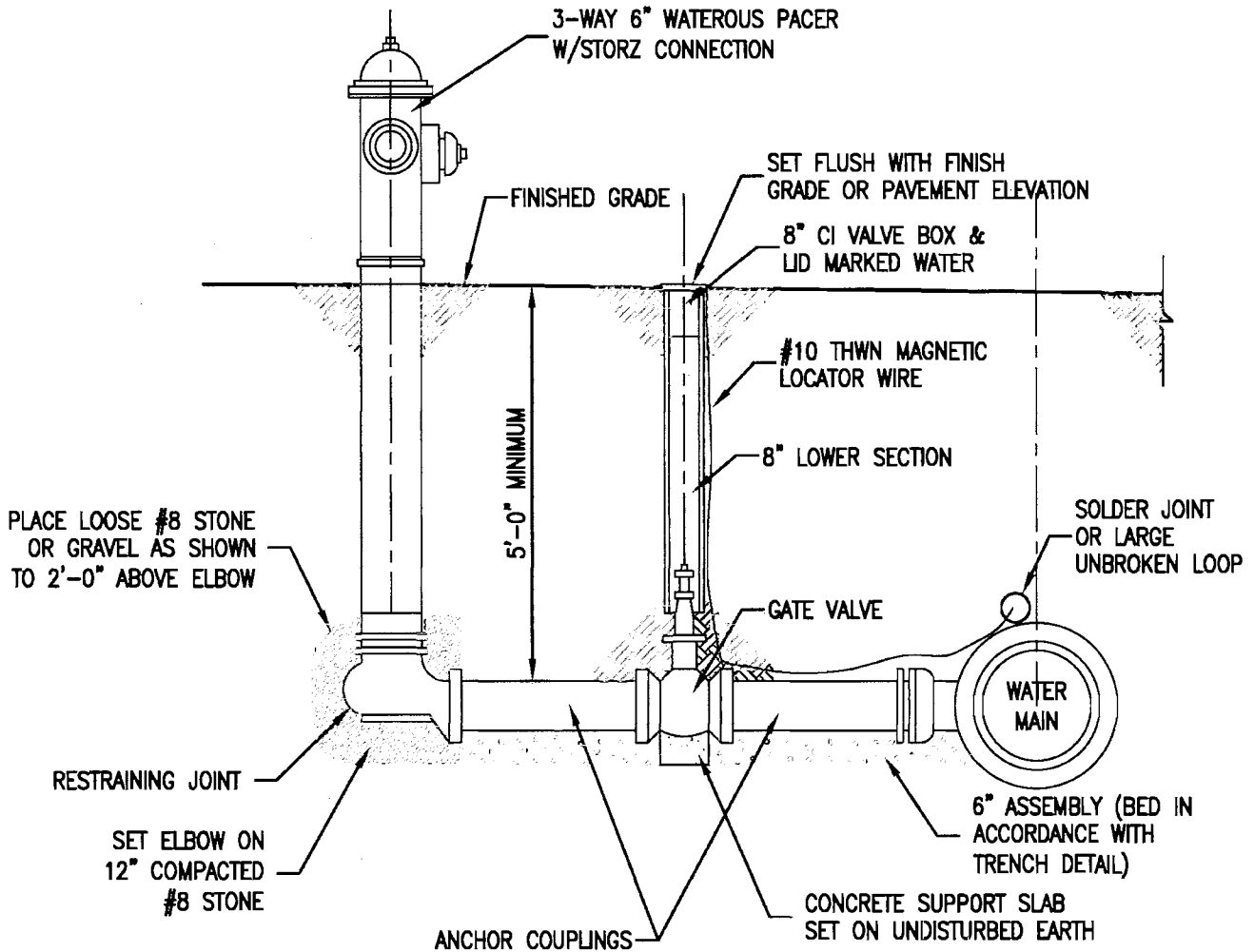
SCALE: NONE



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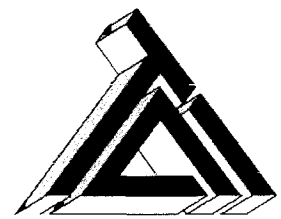
**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5B



FIRE HYDRANT INSTALLATION

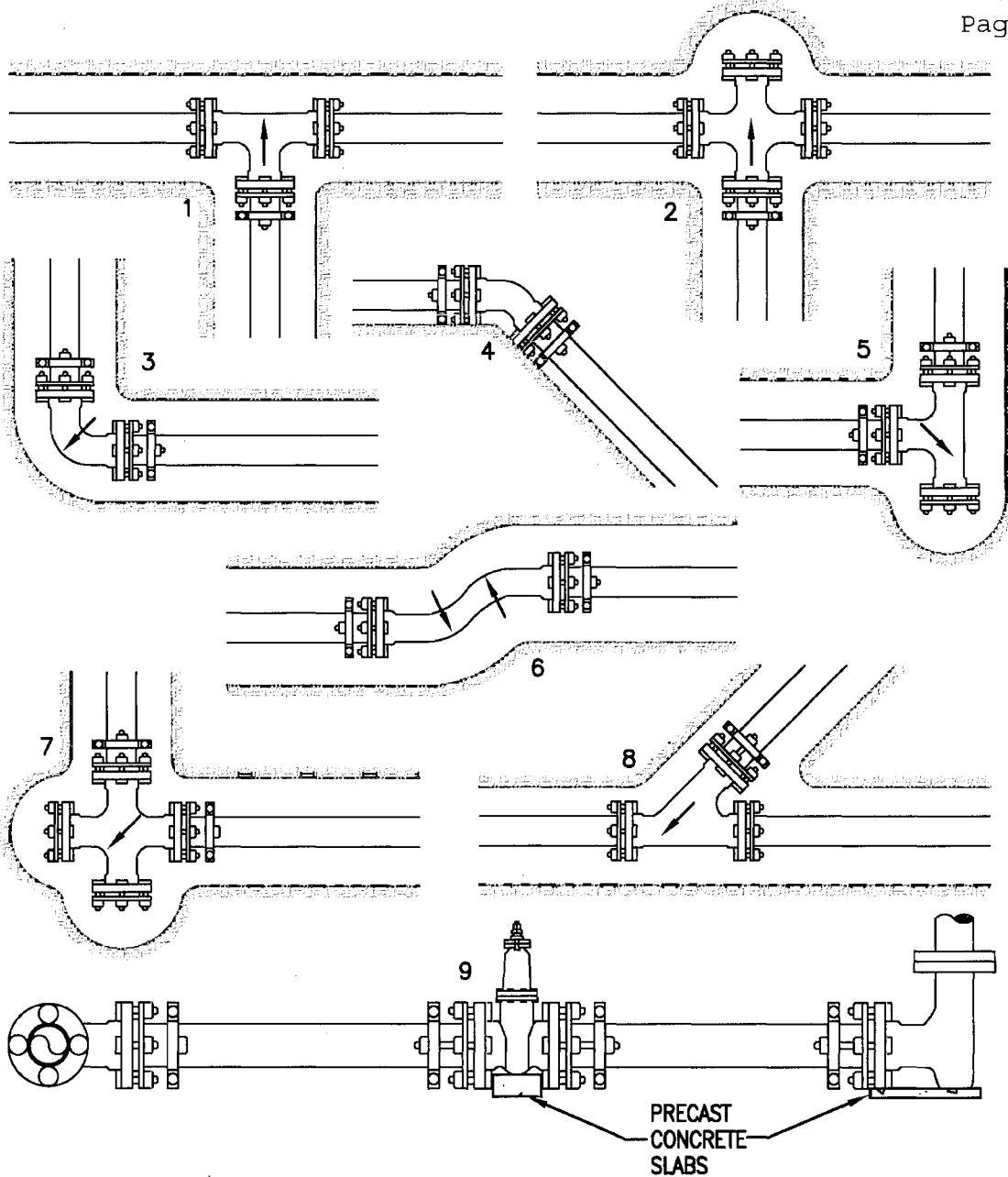
SCALE: NONE



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CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA

DETAIL 5C



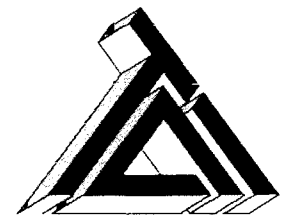
- | | |
|--|--|
| 1. THRU LINE CONNECTION, TEE | 6. DIRECTION CHANGE |
| 2. THRU LINE CONNECTION, CROSS USED AS TEE | 7. DIRECTION CHANGE, CROSS USED AS ELBOW |
| 3. DIRECTION CHANGE, ELBOW | 8. THRU LINE CONNECTION, WYE |
| 4. DIRECTION CHANGE VERTICAL, BAND | 9. HYDRANT RUNOUT |
| 5. DIRECTION CHANGE, TEE USED AS ELBOW | |

NOTE: ALL RESTRAINED JOINTS TO BE WRAPPED

JOINT RESTRAINING

SCALE: NONE

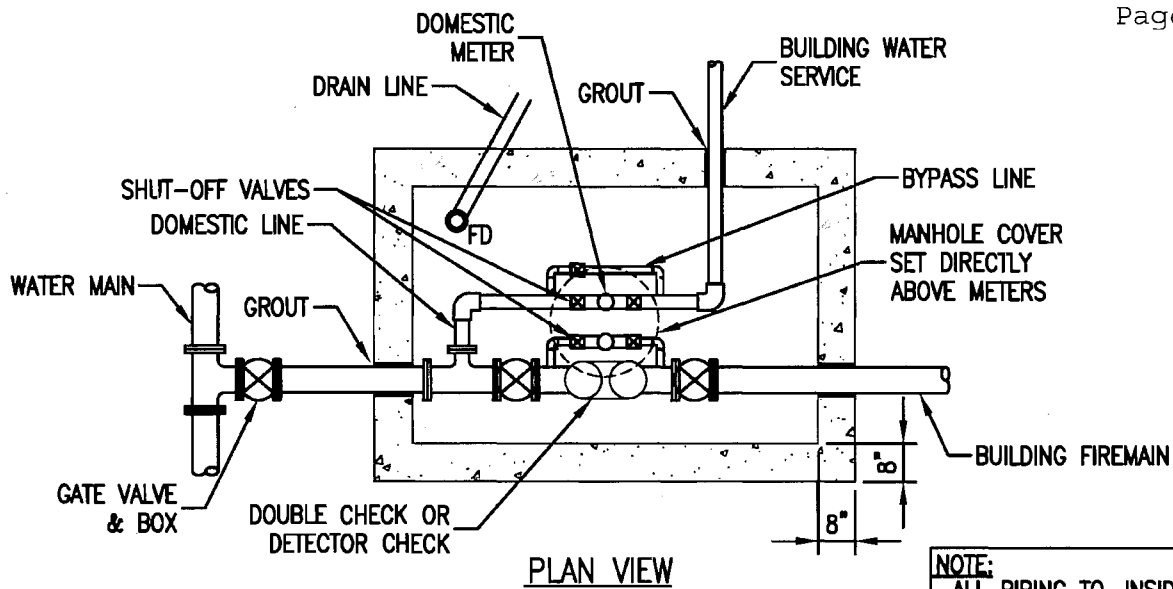
PRECAST
CONCRETE
SLABS



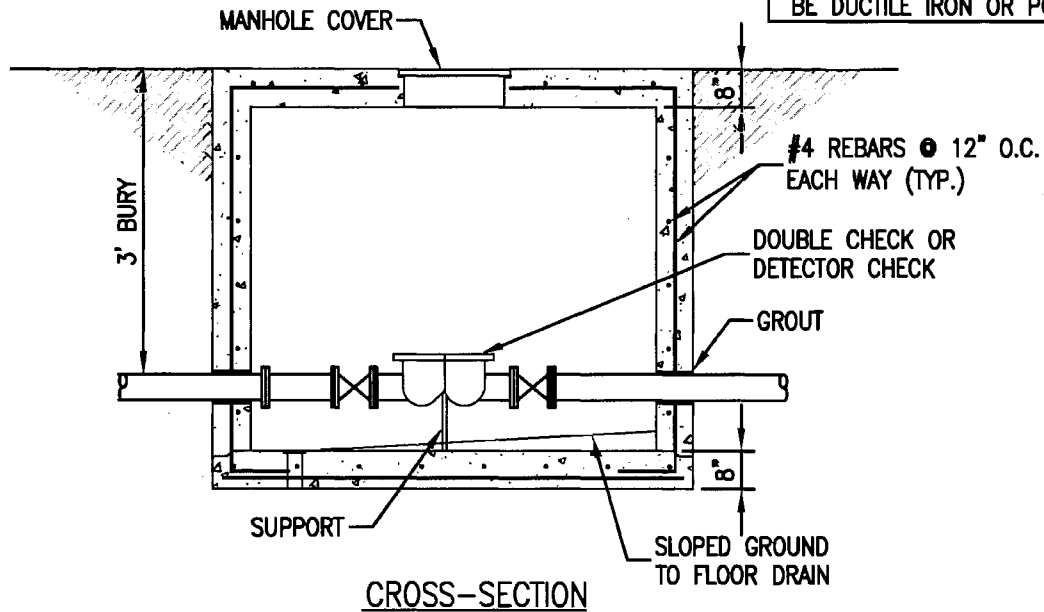
TRIAD ASSOCIATES INC.
 5835 LAWTON LOOP EAST DRIVE
 INDIANAPOLIS, INDIANA 46216
 PHONE: 317-377-5230 FAX: 317-377-5241

**CONSTRUCTION STANDARDS
 TOWN OF LIZTON, INDIANA**

DETAIL 5D



NOTE:
ALL PIPING TO, INSIDE, & THREE FEET BEYOND THE VAULT SHALL BE DUCTILE IRON OR POLY.

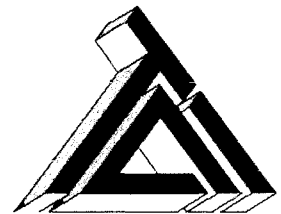


GENERAL NOTES:

1. THE DOMESTIC LINE WILL REQUIRE A REDUCED PRESSURE BACKFLOW PREVENTOR.
2. EXACT DIMENSIONS OF THE METER VAULT WILL DEPEND UPON THE SIZE OF THE WATER LINES.

BACKFLOW PREVENTION/SERVICE DETAIL

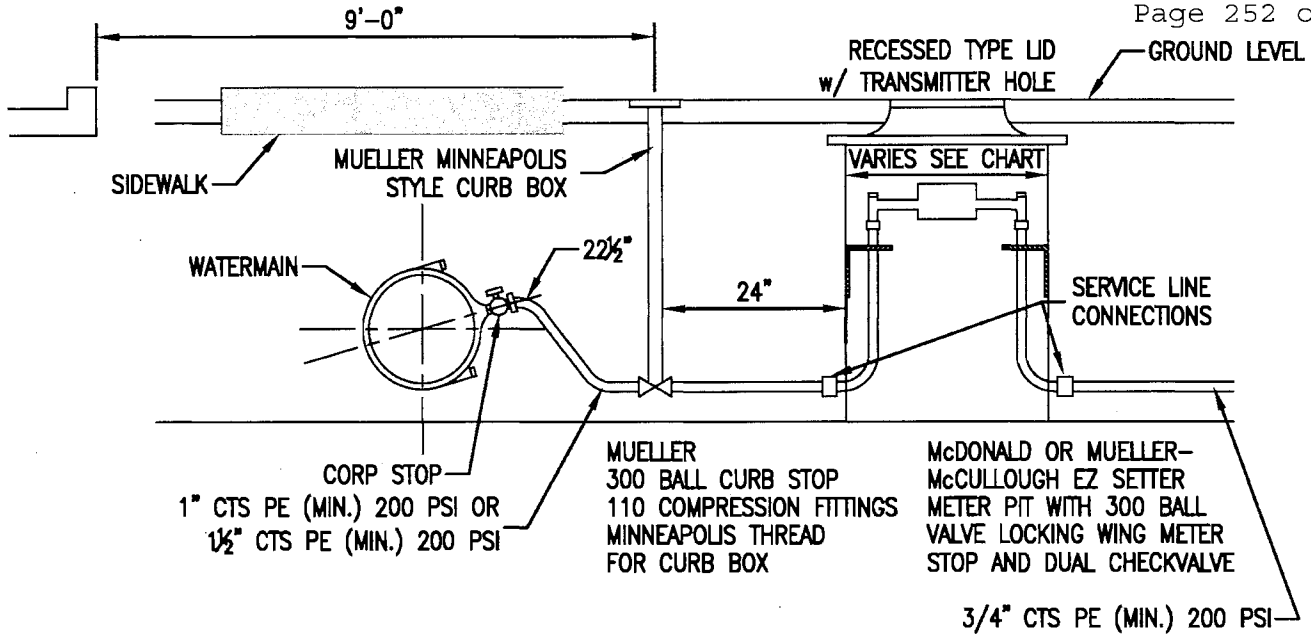
SCALE: NONE



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INDIANAPOLIS, INDIANA 46216
PHONE: 317-377-5230 FAX: 317-377-6241

**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5E



WATERMAIN CONTRACTOR TO INSTALL SADDLE, CORPSTOP, SERVICE LINE AND CURBSTOP. RUN MARKER WIRE WITH WATERMAIN. EXTEND MARKER WIRE TO CURBSTOP AND LEAVE 7'-0" EXTRA TO EXTEND TO PIT. SERVICE LINE MARKER WIRE TO BE SOLDERED TO MAIN LINE MARKER WIRE. PLACE 2x4 AT END OF SERVICE LINE.

BUILDER TO SUPPLY MUELLER-McCULLOUGH OR MCDONALD METER PIT, CURB BOX AND SERVICE LINE TO HOUSE. EXTEND MARKER WIRE FROM INSIDE OF METER PIT (AT TOP) TO HOUSE WITH SERVICE LINE.

SINGLE METER PITS SHALL HAVE 1" CTS PE 200 psi SERVICE LINE.

DUAL METER PITS SHALL HAVE 1 1/2" CTS PE 200 psi SERVICE LINE TO PIT AND 3/4" TO HOUSE. MINIMUM 4'-0" BURY.

NOTES

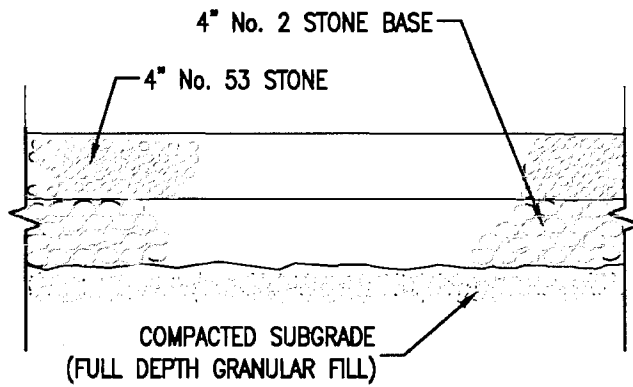
1. PITS SHALL BE MCDONALD OR MUELLER RISER EZ-SETTER METER BOX.
2. COVER SHALL BE LOCKING TYPE SINGLE LID, 4" RISE, SMALL OPERATING NUT, LID MUST HAVE HOLE FOR METER TRANSMITTER. LID MUST BE RECESSED TYPE.
3. SERVICE LINES SHALL BE POLYETHYLENE TUBING, 200 psi CTS.
4. BURY TRACING WIRE WITH ALL PLASTIC LINES.
5. CORPORATION STOP & SADDLES SHALL BE INSTALLED ON ALL TAPS AT A 22 1/2" ANGLE.
6. SERVICE LINES SHALL HAVE COMPRESSION FITTINGS FOR 1" CTS OR LARGER ON ALL CONNECTIONS.
7. PITS TO BE SET AT NO MORE THAN 6 FEET INSIDE THE SIDEWALK.
8. PITS ARE TO BE AT A DEPTH OF 48".
9. CONTRACTOR MUST FURNISH SUBMITTALS ON ALL MATERIAL TO BE INSTALLED.
10. ANY SUBSTITUTIONS MUST BE APPROVED.

METER SIZE	MINIMUM METER PIT MODEL NO.
5/8" x 3/4"	203RS1848RBBN
3/4"	250RS1848RBBN
1"	330RS1848RBBN
1 1/2"	500VS2448FBB
2"	550VS2748FBB

WATER METER DETAIL

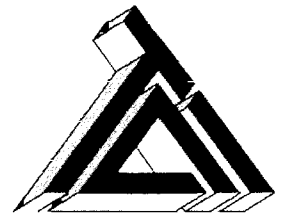
SCALE: NONE

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STONE DRIVE PATCH DETAIL

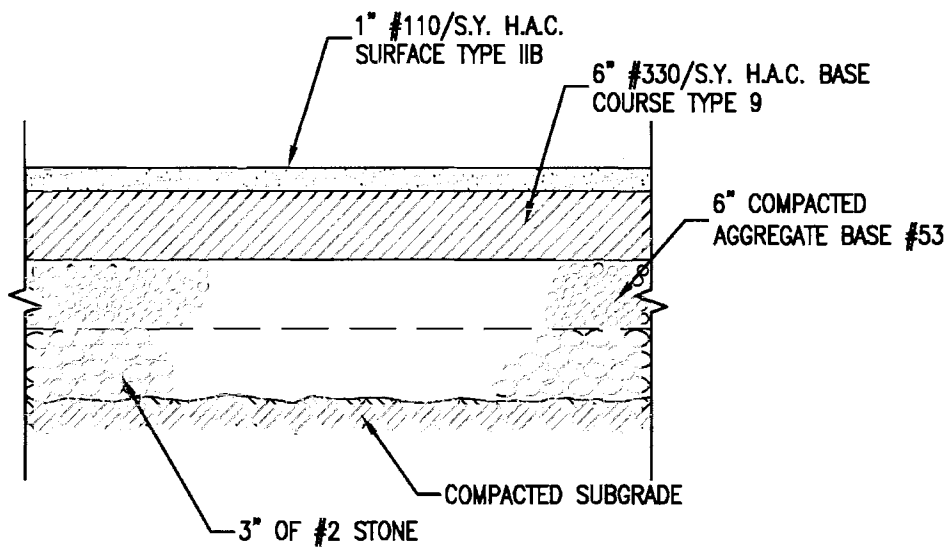
SCALE: NONE



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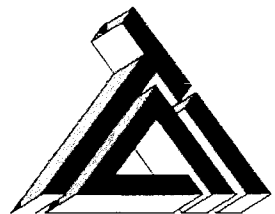
**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5G



ASPHALT DRIVE PATCH DETAIL

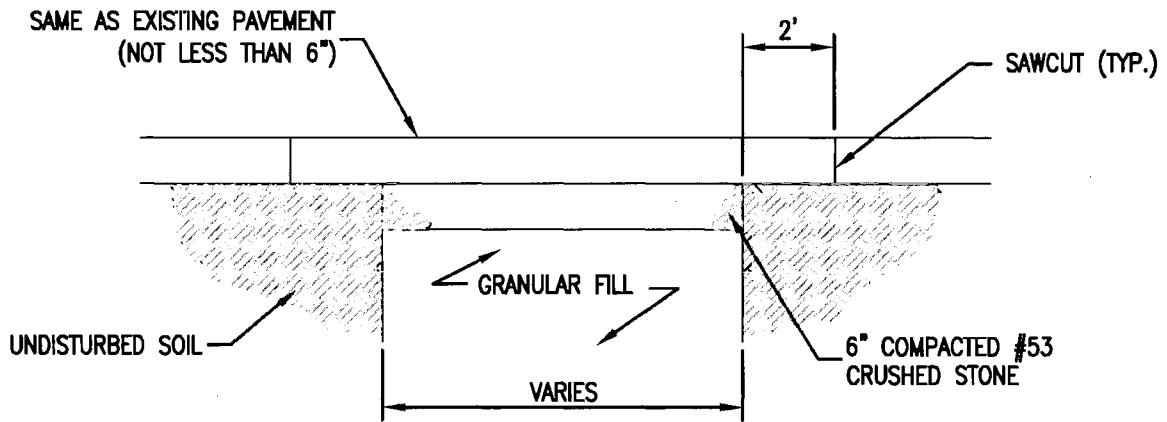
SCALE: NONE



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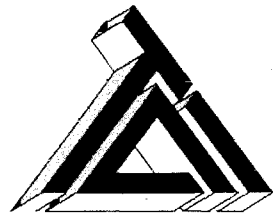
**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5H



BRICK OR CONCRETE PAVEMENT

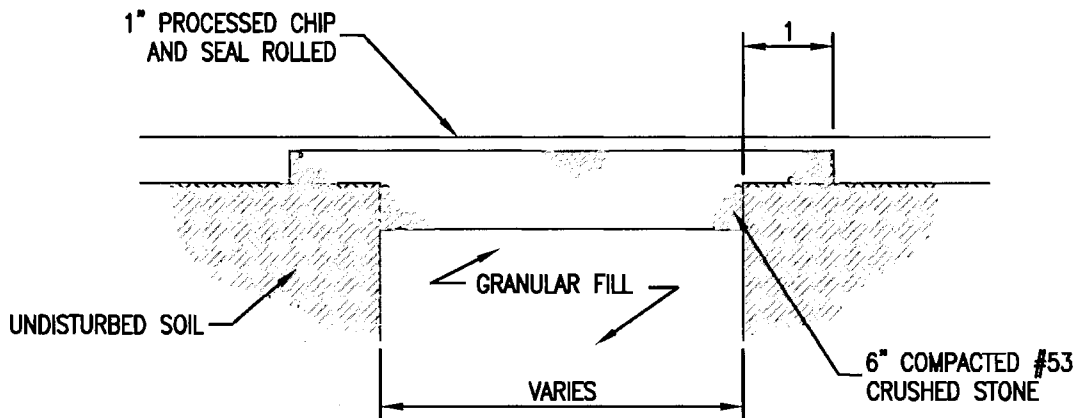
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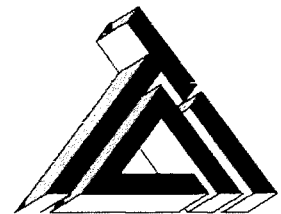
**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5I



CHIP AND SEAL SURFACE

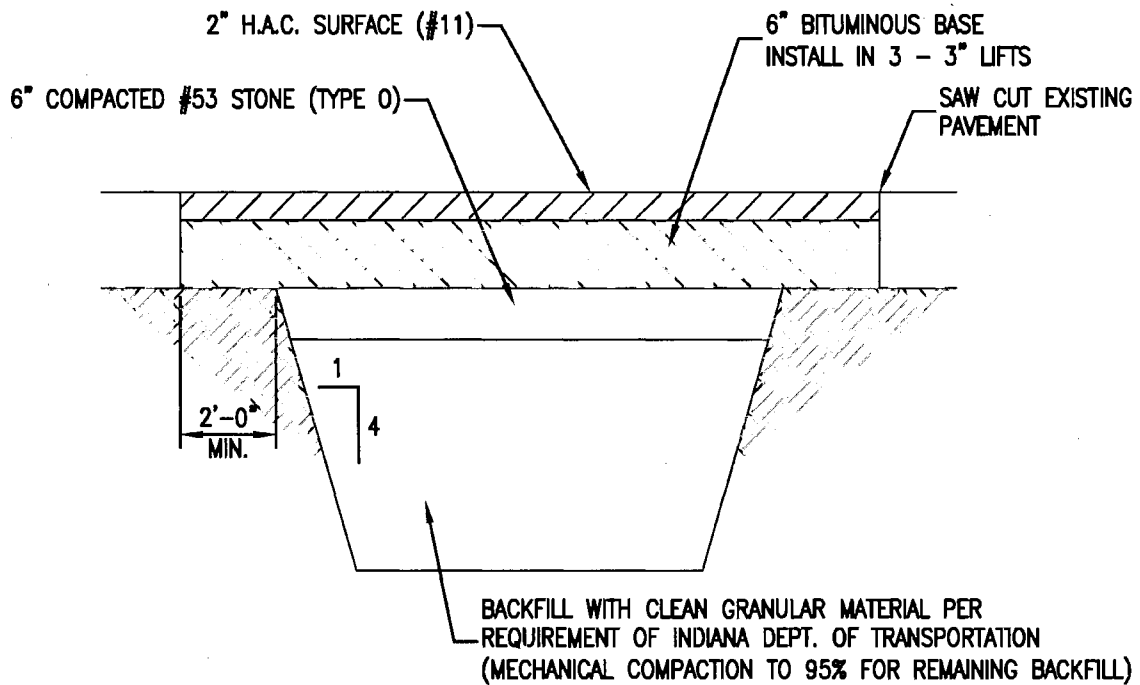
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**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5J

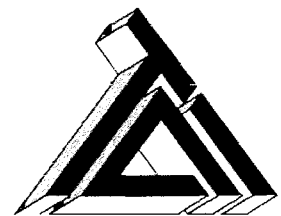


NOTE:

1. BITUMINOUS PAVEMENT TACK COAT SHALL BE PLACED BETWEEN THE #53 STONE SURFACE AND ALONG THE SAW CUTS.
2. NEW SURFACE IS TO BE SLOPED AT THE SAME RATE AS THE EXISTING SURFACE.
3. TRENCH SPOIL IS TO BE REMOVED FROM THE WORK SITE.
4. BITUMINOUS TACK COAT APPLIED AS PER INDIANA DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS

BITUMINOUS STREET REPAIR DETAIL

SCALE: NONE



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5835 LAWTON LOOP EAST DRIVE
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**CONSTRUCTION STANDARDS
TOWN OF LIZTON, INDIANA**

DETAIL 5K

PRODUCT SHEET



A PRODUCT SHEET OF NEPTUNE TECHNOLOGY GROUP

MRX920™ Mobile Data Collector and MX900™ Software

Make Reading Success and Efficiency Automatic

Reliable, accurate, and field-proven, Neptune's MRX920™ mobile data collector – along with its MX900™ meter routes and mapping software – has helped water utilities across North America streamline, automate, and increase operational efficiencies. As part of Neptune's R900® System, the MRX920 helps transform data into actionable information that helps identify hidden causes of loss and optimize operational efficiency.

Strapped to the seat of your utility vehicle, the MRX920 reads up to fifty (50) meters simultaneously as your meter reader cruises down the streets. And in conjunction with the routes-integrated/Esri®-powered MX900 mapping, meter reading is automatic, fast, and effortless for your meter readers, accurate with less manpower deployed for your utility.

The MRX920 comes with Bluetooth capability, so your meter readers have the option of wirelessly updating routes and uploading the latest readings to the host system remotely and in near real-time without having to return to the office^{1,2}.

Additionally, Neptune has ported its well-established R900 radio frequency (RF) architecture to the latest release of MRX920 using software-defined radio (SDR) technology. This means all Neptune data collection systems have a common, core code base which translates to faster availability of new features and functionalities for your utility.

Make Migration to Other Technology Simple

The R900 System is designed to easily accommodate and support past generations of meters, encoder registers, and data collectors – while at the same time giving your utility the flexibility to incorporate future innovations as needed. The MRX920 is no exception, providing seamless compatibility with all generations of R900 MIUs. Its industry-leading performance can save days or even weeks for your meter reading routes, and new features within its MX900 software, such as Esri-powered mapping and wireless mobility, make valuable data available in real time as you read your system. Feel free to phase in these new features and equipment at your own pace, secure in the knowledge that Neptune will support your future needs without leaving you with stranded assets.



KEY BENEFITS

Reduced Meter Reading Time

- Reads up to fifty (50) meters simultaneously

Simple Access to Actionable Data

- Esri-powered GIS maps¹ show meter reading and flag status
- Wireless mobility – communicate meter reading data back to N_SIGHT® in real time¹
- User-configurable advanced filtering shows you only the information you need
- Data logging and off-cycle reads without physical access to the meters²

Analyze Data at the Source

- View data logging graphs in the field and share with homeowner to address high bill complaints
- Identify high/low audit status failures
- Receive leak, reverse flow, and days of no flow alerts from E-CODER®-equipped meters

¹ Optional MX900™ Mapping and Mobility module required. Mobile computing device recommended and not included

² Cellular or Internet connection required

Save Your Utility – and Your Customers – Time and Money
While the R900 System always allows your utility to migrate forward to implement fixed network data collectors, or backward to use RF technology for individual off-cycle readings or data logging, using the MRX920 and MX900 software as a part of your system makes for fast and simple access to information that can provide effective resolutions to customers' water-related issues. With detailed consumption data in hand while working in the field, along with proactive alerts of leaks and backflow conditions, you can enhance customer service. In the process, you can even preempt high bill complaints, reduce delinquent payments, and eliminate write-offs.

Specifications

Physical Specifications

- Dimensions: 8" (width) x 3.15" (height) x 11" (length excluding connections and handle)
- Weight: ~5 lbs

Electrical Specifications

- Power consumption: < 1A
- Power supply: 12V DC via vehicle power source adapter

Reading	Consumption	Off Cycle
01/10/2018	214225.8	22.7
02/10/2018	214225.7	22.9
03/10/2018	214225.7	22.9
04/10/2018	214225.4	23.2
05/10/2018	214225.4	23.2
06/10/2018	214225.4	23.2
07/10/2018	214225.4	23.2
08/10/2018	214225.4	23.2
09/10/2018	214225.4	23.2
10/10/2018	214225.4	23.2
11/10/2018	214225.4	23.2
12/10/2018	214225.4	23.2
01/11/2018	214225.4	23.2
02/11/2018	214225.4	23.2
03/11/2018	214225.4	23.2
04/11/2018	214225.4	23.2
05/11/2018	214225.4	23.2
06/11/2018	214225.4	23.2
07/11/2018	214225.4	23.2
08/11/2018	214225.4	23.2
09/11/2018	214225.4	23.2
10/11/2018	214225.4	23.2
11/11/2018	214225.4	23.2
12/11/2018	214225.4	23.2



Neptune recommends the following mobile computing hardware specifications for optimal performance:

- 12.1" XGA (800 x 600) minimum
 - 89-key keyboard
 - Operating System:
 - Windows® 7 Professional 32 & 64
 - Windows® 8 Professional 32 & 64
 - Windows® 8.1 Professional 64
 - Windows® 10 Professional 64
 - .Net Framework 4.5 or higher
 - Processor: Intel Pentium 1.7 Ghz or faster processor
 - Memory: 1 GB minimum
 - Communication
 - Internal 802.11 b/g wireless LAN
 - Windows Wireless Connection Manager (if Bluetooth connection to the receiver is desired, Bluetooth v2.1 + EDR required)
 - USB 2.0
 - GPS receiver (required for the mapping and mobility module)
 - Minimum of 2 GB of available hard drive space
- ### Environmental Conditions
- Operating temperature: -4°F to +122°F (-20°C to +50°C)
 - Storage temperature: -40°F to +185°F (-40°C to +85°C)
 - Operating humidity: 5 to 95% non-condensing relative humidity



APPENDIX L
**Summary of Local,
State and Federal Regulations**

LOCAL, STATE & FEDERAL REGULATIONS

3.1 GENERAL

This chapter includes a list of some of the acts, rules, guidelines and regulations enacted by the State of Indiana and Federal Government, through the U.S. Environmental Protection Agency (EPA). The primary objective of these standards is to regulate and assure the quality of water for human consumption. The statutes and rules and regulations applicable to public water utilities are Title 8 of the Indiana Code and Title 170 of the Indiana Administrative Code. In addition all applicable standards established by the American Water Works Association (AWWA) and the Environmental Protection Agency (EPA) must be met. As this is a new utility, PWLLC is also subject to the rules and regulations of the Indiana Utility Regulatory Committee (IURC)

3.2 327 IAC SECTION 8

- 327 IAC 8-1 Drinking water additives and indirect additives

- 327 IAC 8-2 Drinking water standards
 - Monitoring, collecting samples, testing
 - Filtration, Disinfection
 - Reporting and record keeping
 - Public notice of violation of a drinking water regulation
 - Consumer Confidence Reporting

- 327 IAC 8-3 Pubic water supply construction permits
 - Early Warning Order, Connection Ban
 - Material and Construction Standards
 - Cross Connection Control
 - Quantity Standards
 - Public water system wells
 - Construction Permit for water main

LOCAL, STATE & FEDERAL REGULATIONS

327 IAC 8-4	Wellhead Protection
327 IAC 8-5	Construction of public water supply system
327 IAC 8-10	Cross Connection Control
327 IAC 8-11	Water works Operation, reports, operator certificate
327 IAC 8-12	Operator Certification

**3.3 Recommended Standards for Water Works Great Lakes - Upper Mississippi River
Board of State Public Health and Environmental Managers (Ten State Standards)**

All technical design, construction and operation standards must be in conformance with Ten State Standards. Specific sections are as follows:

Part 3	Source
Part 4	Treatment
Part 6	Pumping facilities
Part 7	Water Storage
Part 8	Water mains and cross-connections

3.4 EPA, SDWA

Under the Safe Drinking Water Act, the US Environmental Agency (EPA) sets standards for drinking water quality and oversees the states, localities and water suppliers who implement those standards. The SDWA requires many actions to protect drinking water and its sources (rivers, lakes, reservoirs, springs and ground water wells). the SDWA authorizes the EPA to set national health based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The EPA, states, localities and individual water systems then work together to assure that all environmental and water quality standards established by the EPA are met.

LOCAL, STATE & FEDERAL REGULATIONS

3.5 AWWA

The American Water Works Association (AWWA) is an international, nonprofit, scientific, and educational society that is dedicated to the improvement of drinking water quality and supply. All materials, testing and workmanship performed on the water works facilities must conform to applicable standards of the AWWA.

3.6 IURC

As a new public water utility, PWLLC requires determination of public convenience and necessity by the IURC. The IURC also monitors and regulates rates and charges. Increases and other changes to rates and charges must be approved by the IURC.

3.7 WATER QUALITY STANDARDS

Indiana Water Pollution Control Board Rule 327 IAC Article 2 establishes water quality standards for waters of the State of Indiana and water use designations. The purpose of the rule is to establish water quality criteria that will restore and maintain the integrity of the State's water for the support of natural aquatic life and for recreational, domestic, industrial, agricultural and other water uses. The following criteria is for the evaluation of the water quality at the point at which water is withdrawn for treatment and distribution as a potable supply:

- 1) Bacteria: The coliform bacteria group shall not exceed 5,000 per 100 mg as a monthly average value (either MPN or MF count); nor exceed this number in more than 20% of the samples examined during any month; nor exceed 20,000 per 100 ml in more than 5% of such samples.

LOCAL, STATE & FEDERAL REGULATIONS

2) Threshold-Odor Number: Taste and odor producing substances, other than naturally occurring, shall not interfere with the production of a finished water by conventional treatment consisting of coagulation, sedimentation, filtration and chlorination. The threshold odor number of the finished water must be 3.0 or less.

3) Dissolved Solids: Other than from naturally occurring sources, dissolved solids shall not exceed 500 mg/l as a monthly average value, nor exceed 750 mg/l at any time. Values of specific conductance of 800 and 1,200 micromhos/cm (at 25°C) may be considered equivalent to dissolved solids concentrations of 500 and 750 mg/l.

4) Radioactive Substances: Water supplies shall be approved without further consideration of other sources of radioactivity if Radium-226 and Strontium-90 are present in amounts not exceeding 3 and 10 picocuries per liter, respectively. In the known absence of strontium-90 and alpha emitters, the water supply is acceptable when the gross beta concentrations do not exceed 1,000 picocuries per liter.

5. Chemical Constituents: The chemical constituents in the waters shall not be present in such levels as to prevent meeting the Drinking Water Standards adopted by the Indiana State Board of Health after conventional water treatment.

APPENDIX M
Certified Letters to Surrounding
Water Utilities and Responses

May 7, 2019

Robert Uhrick
Town of Lizton
106 N. Lebanon
P.O. Box 136
Lizton, IN 46149

Re: Citizens Water Response

Citizens has been engaged in discussions with InDot and the Town of Lizton for more than two years related to options to serve this area. Based on the outcome of those discussions, Citizens believes the wholesale agreement, signed by both parties, with terms and conditions is the appropriate response.

If you have any questions please contact me at 317-927-4744.

Best Regards,



Jeff Sinclair
Manager, Thermal Market Development
Citizens Energy Group



Town of Lizton
106 N. Lebanon / PO Box 136
Lizton, IN 46149
Phone: (317) 994-5500 - Fax (317) 994-5200

April 10, 2019

Mr. Jeffrey Sinclair
Citizens Energy Group
2020 N. Meridian Street
Indianapolis, Indiana 46202

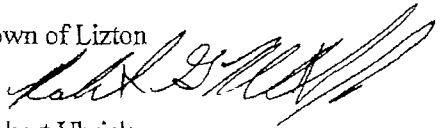
Re: Town of Lizton Water

Dear Mr. Sinclair,

Per 327 IAC 8-3.6-6, before a new PWS can be established, all existing PWSs within a ten-mile radius must be contacted regarding their willingness and ability to supply water to the proposed PWS. Your PWS is located within ten (10) miles of the proposed PWS which is the reason for this correspondence. If your PWS is willing to supply water to Lizton, please send your written response to my attention as soon as possible with the specified terms and conditions of such at: Town Hall – P.O. Box 136 – Lizton, Indiana 46149.

Thank you for your attention to the above referenced matter.

Town of Lizton


Robert Uhrick
Council Member

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:
 Mr. Jeffrey Sinclair
 Citizens Energy Group
 2020 N. Meridian St.
 Indpls, IN 46202



9590 9403 0457 5169 4588 92

2. Article Number (Transfer from service label)
 7015 3010 0000 4228 6393

PS Form 3811, April 2015 PSN 7530-02-000-9053

COMPLETE THIS SECTION ON DELIVERY

A. Signature Attachment JF-1
 X Page 268 of 341
 Agent
 Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? Yes
 If YES, enter delivery address below: No

3. Service Type
- Adult Signature
 - Adult Signature Restricted Delivery
 - Certified Mail®
 - Certified Mail Restricted Delivery
 - Collect on Delivery
 - Collect on Delivery Restricted Delivery
 - Mail Restricted Delivery (00)
 - Priority Mail Express®
 - Registered Mail™
 - Registered Mail Restricted Delivery
 - Return Receipt for Merchandise
 - Signature Confirmation™
 - Signature Confirmation Restricted Delivery

Domestic Return Receipt

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE

CERTIFIED MAIL



7015 3010 0000 4228 6393
 7015 3010 0000 4228 6393

U.S. Postal Service™
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OFFICIAL USE

Certified Mail Fee	\$ 3.50
Extra Services & Fees (check box, add fee as appropriate)	
<input checked="" type="checkbox"/> Return Receipt (hardcopy)	\$ 2.80
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$ 1.00
Total Postage and Fees	\$ 7.30

Postmark Here

Sent To: Mr. Jeffrey Sinclair - CEG
 Street and Apt. No., or PO Box No.: 2020 N. Meridian St.
 City, State, ZIP+4®: Indianapolis, IN 46202

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 3010 0000 4228 6393

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
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7015 3010 0000 4228 6393

Certified Mail Fee	\$ 3.50
Extra Services & Fees (check box, add fee as appropriate)	
<input checked="" type="checkbox"/> Return Receipt (hardcopy)	\$ 2.80
<input type="checkbox"/> Return Receipt (electronic)	\$
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$
Postage	\$ 1.00
Total Postage and Fees	\$ 7.30

Postmark Here

Sent To: Mr. Jeffrey Sinclair - CEG
 Street and Apt. No., or PO Box No.: 2020 N. Meridian St.
 City, State, ZIP+4®: Indianapolis, IN 46202

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

LAWRENCE BR.
 INDIANAPOLIS, IN 46205
 APR 10 2019



Track Another Package +

Tracking Number: 70153010000042286393

Remove X


Your item was delivered to an individual at the address at 3:55 pm on April 13, 2019 in INDIANAPOLIS, IN 46202.


Delivered

April 13, 2019 at 3:55 pm
Delivered, Left with Individual
INDIANAPOLIS, IN 46202

Get Updates 

Feedback

Text & Email Updates 

Tracking History 

April 13, 2019, 3:55 pm
Delivered, Left with Individual
INDIANAPOLIS, IN 46202
Your item was delivered to an individual at the address at 3:55 pm on April 13, 2019 in INDIANAPOLIS, IN 46202.

April 13, 2019, 5:12 am
Departed USPS Regional Facility
INDIANAPOLIS IN DISTRIBUTION CENTER

April 12, 2019
In Transit to Next Facility

Town of Advance
Office of Clerk - Treasurer

(765) 676-6611
Fax (765) 676-6696

October 9, 2018

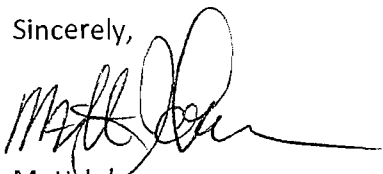
Robert Uhrick
Council President
Town of Lizton
106 N. Lebanon
PO Box 136
Lizton, IN 46149

Dear Mr. Uhrick,

In response to your letter dated September 10, 2018 regarding a new public water distribution system in Union Township, the current Advance treatment capacity is 100 gallons/minute. Considering a maximum day demand for Advance of 80,000 gallons/day plus 145,000 gallons for Lizton and having enough plant capacity to provide this demand over an 18-hour period, the plant capacity required is approximately 208 gallons/minute. The Town of Advance existing well and treatment capacity is 100 gallons/minute.

Therefore, considering the limited well supply source, it is my opinion that Advance does not have the capacity to serve the proposed Union Township water system.

Sincerely,



Matt Johnson
Council President



Town of Lizton

106 N. Lebanon / PO Box 136

Lizton, IN 46149

Phone: (317) 994-5500 - Fax (317) 994-5200

September 10, 2018

Advance Town Council
112 N. Main Street
P.O. Box 67
Advance, Indiana 46102

RE: Notice Pursuant to Indiana Code 327-IAC 8-3.606


The Town of Lizton is proposing construction of a new public water distribution system (PWS) in Union Township. The proposed system will serve the Town of Lizton as well as the INDOT rest areas and INDOT garage in Hendricks County generally located at S.R. 39 and U.S. 136. Based on the initial interest to immediately connect to the new Lizton Water System, the demand will consist of approximately 175 water services plus the INDOT facilities averaging approximately 50,000-60,000 gallons per day with possible peak daily demands of 145,000 gallons per day. Future connections could require increases in the quantities identified by 20% or more.

Per 327 IAC 8-3.6-6, before a new PWS can be established, all existing PWSs within a ten-mile radius must be contacted regarding their willingness and ability to supply water to the proposed PWS. Your PWS is located within ten (10) miles of the proposed PWS which is the reason for this correspondence. If your PWS is willing to supply water to the new PWS, please send your written response to my attention at: Town Hall – P.O. Box 136 – Lizton, Indiana 46149.

Thank you for your attention to the above referenced matter.

Town of Lizton

Robert Uhrick
Council President

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> X <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <i>Shan Johnson</i> C. Date of Delivery <i>9/24/2018</i></p>
<p>1. Article Addressed to:</p> <p>Advance Town Council 112 N. Main Street P.O. Box 67 Advance, Indiana 46102</p> 	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If YES, enter delivery address below:</p> <p>3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Priority Mail Express™ <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. 7015 3010 0000 4228 8854</p>	
<p>PS Form 3811, July 2013 Domestic Return Receipt</p>	

U.S. Postal Service
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OFFICIAL USE

Certified Mail Fee \$ _____

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ _____

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ 6.67

Total Postage \$ _____

Sent To: Advance Town Council
 Street and: 112 N. Main Street
 City, State: P.O. Box 67
 Advance, Indiana 46102

Postmark: LAWRENCE BR. INDIANAPOLIS, IN 46228 SEP 14 2018

7015 3010 0000 4228 8854

TOWN OF DANVILLE

Town Council

Mike Neilson
Tom Pado
Marcia Lynch
Jim Stephens
Dennis Wynn

Clerk-Treasurer

Jenny Pearcy

Town Manager

Gary Eakin

**Assistant Town Manager
& Planner**

Laura Parker

Plan Commission

Loris Thompson
Adam Harvey
Elmer Cook
Gary Eakin
Cody Sheets
Mike Neilson
Jim Stephens

Board of Zoning Appeals

Kevin Tussey
Tom Swords
Elmer Cook
Lyn Larison
Loris Thompson

Park Board

Kent Elliott
David Glover
Tracy Jones
Jim Pearcy
Elizabeth Whitaker

**Metropolitan Board of Police
Commissioners**

Tom Pado
Todd Davis
Jill Howard
Andy Kult
Jim Stephens

Departments

Jerry Crisp, Wastewater
Will Lacey, Park
Barry Lofton, Stormwater
Mark Morgan, Fire
Ray Raney, Police
Jim Russell, Water
Ray Whitaker, Public Works

September 24, 2018

Robert Uhrick
Lizton Council President
106 N. Lebanon
PO Box 136
Lizton, IN 46149

Re: Notice PWS in Union Township

Dear Mr. Uhrick;

To date the Town of Danville water utility does not have plans or intent to extend water to Lizton.

Thank you for contacting us.

Respectfully,



Gary Eakin
Town Manager

Cc: James Russell
Jenny Pearcy
Mike Neilson



Town of Lizton
106 N. Lebanon / PO Box 136
Lizton, IN 46149
Phone: (317) 994-5500 - Fax (317) 994-5200

September 10, 2018

Mr. Jim Russell
Danville Water Department
49 N. Wayne Street
Danville, Indiana 46122

RE: Notice Pursuant to Indiana Code 327-IAC 8-3.606


The Town of Lizton is proposing construction of a new public water distribution system (PWS) in Union Township. The proposed system will serve the Town of Lizton as well as the INDOT rest areas and INDOT garage in Hendricks County generally located at S.R. 39 and U.S. 136. Based on the initial interest to immediately connect to the new Lizton Water System, the demand will consist of approximately 175 water services plus the INDOT facilities averaging approximately 50,000-60,000 gallons per day with possible peak daily demands of 145,000 gallons per day. Future connections could require increases in the quantities identified by 20% or more.

Per 327 IAC 8-3.6-6, before a new PWS can be established, all existing PWSs within a ten-mile radius must be contacted regarding their willingness and ability to supply water to the proposed PWS. Your PWS is located within ten (10) miles of the proposed PWS which is the reason for this correspondence. If your PWS is willing to supply water to the new PWS, please send your written response to my attention at: Town Hall – P.O. Box 136 – Lizton, Indiana 46149.

Thank you for your attention to the above referenced matter.

Town of Lizton


Robert Uhrick
Council President

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> <i>[Signature]</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>
<p>1. Article Addressed to:</p> <p>Mr. Jim Russell Danville Water Department 49 N. Wayne Street Danville, IN 46122</p>	<p>B. Received by (Printed Name) _____ C. Date of Delivery <u>9/18/18</u></p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
	<p>3. Service Type</p> <p><input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express™</p> <p><input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise</p> <p><input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p>
<p>7015 3010 0000 4228 8885</p>	<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>

PS Form 3811, July 2013 Domestic Return Receipt

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OFFICIAL USE

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Certified Mail Fee \$ 3.45

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ 2.75

Return Receipt (electronic) \$ _____

Certified Mail Restricted Delivery \$ _____

Adult Signature Required \$ _____

Adult Signature Restricted Delivery \$ _____

Postage \$ 97

Total Postage \$ 100.42

Sent To _____

Street and Apt. _____

City, State, Zi _____

SEP 14 2018 Postmark Here

Lawrence Br. 46226 DANAPOLIS, IN

USPS

Mr. Jim Russell
 Danville Water Department
 49 N. Wayne Street
 Danville, IN 46122

PS Form 3811, July 2013 See Reverse for Instructions



61 N. Green Street, Brownsburg, IN 46112
P 317-852-1120 | F 317-852-1135 | www.brownsburg.org

September 24, 2018

Robert Uhrick, Council President Town of Lizton

Mr. Uhrick,

The Town of Brownsburg would not be able to supply the Town of Lizton with water at this time. We are looking for additional water for our system at this time and the distance to supply your town is too great.

Respectfully,

A handwritten signature in black ink that reads "Mike Good". The signature is written in a cursive style.

Mike Good
Town of Brownsburg Water Department



Town of Lizton
106 N. Lebanon / PO Box 136
Lizton, IN 46149
Phone: (317) 994-5500 - Fax (317) 994-5200

September 10, 2018

Brownsburg Town Council/Town Manager
61 N. Green Street
Brownsburg, Indiana 46112

RE: Notice Pursuant to Indiana Code 327-IAC 8-3.606


The Town of Lizton is proposing construction of a new public water distribution system (PWS) in Union Township. The proposed system will serve the Town of Lizton as well as the INDOT rest areas and INDOT garage in Hendricks County generally located at S.R. 39 and U.S. 136. Based on the initial interest to immediately connect to the new Lizton Water System, the demand will consist of approximately 175 water services plus the INDOT facilities averaging approximately 50,000-60,000 gallons per day with possible peak daily demands of 145,000 gallons per day. Future connections could require increases in the quantities identified by 20% or more.

Per 327 IAC 8-3.6-6, before a new PWS can be established, all existing PWSs within a ten-mile radius must be contacted regarding their willingness and ability to supply water to the proposed PWS. Your PWS is located within ten (10) miles of the proposed PWS which is the reason for this correspondence. If your PWS is willing to supply water to the new PWS, please send your written response to my attention at: Town Hall – P.O. Box 136 – Lizton, Indiana 46149.

Thank you for your attention to the above referenced matter.

Town of Lizton

Robert Uhrick
Council President

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee
1. Article Addressed to: Brownsburg Town Council / Town Manager 61 N. Green Street Brownsburg, Indiana 46112 	B. Received by (Printed Name) C. Date of Delivery
7015 3010 0000 4228 8861	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No SEP 17 2018
PS Form 3811, July 2013	3. Service Type <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express™ <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes

U.S. Postal Service
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OFFICIAL USE

Certified Mail Fee \$ 3.45

Extra Services & Fees (check box, add fees appropriate)

Return Receipt (hardcopy) \$ 2.45

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$ 1.47

Total Postage \$ 6.67

Sent To
 Brownsburg Town Council /
 Town Manager
 61 N. Green Street
 Brownsburg, Indiana 46112

Postmark
 SEP 14 2018
 LAWRENCE BR.
 INDIANAPOLIS, IN 46226

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions



Town of Lizton
106 N. Lebanon / PO Box 136
Lizton, IN 46149
Phone: (317) 994-5500 - Fax (317) 994-5200

September 10, 2018

Jamestown Utilities
421 E. Main Street
P.O. Box 165
Jamestown, Indiana 46147

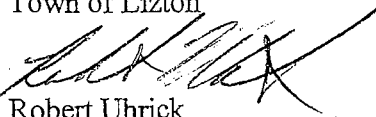
RE: Notice Pursuant to Indiana Code 327-IAC 8-3.606


The Town of Lizton is proposing construction of a new public water distribution system (PWS) in Union Township. The proposed system will serve the Town of Lizton as well as the INDOT rest areas and INDOT garage in Hendricks County generally located at S.R. 39 and U.S. 136. Based on the initial interest to immediately connect to the new Lizton Water System, the demand will consist of approximately 175 water services plus the INDOT facilities averaging approximately 50,000-60,000 gallons per day with possible peak daily demands of 145,000 gallons per day. Future connections could require increases in the quantities identified by 20% or more.

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Thank you for your attention to the above referenced matter.

Town of Lizton


Robert Uhrick
Council President

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) <input type="checkbox"/> Agent Katie Conner <input type="checkbox"/> Addressee</p> <p>C. Date of Delivery SEP 17 2018</p>
<p>1. Article Addressed to:</p> <p>Jamestown Utilities 421 E. Main Street P.O. Box 165 Jamestown, IN 46147</p> 	<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p> <p>3. Service Type <input type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express™ <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>2. 7015 3010 0000 4228 8892</p>	
<p>PS Form 3811, July 2013 Domestic Return Receipt</p>	

7015 3010 0000 4228 8892

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Certified Mail Fee \$ 5.45

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$ 2.45

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$ 1.47

Total Postage \$ 6.67

Sent To
Jamestown Utilities
421 E. Main Street
P.O. Box 165
Jamestown, IN 46147

SEP 14 2018
LAWRENCE BR.
INDIANAPOLIS, IN 46226
USPS

PS Form 3800, April 2015 PSN 7530-02-000-904 See Reverse for Instructions



Town of Lizton

106 N. Lebanon / PO Box 136

Lizton, IN 46149

Phone: (317) 994-5500 - Fax (317) 994-5200

September 10, 2018

Pittsboro Town Council
80 N. Meridian Street
P.O. Box 185
Pittsboro, Indiana 46167

RE: Notice Pursuant to Indiana Code 327-IAC 8-3.606


The Town of Lizton is proposing construction of a new public water distribution system (PWS) in Union Township. The proposed system will serve the Town of Lizton as well as the INDOT rest areas and INDOT garage in Hendricks County generally located at S.R. 39 and U.S. 136. Based on the initial interest to immediately connect to the new Lizton Water System, the demand will consist of approximately 175 water services plus the INDOT facilities averaging approximately 50,000-60,000 gallons per day with possible peak daily demands of 145,000 gallons per day. Future connections could require increases in the quantities identified by 20% or more.

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Thank you for your attention to the above referenced matter.

Town of Lizton

Robert Uhrick
Council President

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none"> ■ Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits. 	<p>A. Signature <input checked="" type="checkbox"/> Randy Warthen <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name) C. Date of Delivery Randy Warthen 9/17/18</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No</p>
<p>Pittsboro Town Council 80 N. Meridian Street P.O. Box 185 Pittsboro, Indiana 46167</p> 	<p>3. Service Type <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Priority Mail Express™ <input type="checkbox"/> Registered <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> Collect on Delivery</p> <p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>
<p>7015 3010 0000 4228 8878</p>	

PS Form 3811, July 2013

Domestic Return Receipt

U.S. Postal Service
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Domestic Mail Only

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OFFICIAL USE

7015 3010 0000 4228 8878

Certified Mail Fee \$ 3.45

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy) \$

Return Receipt (electronic) \$

Certified Mail Restricted Delivery \$

Adult Signature Required \$

Adult Signature Restricted Delivery \$

Postage \$ 4.00

Total Postage \$ 7.45

Sent To
Street and
City, State

Pittsboro Town Council
80 N. Meridian Street
P.O. Box 185
Pittsboro, Indiana 46167

LAWRENCE BR.
INDIANAPOLIS, IN
Postmark Here
SEP 14 2018
USPS

APPENDIX N

Summary of Interconnection Evaluation

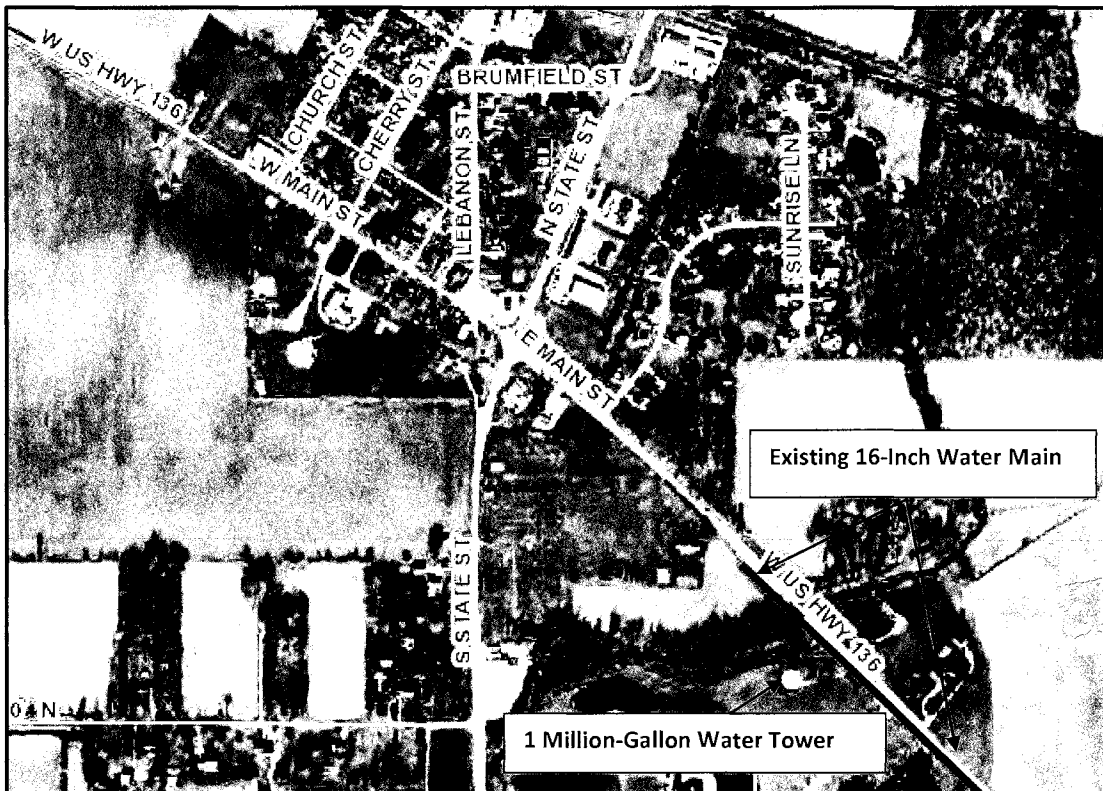
Lizton Water Inter-Connect & Consolidation Assessment

Water systems within a 10-mile radius were identified relative to consolidation and/or inter-connection. (See Exhibit A)

Those systems within the 10-mile radius included:

1. Citizens Water
2. Town of Advance
3. Brownsburg
4. Danville
5. Jamestown
6. Pittsboro

1. **Citizens Water** is the clear and most economical option to provide water to Lizton. CWA will be providing water on a wholesale rate basis to Lizton because CWA has a 16-inch diameter water main directly adjacent to the eastern corporate limits of town. The capital cost to install pipe to connect is virtually zero. CWA also has a 1 million-gallon elevated water tower within a few hundred feet of the intended connection point that will provide consistent flow, pressure, quantity and affords the Town the ability to include fire hydrants to the proposed water system without further capital costs above and beyond the hydrants.



2. **Town of Advance**

While Advance is within the 10-mile radius, the route and length of water main necessary to connect is financially not feasible. (See Exhibit B)

Length of Water Main: 48,900 LF @ \$70/LF = **\$3,423,000.00 plus soft costs**

3. **Brownsburg**

The length of water main necessary to connect to Brownsburg is 37,000 LF. (See Exhibit C) The logical route of the main would place it along Highway 136 from Brownsburg through Pittsboro (which purchases its water from Citizens via a large diameter water main already existing).

Length of Water Main: 37,000 LF @ \$70/LF = **\$2,590,000.00 plus soft costs**

4. **Danville**

The length of water main necessary to connect to Danville is 44,000 LF. (See Exhibit D)

Length of Water Main: 44,000 LF @ \$70/LF = **\$3,080,000.00 plus soft costs**

5. **Jamestown**

The length of water main necessary to connect to Jamestown is 28,500 LF. (See Exhibit E)

Length of Water Main: 28,500 LF @ 470/LF = **\$1,995,000.00 plus soft costs**

6. **North Salem**

The length of water main necessary to connect to North Salem is 34,000 LF. (See Exhibit F)

Length of Water Main: 34,000 LF @ \$70/LF = **\$2,380,000.00 plus soft costs**

7. **Pittsboro**

Pittsboro currently purchases water through Citizens via the large diameter water main running along Highway 136 (Exhibit G) that supplies the existing water tower adjacent to Lizton and is the same water main Lizton will connect to. **Therefore, this option is not feasible.**

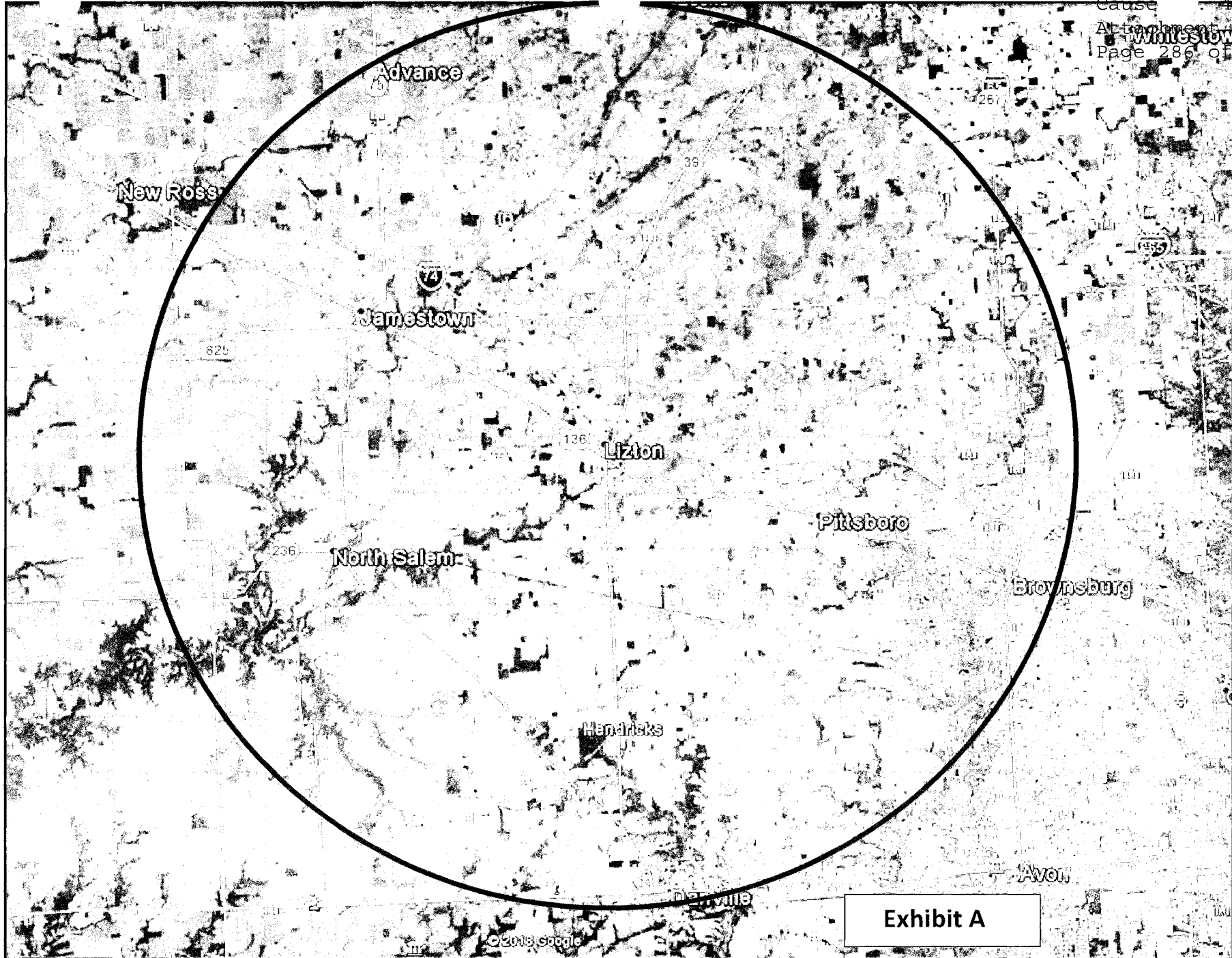
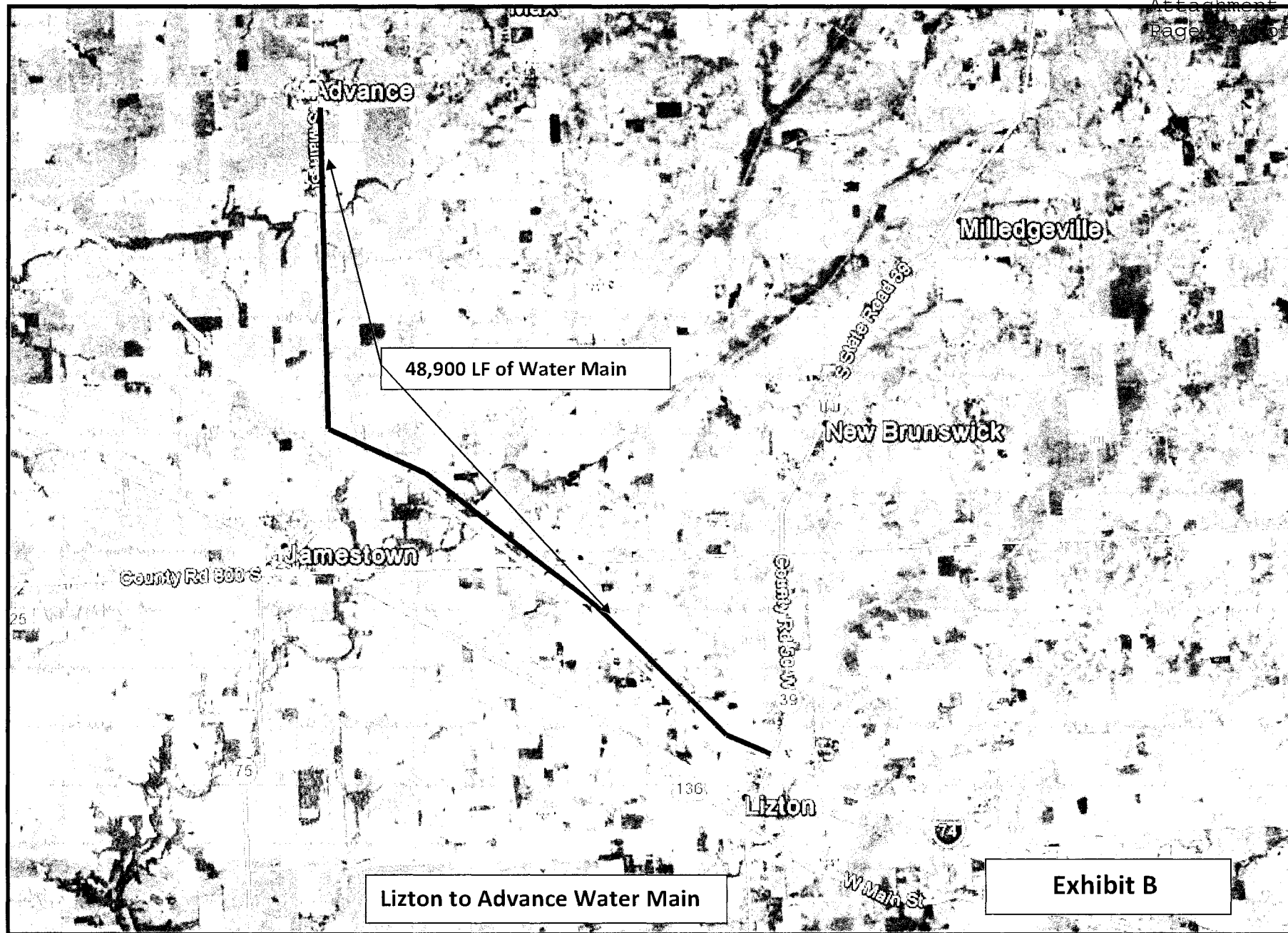


Exhibit A



Lizton to Advance Water Main

Exhibit B

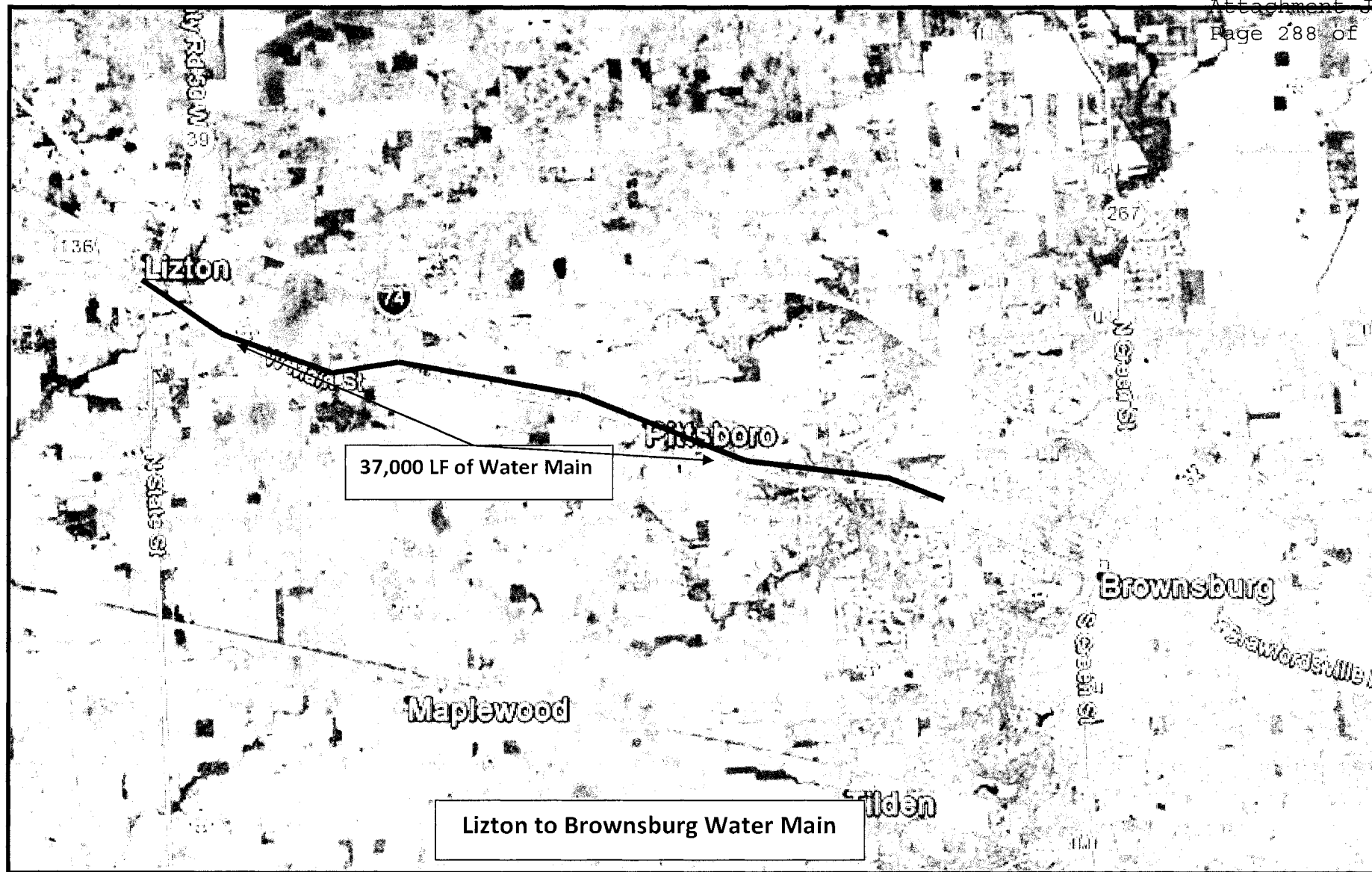
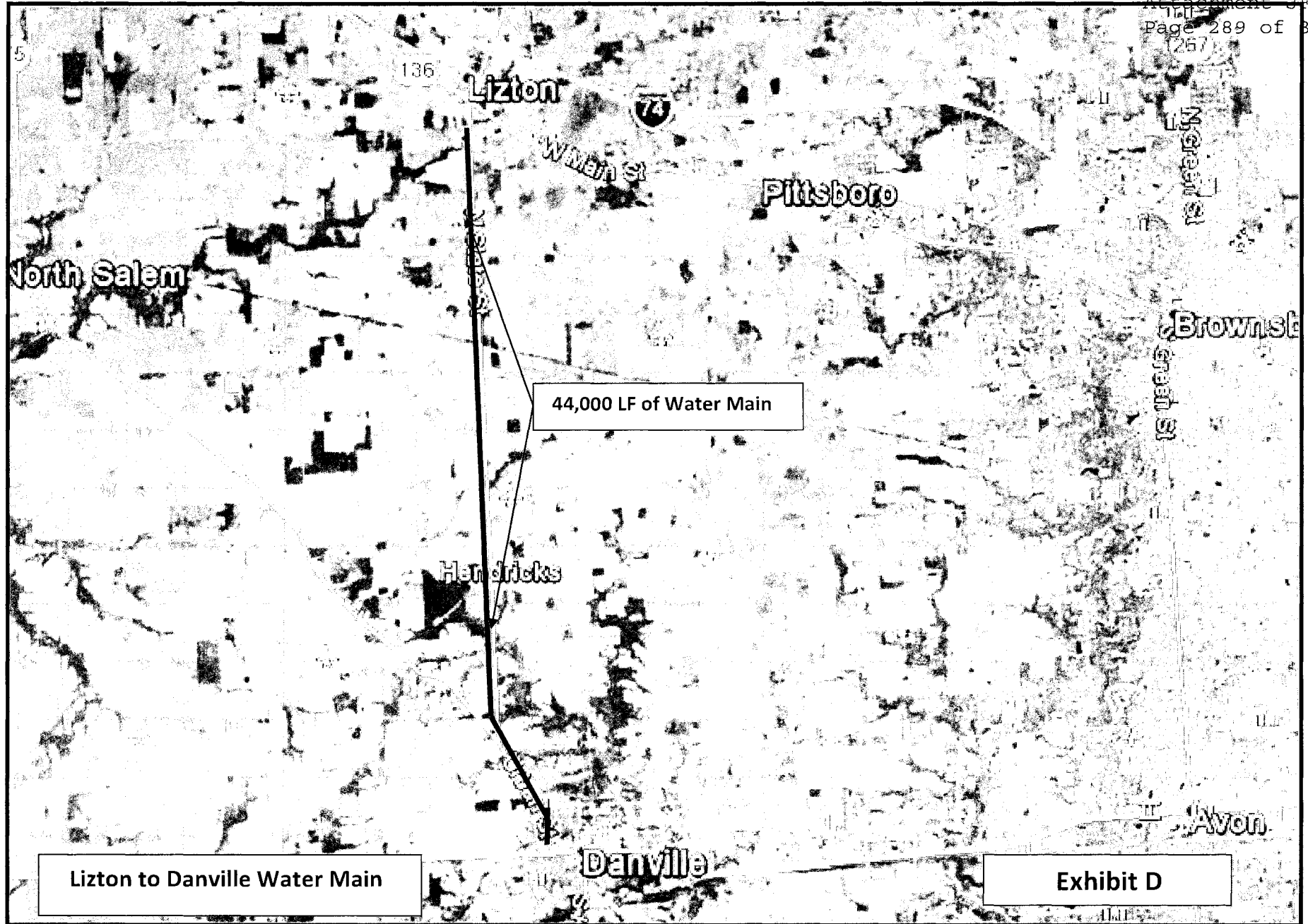
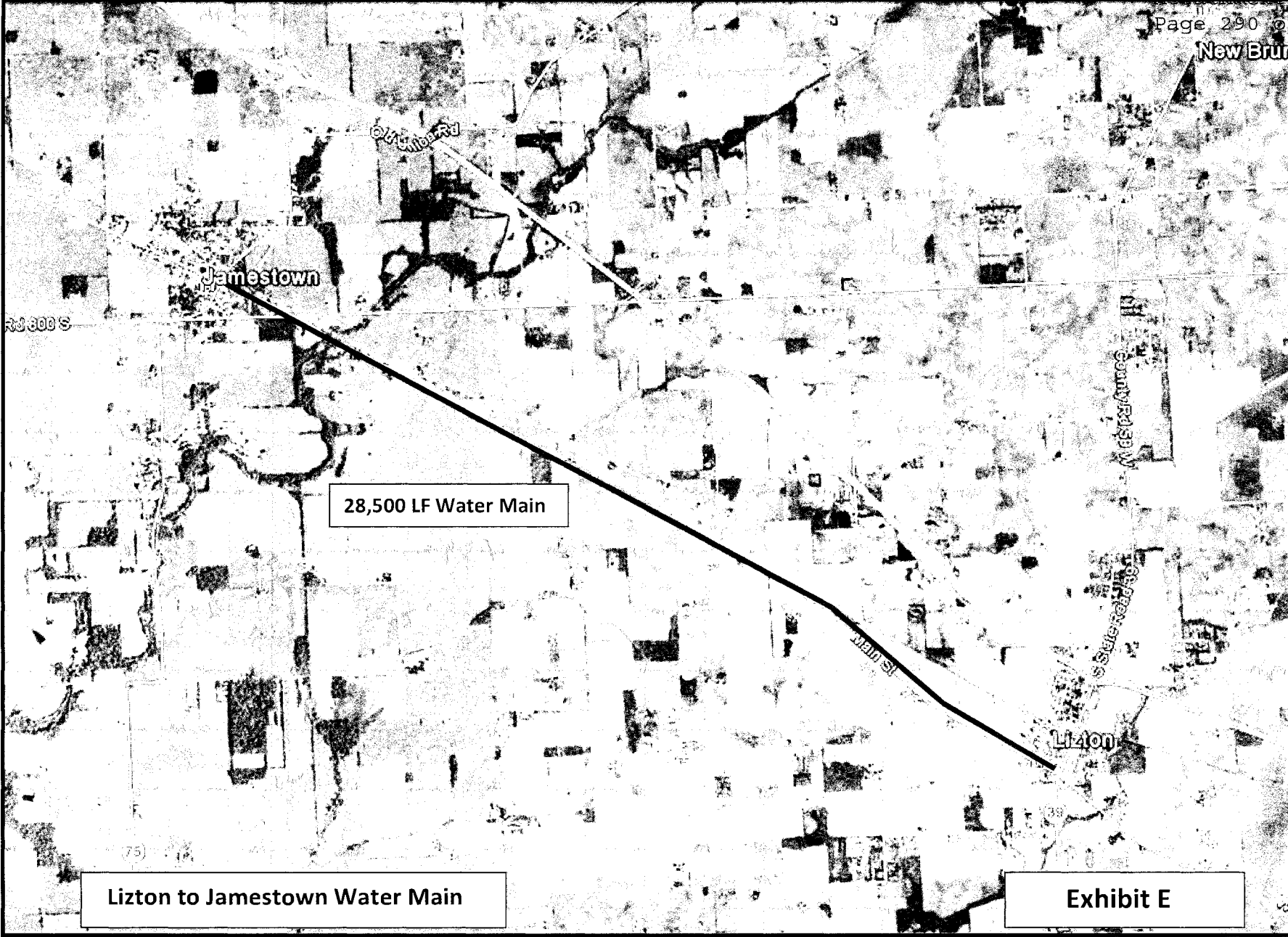


Exhibit C



Lizton to Danville Water Main

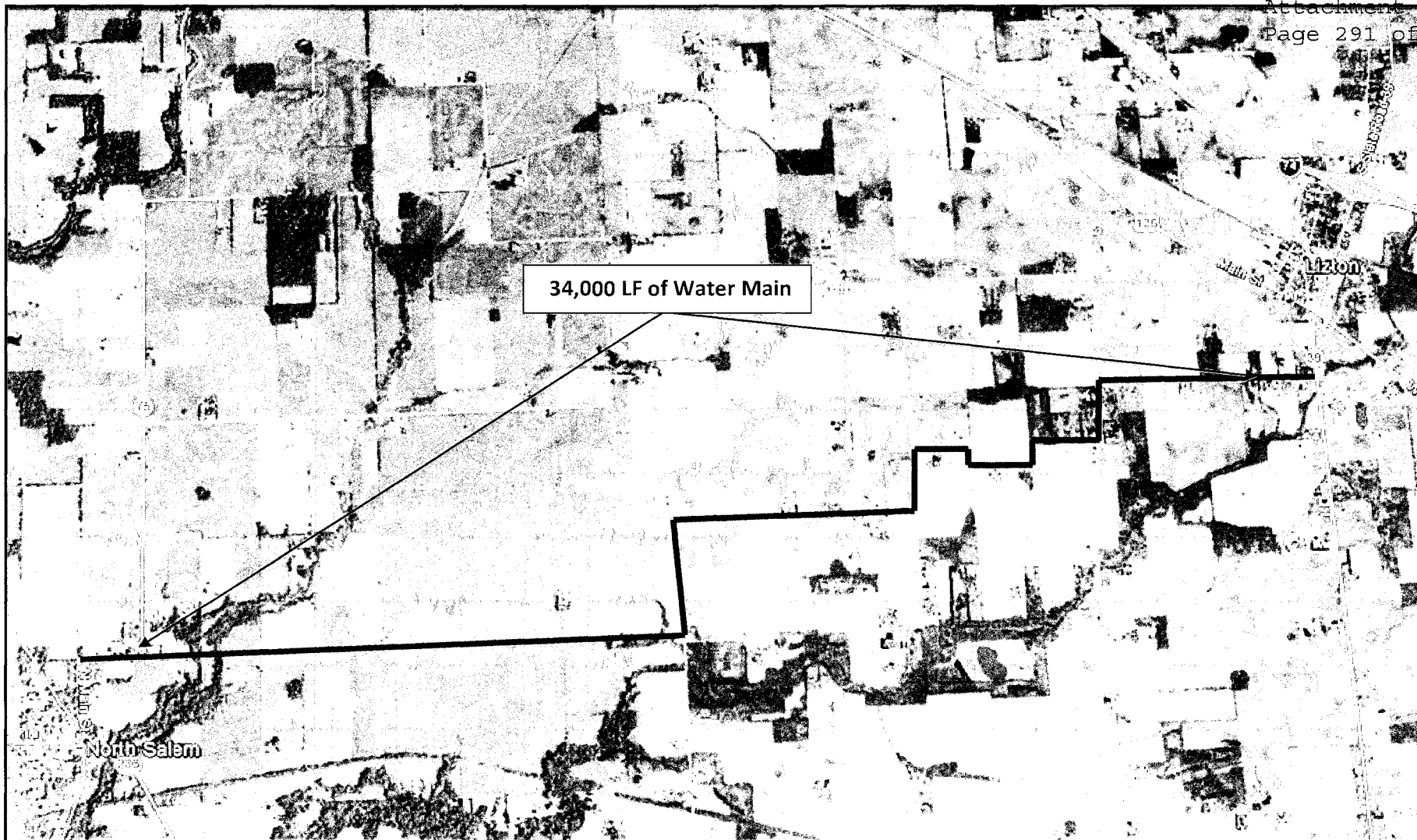
Exhibit D



28,500 LF Water Main

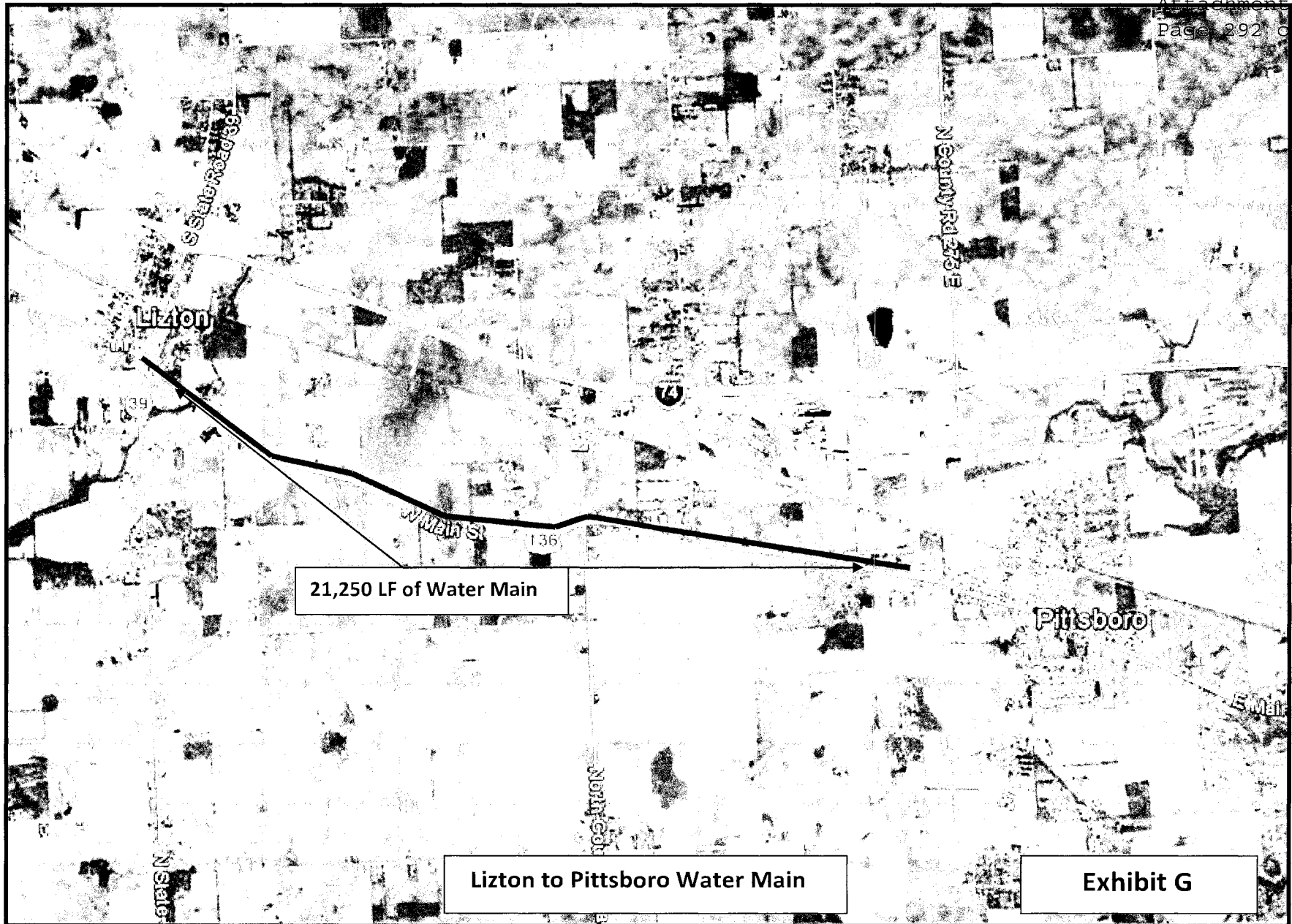
Lizton to Jamestown Water Main

Exhibit E



Lizton to North Salem Water Main

Exhibit F



21,250 LF of Water Main

Lizton to Pittsboro Water Main

Exhibit G

APPENDIX O

Chlorine Residual Discussion

Water Quality

The Lizton Water Utility DSS Operator will perform the necessary distribution testing required including sampling for chlorine residual at the point of delivery as well as a point in the distribution system (INDOT Rest Area) to ensure an adequate disinfection residual is maintained.

Section 6, sub-section b of the Wholesale Finished Water Purchase Agreement Between Citizens Water and The Town of Lizton states that Citizens Water shall provide a combined chlorine residual at the Delivery Point within a concentration range of 0.5 to 1.0 mg/L.

Further, CEG utilizes ammonia in their finished water to form Chloramines to insure sufficient residual with the extended reaches of the CEG system, and thus the Lizton system. The ammonia further reduces the possibilities for formation of disinfection byproducts. The system at the extreme end (INDOT Rest Areas) will utilize approximately 4,000 gallons per day resulting in a complete line volume changeover every 1.9 days without an additional event occurring. The use of Chloramines will insure a residual within the time period.

The Lizton water distribution system will be constructed of new PVC and polyethylene (non-metallic) pipe. The services will be constructed of CTS polyethylene pipe (non-metallic) as well. The greater flow efficiency and non-corrosion factors of the PVC pipe will ensure non-build-ups and corrosion problems that normally exhaust chlorine residual in a distribution system.

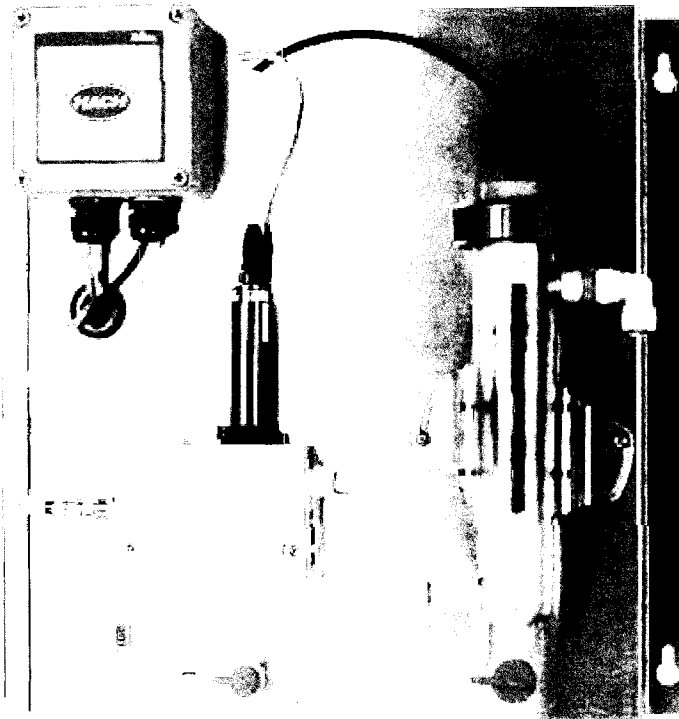


Treating Drinking Water

To ensure tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily pose a health risk.

Groundwater treatment plants aerate and filter water to remove dissolved iron and manganese. Chlorine is added to destroy any bacteria present and to maintain a level of disinfectant as the water travels through the distribution system. Fluoride is added to help strengthen resistance to cavities in teeth. A small amount of ammonia is used to minimize byproducts of the disinfection process and to enable chlorine to persist longer in the distribution system.

CLF10 sc & CLT10 sc FREE & TOTAL REAGENTLESS CHLORINE ANALYZERS



Hach's answer to reagentless amperometric chlorine measurement.

From the leaders in disinfection monitoring, the right instrument for reagentless chlorine analysis.

Exclusive Self Diagnostics

The CLF10 sc and CLT10 sc analyzers leverage Hach's exclusive self diagnostics to alert users when the process has changed or the instrument needs servicing. Diagnostic features include the Cal Watch algorithm for warning of pH and chlorine calibration deviation and a non-contacting flow sensor for notification of insufficient sample flow.

Real-Time Process Control

The CLF10 sc and CLT10 sc analyzers allow for real-time control of disinfection processes by providing continuous readings that indicate when treatment conditions have changed.

No Reagent Replacement, No Waste Stream

Chlorine measurement with an amperometric analyzer such as the CLF10 sc or CLT10 sc does not require reagents, eliminating the need for routine reagent replacement and waste stream management.

Compatible with Hach's "Plug and Play" Digital Controllers

The CLF10 sc and CLT10 sc analyzers can be used with any Hach sc digital controller. Just plug in the analyzer and it's ready to use without software configuration.

EPA Compliant According to Method 334.0

The CLF10 sc and CLT10 sc analyzers can be used for reporting chlorine residual measurements in accordance with EPA Method 334.0.



Be Right[®]

Specifications*

Chlorine Sensor	
Measurement Range	0 to 10 ppm
Lower Limit of Detection (LOD)	30 ppb (0.03 ppm) or lower
Limit of Quantitation (LOQ)	90 ppb (0.09 ppm) or lower
Resolution	0.001 ppm (1 ppb)
Accuracy	Free Chlorine: +3% of the reference test** (DPD) at constant pH less than 7.2 (± 0.2 pH unit) $\pm 10\%$ of the reference test** (DPD) at stable pH less than 8.5 (± 0.5 pH unit from the pH at calibration) Total Chlorine: $\pm 10\%$ of the reference test** (DPD) at stable pH less than 8.5 (± 0.5 pH unit from the pH at calibration) $\pm 20\%$ of the reference test** (DPD) at stable pH greater than 8.5
Repeatability	30 ppb or 3%, whichever is greater
Response Time	Free Chlorine: 140 seconds or less for 90% change (T90) at a stable temperature and pH Total Chlorine: 100 seconds or less for 90% change (T90) at a stable temperature and pH
Sampling Time	Continuous
Interferences	Free Chlorine: Monochloramine, chlorine dioxide, ozone, and chalk deposits Total Chlorine: Chlorine dioxide, ozone, and chalk deposits
Pressure Limit	0.5 bar, no pressure impulses and/or vibrations
Sample Flow Rate	30 to 50 L/hour (7.9 to 13.2 gal/hour). Optimal is 40 L/hour (10.5 gal/hour)
Sample pH	4-9
Sample Temperature (compensated for fluctuations)	5 to 45°C (41 to 113°F)
Temperature Compensation	Internal temperature sensor
Storage Temperature	Sensor: 0 to 50°C (32 to 122°F) dry, without electrolyte Electrolyte: 15 to 25°C (59 to 77°F)
Power Requirements	12 Vdc, 30 mA maximum (supplied by controller)

Dimensions (sensor only)	195 mm (7.68 in.)/25 mm (0.98 in.) (length/diameter)
Cable Length	1 m (between gateways and sc-controller)
Cable Connection	5 pin, M12 connector
Measurement Method	Reagentless, electrochemical, three-electrode amperometric system
Calibration Methods	1-point or 2-point (zero and slope) calibration
Material	Corrosion-resistant materials, (stainless steel, PVC, silicon rubber and polycarbonate)
Warranty	1-year warranty on the electrode body, includes the electronics
Panel (including 88 Panel, Gateway, Chlorine Sensor Flow Cell, pH Sensor Flow Cell)	
Operating Temperature	0 to 45°C (32 to 113°F)
Storage Temperature (panel only)	-20 to 60°C (-4 to 149°F)
Power Requirements	12 Vdc $\pm 10\%$, at 100 mA maximum (supplied by sc controller)
Mounting	Flat, vertical surface
Connections	Sample Line: 1/4-inch OD Drain Line (pH Flow Cell Outlet): 1/2-inch ID
Panel Dimensions	Length 482.6mm (19 in.) x Width 495.3mm (19.5 in.) x Depth 151.2mm (5.95 in.) (with panel-mounted components)
Weight	Approximately 5.5 kg (12 lbs) (panel and empty panel-mounted components only)
Controller Platform	sc controller models

Complete Analyzer (Panel + Sensor)

Waterproof Rating	Current rating for sc100/1000/200 controllers and gateway – IP65 (NEMA 4X)
Certification	CE / ETL, EMC
Shipping Weight	Approximately 9.1 kg (20 lbs)

*Subject to change without notice.

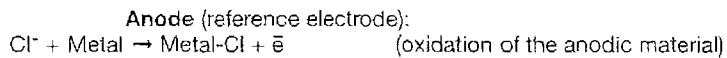
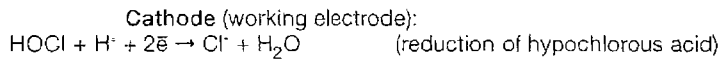
**Reference measurement must be conducted at the analyzer sampling point.

Principle of Operation

Amperometry is an electrochemical technique that measures the change in current resulting from chemical reactions taking place on the electrodes. The generated current is proportional to the analyte concentration. A typical amperometric sensor consists of two dissimilar electrodes—an anode and a cathode (i.e. silver/platinum or copper/gold, respectively).

Typically, the electrodes are covered with a membrane cap containing electrolyte, providing for better selectivity of the analysis. Additionally, a small constant electrical voltage is applied across the electrodes.

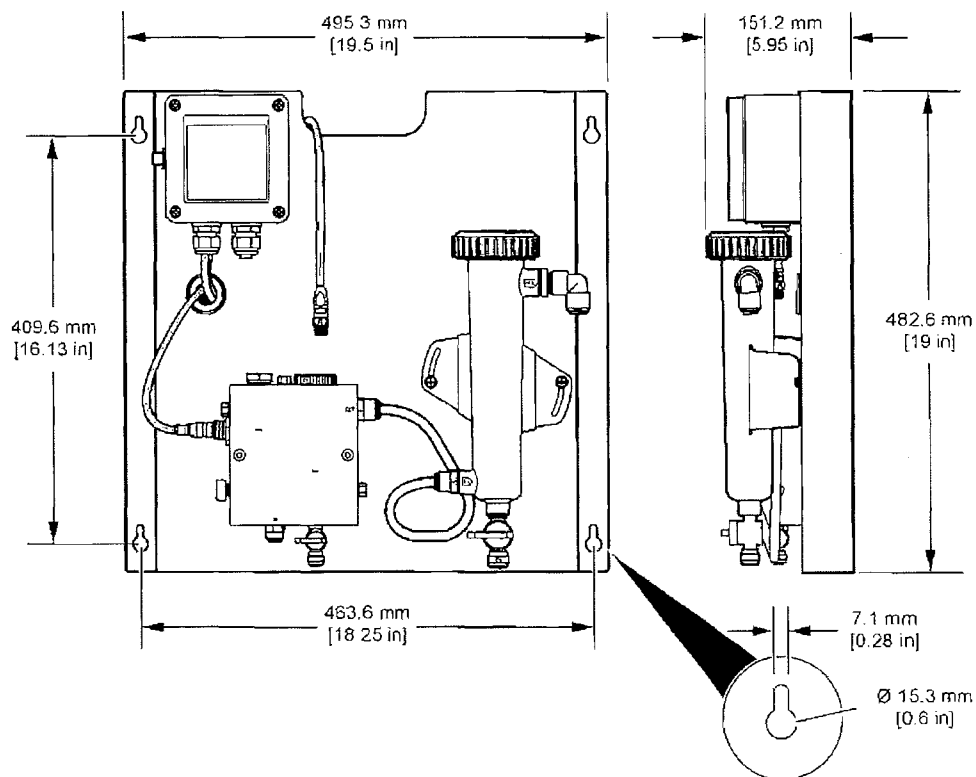
Below is a general schematic of the reduction-oxidation reaction taking place in a simple 2-electrode amperometric system:



In a three-electrode amperometric system, such as used in the CLF10 sc and CLT10 sc, the anode is essentially split into two parts—a reference and an auxiliary (or counter) electrode. These systems are always supported by special electrical circuit directing the voltage between all electrodes. The three-electrode design generally makes the measurements more stable and provides longer life for the working and reference electrodes.

Dimensions

The analyzer should be installed in an accessible location.¹ It can be mounted on a flat, vertical surface (such as a wall, panel, stand, etc.). It should allow for access for any checking or maintenance. Sample flow should meet the specifications on previous page.



¹Do not mount the panel in direct sunlight. Indoor or enclosed installation is recommended. Shield the panel and panel components from any condensing moisture or humidity, especially at the sensor/cable interface.

Ordering Information

CLF10 sc Free Chlorine Sensor with sc200 Controller and SS Panel

2980900	CLF10 sc, sc200 Single Input, pH/D
2981000	CLF10 sc, sc200 Single Input, Combo pH
2981100	CLF10 sc, sc200 Single Input, Grab Sample
2982200	CLF10 sc, sc200 Dual Input Combo pH
2982100	CLF10 sc, sc200 Dual Input, pH/D
2982300	CLF10 sc, sc200 Dual Input, Grab Sample
2981200	CLF10 sc, sc200 Single Input, pH/D, Metric
2981300	CLF10 sc, sc200 Single Input, Combo pH, Metric
2981400	CLF10 sc, sc200 Single Input, Grab Sample, Metric
2982400	CLF10 sc, sc200 Dual Input, pH/D, Metric
2982500	CLF10 sc, sc200 Dual Input, Combo pH, Metric
2982600	CLF10 sc, sc200 Dual Input, Grab Sample, Metric
2987500	CLF10 sc, sc200 Single Input, pH/D, 24 Vdc, Metric
2987600	CLF10 sc, sc200 Single Input, Combo pH, 24 Vdc, Metric
2987700	CLF10 sc, sc200 Single Input, Grab Sample, 24 Vdc, Metric

CLT10 sc Total Chlorine Sensor with sc200 Controller and SS Panel

2981500	CLT10 sc, sc200 Single Input, pH/D
2981600	CLT10 sc, sc200 Single Input, Combo pH
2981700	CLT10 sc, sc200 Single Input, Grab Sample
2982700	CLT10 sc, sc200 Dual Input, pH/D
2982800	CLT10 sc, sc200 Dual Input, Combo pH
2982900	CLT10 sc, sc200 Dual Input, Grab Sample
2981800	CLT10 sc, sc200 Single Input, pH/D, Metric
2981900	CLT10 sc, sc200 Single Input, Combo pH, Metric
2982000	CLT10 sc, sc200 Single Input, Grab Sample, Metric
2983000	CLT10 sc, sc200 Dual Input, pH/D, Metric
2983100	CLT10 sc, sc200 Dual Input, Combo pH, Metric
2983200	CLT10 sc, sc200 Dual Input, Grab Sample, Metric
2987400	CLT10 sc, sc200 Single Input, pH/D, 24 Vdc, Metric
2987800	CLT10 sc, sc200 Single Input, Combo pH, 24 Vdc, Metric
2987900	CLT10 sc, sc200 Single Input, Grab Sample, 24 Vdc, Metric

Note: See LIT2665 for more information about the combinations possible with the sc200

CLT10 sc Total Chlorine Analyzer Panel Only

LXV45B.99.13022	w/ pH/D Differential Sensor
LXV45B.99.12022	w/ pH Combination Sensor
LXV45B.99.11022	Grab Sample Only

Metric sizing available for all configurations.

Accessories

LZY051	Acidification/Cleaning Kit
9159900	Sample Conditioning Kit
9181500	pH/D Differential Analog pH Sensor, Ryton
9181600	Combination Analog pH Sensor, Ryton

Replacement Parts

9150400	Sensor, Free Chlorine
9150300	Sensor, Total Chlorine
9160200	Membrane Replacement Kit, Free Chlorine Sensor
9180900	Membrane Replacement Kit, Total Chlorine Sensor
9160600	Electrolyte, Free Chlorine Sensor 100 mL
9181400	Electrolyte, Total Chlorine Sensor 100 mL

Lab Products for Method 334.0

5870062	Pocket Colorimeter II System, Chlorine MR/HR
1426810	Chlorine Standard Solution, 10-mL Voluette® Ampule, 50-75 mg/L 16/pkg
2980500	DPD Chlorine-MR Spec✓ Secondary Standards Kit

For more information on this method, please visit: www.hach.com/method334

HACH COMPANY World Headquarters: Loveland, Colorado USA

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LIT2679 Rev 3

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In the interest of improving and updating its equipment,

Hach Company reserves the right to alter specifications to equipment at any time.



Pulsafeeder's Pre-Engineered Systems are designed to provide complete chemical feed solutions for all electronic metering applications. From stand alone simplex pH control applications to full-featured, redundant sodium hypochlorite disinfection metering, these rugged fabricated assemblies offer turn-key simplicity and industrial-grade durability.

The UV-stabilized, high-grade HDPE frame offers maximum chemical compatibility and structural rigidity.

Each system is factory assembled and hydrostatically tested prior to shipment.

Basic Systems Utilizing the same durable frame as the Standard Systems (but without the drip rim), providing structure for single or dual metering pumps with multi-function valves (ordered with pump). The Schedule 80 inlet piping assembly includes a clear Y-strainer and calibration column for easy maintenance and measurement. The simplified Schedule 80 discharge piping assembly is rigidly mounted to the frame and includes an isolation valve.

Standard Systems for PULSAtron metering pumps. A compact, rugged High Density Polyethylene frame provides structure for a single or dual metering pumps and inlet and discharge piping assemblies with full 1" drip rim perimeter. The piping assemblies utilize Schedule 80 piping, isolation ball valves and unions throughout. The inlet piping assembly includes a clear Y-strainer and calibration column for easy maintenance and measurement. The discharge piping assemblies incorporate pulsation dampeners, pressure gauge with isolator and discrete back pressure and pressure-relief valves.

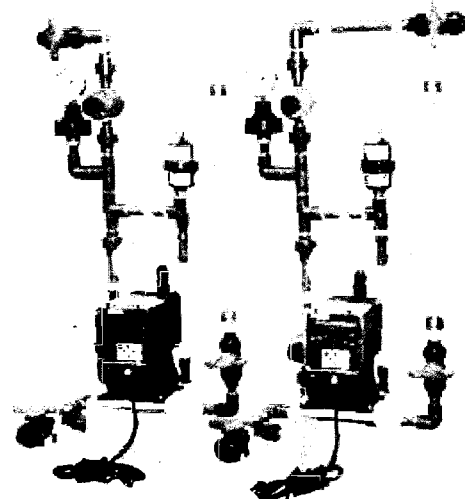
Standard floor mount systems and wall mount systems are available

Features

- **Pre-Configured System:** Rigid, unitized frame with pre-plumbed piping assemblies; schedule 80 PVC standard, other materials are available.
- **Easy to Install and Operate:** Turn-key system with single or multiple input and discharge connections; conduit box electrical connections are optional.
- **Mounting flexibility:** The rigid 1/2" frame incorporates both mounting holes for floor and wall mounting configurations. Three pump skids come with raised base and fork lift pockets.
- **Quick Delivery:** Standard, full feature systems available within 2 weeks of order!
- **Designed for harsh environments:** Rigid, 1/2" high-density (HDPE) polyethylene fabricated frame is strong, UV-stabilized and chemically inert.

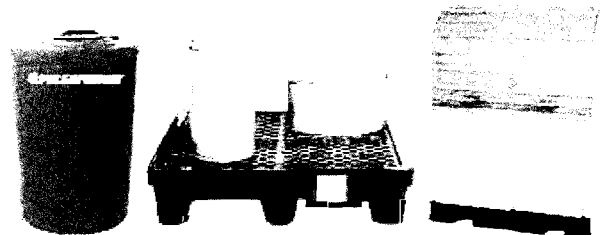
Applications

- **Municipal Water:** Disinfection systems with Sodium Hypochlorite, pH Adjustment, Fluoride addition.
- **Municipal Wastewater:** Fume Scrubbers, General Odor Control, pH adjustment, Residual Disinfectant Mgmt
- **Food & Beverage:** Clean-In-Place, Clean-Off-Line, Sterilizer Water Treatment.
- **Institutional:** Cooling Tower Water Treatment, Boiler Water Treatment, Closed Loop Systems.



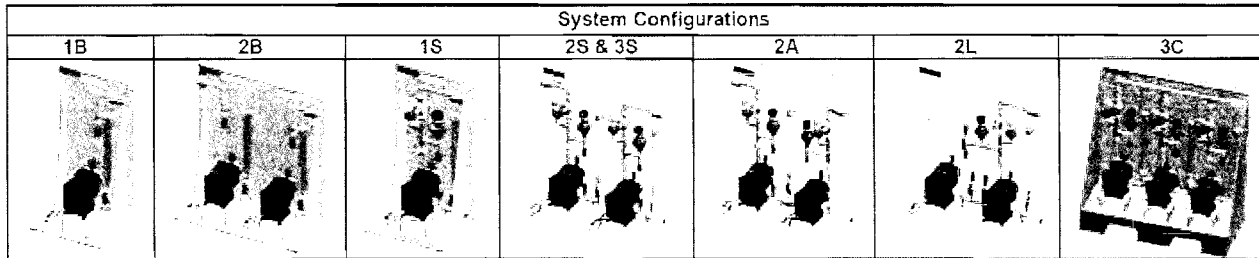
Aftermarket

- Double Wall Containment Tanks from 15 to 500 gallons.
- 1, 2, or 4 Drum Spill Containment Pallets.
- Loading Ramp and Pallet with or without Cover.



Pre-Engineered Systems

Pre-Engineered Systems Specifications and Model Selection



Pre-Engineered Systems Selection Guide					PES		
SYSTEM Position 4 & 5		1B = Single Pump, Basic System 2B = Dual Pump, Basic System 1S = Single Pump, Standard System 2S = Dual Pump, Redundant Pump, Not Connected 2C = Dual Pump, Redundant Pump, Connected, Common S & D 2A = Dual Pump, Redundant Pump w/ 3 Way Select 2L = Dual Pump, Lead/Backup, Single Pipe System 3S = Three Pump, Redundant Pump, Not Connected 3C = Three Pump, Redundant Pump, Connected, Common S & D					
NOMINAL ELASTOMER Ref. 335.6		V = Viton Elastomers for components E = EPDM Elastomers for components					
AVAILABLE OPTIONS Position 7 thru 12 as needed		HF = High Flow, Required for H7, J7, K7 & H8 Pumps 607 = Conduit Box for Power & Signal (ADDER PER PUMP) LP = Less Pump, Undrilled Base CP = Competitive Pump, Mounted At Factory (ADDER PER PUMP)					
Single Pump PES1B, PES1S	Dual Pump PES2A	Dual Pump PES2B, PES2S	Lead / Backup PES2L	Triple Pump PES3S, PES3C	Prices In This Table Are Adders per System, Not Per Pump. All Prices Are Added To The Base 'SYSTEM' Price. CF = PVC - Auto Fill Calibration Column C = CPVC Piping CC = CPVC - Auto Fill Calibration Column K = Kynar Piping KC = Kynar - Auto Fill Calibration Column SL = ...		
Note: Pump Selection and pricing is in addition to Pre-Engineered Systems Selection							

Pre-Engineered System Features

System Part Number	No. of Pumps	Maximum Pressure	Nominal Thickness	Containment Lip	Nominal Pipe Size	Inlet Valve	Y-Strainer	Calibration Column *	Pulsation Damper	Pressure Gauge	Back Pressure Valve	Pressure Relief Valve	Interconnected Piping	Discharge Valve	3 Way Pump Select Valve	Height	Width	Depth	Approx. Wt (no Pumps & Plastic Pipe)	Approx. Wt (no Pumps & SS Pipe)
PES1B	1	150 psi	1/2"	1/2"	1	1	1						1			36"	20"	16"	28 lbs.	33 lbs.
PES2B	2	150 psi	1/2"	1/2"	2	2	2						2			36"	36"	16"	54 lbs.	62 lbs.
PES1S	1	150 psi	1/2"	✓ 1/2"	1	1	1	1	1	1	1	1	1			36"	20"	16"	32 lbs.	38 lbs.
PES2S	2	150 psi	1/2"	✓ 1/2"	2	2	2	2	2	2	2	2	2			36"	36"	16"	62 lbs.	70 lbs.
PES3S	3	150 psi	1/2"	✓ 1/2"	3	3	3	3	3	3	3	3	3			42"	46"	21.5"	100 lbs.	112 lbs.
PES2C	2	150 psi	1/2"	✓ 1/2"	1	1	2	2	2	2	2	2	✓ 1			36"	36"	16"	62 lbs.	70 lbs.
PES3C	3	150 psi	1/2"	✓ 1/2"	1	1	3	3	3	3	3	3	✓ 1			42"	46"	21.5"	100 lbs.	112 lbs.
PES2A	2	150 psi	1/2"	✓ 1/2"	2	2	1	2	2	2	2	2	✓ 2	1		36"	36"	16"	65 lbs.	72 lbs.
PES2L	2	150 psi	1/2"	✓ 1/2"	1	1	1	1	1	1	1	1	✓ 2			36"	36"	16"	65 lbs.	72 lbs.

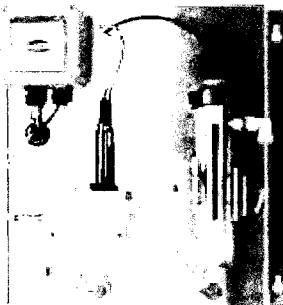
* Note: Calibration column size is 2" I.D. for standard systems and 100 I.D. on HF systems



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Hach CLT-10 Total Chlorine Analyzer w/ Differential pH Sensor & Dual-Input sc200 (2982700)

Click on the product image to view

- Amperometric technology minimizes operating costs—no reagents required!
- Compatible with Hach's plug-and-play digital sc controllers
- EPA compliant according to Method 334.0 for reporting chlorine residual measurements

Item: 45307
Weight: 31.3 lbs

Catalog Price: \$5,365.00

Quantity: [Add to Cart](#) [Add to Wish List](#)



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Buy 1-9 for \$80.05 each

Easily monitor concentration of total residual chlorine in drinking water applications without the need for reagents. These analyzers work with any of Hach's sc digital controllers (sc100, sc200 or sc1000; required for a complete system). Just plug the analyzer into the controller and it's ready to use without any software configuration. The EPA-compliant amperometric system uses temperature-compensated chlorine and pH sensors for reliable, high-accuracy measurements.

Analyzer installation is quick and simple using the included flat mounting panel. Simply hang the panel on your wall, connect 1/4" sample inlet and 1/2" drain lines, and calibrate. Hach's exclusive self diagnostics feature alerts user to process changes or instrument servicing needs. Warnings include pH and chlorine calibration deviation and insufficient sample flow by way of a non-contacting flow sensor.

Maintenance is easy; every 3-6 months, simply replace electrolyte in chlorine sensors and salt bridge and cell solution in pH electrodes. Annual maintenance includes changing out system tubing, and replacing your chlorine sensor's membrane.

These complete systems include a rugged dual-input sc200 digital controller that mounts remotely using the included 3' cable. It feature two 4-20 mA outputs, four relays (for user-programmed alarms), internal data logging with SD card removable memory and an expansion slot for facility communications such as Modbus, PROFIBUS® DP or HART®. Controller allows connection of an alternate Hach digital sensor (i.e., dissolved oxygen, turbidity, another CLT10 sc, etc.).

Includes: a mounting panel, chlorine sensor and flow cell assembly, pH flow cell assembly (without sensor), flow sensor, digital gateway and controller, plus a pH electrode for precise monitoring, and the added benefit of independent process temperature readings. Differential electrodes are rebuildable.

Tech Specs

Range: total chlorine: 0 to 20 ppm (mg/L); pH: 2.5 to 12.5

Accuracy: total chlorine: ±10% based on % of the reference test (DPD) at stable pH <8.5 (±0.5 pH from pH at time of chlorine calibration); ±20% based on % of the reference test (DPD) at stable pH >8.5; pH compensation: 4.0 to 9.0 pH; Accuracy stated when within 0 to 10 ppm (mg/L) range.

Sample flow rate: 7.9 to 13.2 gal/hour (10.5 gal/hour optimal)
Max pressure: 7.25 psi (0.5 bar), no pressure impulses

Enclosure: corrosion resistant (stainless steel, PVC, silicon rubber & polycarbonate), NEMA 4X/IP65

Related Accessories

APPROXIMATE PRICE (US \$) PER UNIT

\$80.05

UNIT PRICE (US \$) PER UNIT

\$63.00

Related Products



CLT-10-REBUILD KIT (2982700)

USABlueBook.com



Hach CLT-10 Total Chlorine Analyzer with Differential pH Sensor &am. Cause No. 2 45274

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Now In: Chemical Feed / Chemical Feed Equipment / PULAStron® General Chemical Skid System, Single Pump, Automatic, 12 GDP, 150 PSI



PULAStron® General Chemical Skid System, Single Pump, Automatic, 12 GDP, 150 PSI

Product Description

- Designed for quick installation and startup
- Single-pump/single-discharge skid includes pump
- Automatic control

Item: 50578
Weight: 190.0 lbs

Catalog Price: \$3,809.95

Quantity: Add to Cart | Add to Wish List

[View larger image](#)



Prod. Lit. (PDF) (10/14)

Use these pre-packaged skid systems to accurately meter a wide variety of chemicals. Pre-plumbed for quick installation and startup, they're piped for single discharge points.

Use with sodium hypochlorite, alum, potassium permanganate, sodium bisulfite/bisulfate, caustic, polyphosphates, antiscalants, hydrochloric acid and ferric chloride.

Includes: one automatic-control (4-20 mA) pump, chemical-resistant base, suction strainer, calibration column, discharge pulsation dampener, pressure gauge(s), pressure relief valve, back pressure/anti-siphon valve, and isolation valves. Discharge tubing not included; order separately.

Note: Systems are configured for flooded suction only. Pumps operate on 120 VAC. Alternate voltages are available; contact us for details.

Shipping: Ships motor freight.

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APPENDIX P

System Pressure Calculations

Lizton Water Pressure & Flow Analysis to the INDOT I-74 Rest Areas

According to the Statewide Facilities Manager at INDOT (Mr. Chris Wren) the Rest Area Facilities on I-74 (East Bound & West Bound) use an average of 2,000 gallons-per-day each. Each rest area facility has its own well capable of producing 25 GPM at approximately 50 psi. There are no existing hydrants or fire suppression via water required.

Currently, Citizens Water (CWA) has a 16-inch diameter water line just east of S.R 39 along the south side of S.R. 136 connected to a 1-million gallon water tower. Based on the height of the tower, the static pressure at the existing terminus of the 16-inch main is 60-65 psi.

A 12-inch C-900 PVC water main will be installed at the connection point with Citizens Water (CWA) and will extend west thence north through town and across I-74 west of S.R 39. The length of 12-inch C-900 PVC water main will be 5,670 LF. Flow calculations using a C-factor of 140 with a velocity of 3.6 ft/second, the pipe will deliver 1,250 GPM with a friction loss of 0.3 per 100 lineal foot.

Using a 60 psi at the connection point, $5,670 \text{ LF}/100 \text{ LF} = 56.7 \times 0.1 = 5.67$ loss ~ 1,250 GPM @ 54.33 psi at the end of the 12-inch water main.

A 6-inch water main will be installed within the I-74 ROW west to the Rest Areas a distance of 5,080 feet.

At 50 GPM, the loss is 0.01/100 LF. $5,080 \text{ LF}/100 \text{ LF} = 50.80 \times 0.01 = 0.508$ loss ~ 50 GPM @ 53.82 psi.

At 100 GPM, the loss is 0.04/100 LF. $5,080 \text{ LF}/100 \text{ LF} = 50.80 \times 0.04 = 2.03$ loss ~ 100 GPM @ 52.3 psi.

At 150 GPM, the loss is 0.07. $5,080 \text{ LF}/100 \text{ LF} = 50.80 \times 0.07 = 3.55$ loss ~ 150 GPM @ 50.78 psi

TOWN OF LIZTON WATER MANAGEMENT PLAN
FRICTION LOSS

12 inches

Volume Flow (gal/min)	Volume Flow (gal/hr)	Velocity (ft/sec)	Friction Head (ft/100 ft)	Friction Loss (psi/100 ft)
350	21000	1	0.03	0.01
400	24000	1.2	0.04	0.02
450	27000	1.3	0.05	0.02
500	30000	1.5	0.06	0.03
750	45000	2.2	0.1	0.05
1000	60000	2.9	0.2	0.09
1250	75000	3.6	0.3	0.1
1500	90000	4.3	0.4	0.2
2000	120000	5.8	0.7	0.3
2500	150000	7.2	1.1	0.5
3000	180000	8.7	1.6	0.7
3500	210000	10.1	2.1	0.9
4000	240000	11.1	2.7	1.2

**TOWN OF LIZTON WATER MANAGEMENT PLAN
 FRICTION LOSS**

6 inches

Volume Flow (gal/min)	Volume Flow (gal/hr)	Velocity (ft/sec)	Friction Head (ft/100 ft)	Friction Loss (psi/100 ft)
50	3000	0.6	0.02	0.01
60	3600	0.7	0.03	0.01
70	4200	0.8	0.04	0.02
75	4500	0.8	0.05	0.02
80	4800	0.9	0.05	0.02
90	5400	1.0	0.06	0.03
100	6000	1.1	0.08	0.04
125	7500	1.4	0.1	0.05
150	9000	1.7	0.2	0.07
175	10500	2.0	0.2	0.1
200	12000	2.3	0.3	0.1
250	15000	2.8	0.4	0.2
300	18000	3.4	0.6	0.3
350	21000	3.9	0.8	0.3
400	24000	4.5	1.0	0.4
450	27000	5.1	1.3	0.6
500	30000	5.6	1.5	0.7
750	45000	8.4	3.3	1.4
1000	60000	11.2	5.5	2.4

APPENDIX Q
Water Service Sign-ups

Town of Lizton Water System Sign-ups

Cause No. 45274

Attachment JF-1

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STREET	NUMBER	Name	Agreement	Paid	Refunded	Sign-in
410 N.Church	410 N.Church	Williams	✓ first round			
Ben Hur	111 W. Ben Hur	Burney	✓ 2018	1010	X	
Ben Hur	107 W. Ben Hur	Graham				
Ben Hur	109 W. Ben Hur	Graham				
Brumfield	111 W. Brumfield	Chadwick	✓ 2018	4742		
Brumfield	110 W. Brumfield	Curry	X	X	X	
Brumfield	104 W. Brumfield	Ginn	✓	ck	1019	
Brumfield	106 W. Brumfield	Heady	✓	ck	X	
Brumfield	107 W. Brumfield	Hocker	✓ 2018	ck#374		
Brumfield	120 W. Brumfield	LUMC	✓ 2018	6499		
Brumfield	116 W. Brumfield	Rude	✓ 2018	2607		
Brumfield	117 W. Brumfield	Williamson	✓	X	X	
Brumfield	119 W. Brumfield	Williamson	✓	X	X	
Cherry	404 N. Cherry	Amanda Mohler	✓ 2018	ck# 1391		
Cherry	211 N. Cherry	Collins	X	X		
Cherry	107 N. Cherry	Galloway	X	X		
Cherry	106 N. Cherry	Knauer	✓ 2018	437		
Cherry	105 A& B Cherry	Lindley = 2 properties	✓	ck#2892		
Cherry	100 S. Cherry	LLC	✓	✓		
Cherry	204 N. Cherry	Mayfield	✓	ck#9833		
Cherry	306 N. Cherry	Mickey Lester	✓ 2018	ck#1232		
Cherry	312 N. Cherry	Mickey Lester	✓	ck#1285		
Cherry	200/201 N. Cherry	Smithville - 1st round	✓	✓	pd ck#44916	
Chery	314 N. Cherry	Marks				
Church	401 N. Church	Barrett	✓	✓	X	
Church	409 W. Church	Barrett	✓	✓		
Church	407 N. Church	Barrett -	pd \$450 1st round per property, refunded him \$200.00 each			
Church	104 N. Church	Church Adm Build	✓ 2018	ck#62801		
Church	310 N. Church Street	Dax Foster	X	X	X	X
Church	314 N. Church	Elliott/Wood	✓ 2018	ck#0146748798		
Church	402 N. Church	Geyer	X	X	X	X
Church	209 N. Church	Graf/Cora	2018	ck#2374	1003	
Church	202 N. Church	LCC	✓	ck#4364		
Church	201 N. Church	P. Summers	✓ 2018	ck#3238	X	
Church	305 N. Church	Poland	✓ 2018	ck#5933	X	
Church	309 N. Church	Poland	✓ 2018	ck#5933	✓ 1030	
Church	206 N. Church	Poynter	✓	X	X	
Church	108 N. Church	Rae	X	X	X	X
Church	105 N. Church	Randel, Vickey, Mitscher	✓ 2018	ck#H10	X	X
Church	210 N. Church	Shugars	✓ 2018 previous	✓ owner paid left \$	X	X
Church	306 N. Church	Simmons	✓	ck#2021		
Church	302 N. Church	Tremble	✓	✓	1033	
First	403 W. First	Fisher	✓ 2018			
First	405 W. First	Fulton	first round ✓			
First	407 W. First	Fulton	first round ✓			
First	408 W. First	Kimmel	X	X	X	
Huber	606 Huber	Baber	✓ 2018	ck#1340		
Huber	610 Huber	Baber	✓ 2018	ck#1340		
Huber	618 Huber	Ben Jones	✓	✓	X	✓
Huber	620 Huber	Hayes	X	X	X	
Huber	602 N. Huber	Scott	X	ck#4628	X	
Huber	614 Huber	Uhrick	X	X	X	
Kody Dr. Apts.	Kody Dr. Apts.	Keers				
Lebanon	500 Lebanon	Brasher	Paid 1st round ✓ 2018	✓ 0958		
Lebanon	640 Lebanon	Caldwell				
Lebanon	212 Lebanon	Calhoune				
Lebanon	205 Lebanon	Christian	✓ 2018	paid	X	
Lebanon	502 Lebanon	Coffenberry	✓ 2018			
Lebanon	209 Lebanon	Crouch	✓ 2018	✓ ck#10909		
Lebanon	602 Lebanon	DC Capital/Supreme Prop	✓ 2018	ck 2281		
Lebanon	615 Lebanon	Debruhl	✓ 2018			
Lebanon	617 Lebanon	Debruhl	✓ 2018			
Lebanon	302 Lebanon	Egbert	✓ 2018	ck 3269		
Lebanon	625 Lebanon	Fotchman				
Lebanon	506 Lebanon	Garland	✓ 2018	ck2547		
Lebanon	213 Lebanon	Graham	✓ 2018	✓ ck#788		
Lebanon	621 Lebanon	Haag	✓ 2018	ck#604		
Lebanon	621 Lebanon	Haag, Michael	✓	ck#604		
Lebanon	609 Lebanon	Holman	✓	ck#1273		
Lebanon	413 Lebanon	Jackson				
Lebanon	521 Lebanon	Kincaid	✓ first round	✓ 2978	X	
Lebanon	526 Lebanon	Lindley	✓ 2018	ck#2892		

Town of Lizton Water System Sign-ups

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Lebanon	646 N. Lebanon	LUMC	✓ 2018	ck 6498		
Lebanon	606 Lebanon	Madjesky				
Lebanon	221 Lebanon	Matt Kish	✓ 2018	ck#153		
Lebanon	636 Lebanon	Neeley				
Lebanon	407 Lebanon	Paino Schoolhouse Apts. (✓ 2018	✓	10279	
Lebanon	204 Lebanon	Paris (Kiser)	✓ first round			
Lebanon	522 Lebanon Street	Paula Dillon	✓ 2018	✓		
Lebanon	505 N. Lebanon	Pearman	✓ first round	8293	X	
Lebanon	509 N. Lebanon	Perry Phillips	✓ 2018	ck#10015		
Lebanon	514 Lebanon	Rae/Teresa Hickner	✓ 2018	✓		
Lebanon	217 Lebanon	Randall Randy Richard (Jo	✓ 2018	pd cash		
Lebanon	109 N. Lebanon	Roark	✓ 2018	✓ ck#261		
Lebanon	643 Lebanon	Scott	✓ 2018	ck 12382		
Lebanon	201 Lebanon	St. BK	✓	✓		
Lebanon	113 Lebanon	St. BK (Moore Rd)	✓	✓		
Lebanon	630 Lebanon	Stapleton				
Lebanon	513 N. Lebanon	Ted & Cathy Smith	✓	ck#796		
Lebanon	106 Lebanon	Town Hall	✓ 2018			
Lebanon	622 Lebanon	Waling				
Lebanon	206 Lebanon	Williams	✓ 2018	ck#1424		
Lebanon	616 Lebanon	Wilson				
Levi	205 Levi Drive	David Gaskill	✓	✓ previous		
Levi	201 Levi	Devitt	✓ 2018	ck 1975		
Levi	202 Levi	Land	✓			
Levi	204 Levi	Roseboom				
Main	309 W. Main	1st Baptist	X	ck#16329	X	✓
Main	218 W. Main	Agals	X	X	X	X
Main	205 W. Main	Barrett (no sewer connect	✓	✓	X	X
Main	202 W. Main	Brasher - 1st round	✓	ck#0958		
Main	411 W. Main	C. Huckleberry	✓ 2018	ck#2240		
Main	413 W. Main	C. Huckleberry	✓ 2018	ck#2243		
Main	102 W. Main	Dairy Bar	✓	ck#2084		
Main	103 W. Main	Canada (store)	✓ 2018	ck#1252	X	X
Main	104 E. Main	Canada (empty lot)				
Main	110 E. Main	Canada (empty lot)	✓ 2018	✓ #1252		
Main	210 W. Main	DEK Properties/Thompson	✓ 2018	X	X	X
Main	402 W. Main	Drumwright	X	X	X	X
Main	306 W. Main	Eric Baynard	✓	ck#2863 and ck#1206	1018	
Main	101 E. Main	Fire Dept.	✓ 2018	X	X	X
Main	213 W. Main	Hughes	✓	ck#1679	1011	X
Main	214 W. Main	Keers	X	X	X	X
Main	405 W. Main	Lester	X	X	X	X
Main	305 W. Main	Lewis	X	X	X	✓ first round
Main	209 W. Main	McNeely	X	X	X	X
Main	217 W. Main	Padgitt	X	X	X	X
Main	410 W. Main	Sullivan	✓	ck#2907	1034	X
Main	406 W. Main Street	Surack, Richard	✓	ck#102		
Main	104 W. Main	Thompson, Bell, Canada	✓	ck#1252		
Main	317 W. Main	W&G Machine & Tool	X	ck#11689		
Main	301 W. Main	Williams	X	X	X	X
Mulberry	102 Mulberry	Armstrong		ck#1615		
Mulberry	106 Mulberry	Coles	✓	X		
Railroad	409 Railroad	Barrett (5 unit apartment)	✓	✓		
Railroad	405 Railroad	Hobble	✓ 2018	✓ 1340		
Railroad	413 Railroad	Smith, David	✓	ck #6991		
Second	407 W. 2nd	Charles - 1st round	✓ 2018	X	X	
Second	522 W. 2nd	Myers	✓ 2018	1279	X	
Second	526 W. 2nd	Myers	✓ 2018	1279	X	
Shockley	321 Shockley Street	Dawn Rushmeier	✓	cash		
Shockley	116 Shockley	Austin	✓	not paid		
Shockley	108 Shockley	Baber	✓ 2018	ck#1340		
Shockley	112 Shockley	Baber	✓ 2018	ck#1340		
Shockley	121 W. Shockley	Eads	X			
Shockley	220 Shockley	Hicks	✓ 2018	738		
Shockley	117 W. Shockley	Brainer, Todd	✓	ck#221		
Shockley	113 W. Shockley	Miner	✓ 2018	6009		
Shockley	321 W. Shockley	Ruschmeir	X			
Shockley	317 W. Shockley	S&C Financial	X	X		
Shockley	208 Shockley	Smith	X			
Shockley	210 Shockley	Smith	X			
Shockley	120 Shockley	Williamson	first round ✓	ck#4401		
Shockley	109 W. Shockley	Zwilling	first round ✓	X	X	
Shockley - approx	240 Shockley	Baber	✓ 2018	ck#1340		

Town of Lizton Water System Sign-ups

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State	511B N. State	Barn @ Kennedy Farm				
State	514 N. State	Chris & Jennifer Dearborn	✓	ck#2717		
State	402 S. State	Clark	X			
State	501 N. State	Coffey				
State	110 S. State	Danford	✓ 2018	3528		
State	504 N. State St.	Della & Jimmy McKinney	✓	✓		
State	101 N. State	Dollar General				
State	518 N. State	Dugan, Rob & Jamie	✓ 2018	X		NOT pd.
State	530 N. State	Garland	✓	2670		
State	505 N. State	Goes with S03 n. State (Cl	✓	ck#11079		
State	480 N. State	Hostettler	X			
State	510 N. State	Joseph	✓	pd ck#1002		
State	411 N. State	Rusted Silo	✓	ck#21341		
State	410 S. State	Long	X			
State	527 N. State	Love	X	X	X	
State	527 N. State	Love	structure here BK Prop of School House Apt			
State	515 N. State	Love - no structure here	✓	✓	1032	
State	402 S. State St	Marti Walker	✓			
State	522 N. State	Mohr	✓	7249		
State	111 N. State	New Bev Mart	✓ 2018	✓ ck#21291		
State	511 N. State	Poland	X			
State	526 N. State	Scott	✓	3531	X	
State	206 N. State	State Bank of Lizton	✓	ck#63676		
State	401 N. State	Storage/Grahaam (Pizza)	X	X		
State	201 N. State	Sunoco	✓ 2018	✓ ck#419		
State	503 S. State	Venture Church – Pete Owner of the building, paid for the church				
State Street	301 State St. N	Owner: JEP Holdings	empty lot✓	PAID - ck#8868		
State Street	211 State St. N	Owner: JEP Holdings	empty lot✓	PAID - ck#8869		
Stillmeadow	117 Stillmeadow	Adams/Gardner	✓ 2018	✓ ck#31786		
Stillmeadow	105 Stillmeadow	Ashley				
Stillmeadow	122 Stillmeadow	Ayers	✓ 2018	✓ ck#3815		
Stillmeadow	102 Stillmeadow	Brawn				
Stillmeadow	118 Stillmeadow	Brindle, Amanda	✓ first round	✓	✓ 1002	pd. Again ck#1625
Stillmeadow	106 Stillmeadow	Cowen	✓ 2018	✓ ck#2008		
Stillmeadow	101 Stillmeadow	Donald				
Stillmeadow	109 Stillmeadow	Hornback (new owner)	✓ 2018	ck#210		
Stillmeadow	113 Stillmeadow	McKinley	✓ 2018	✓ #1933		
Stillmeadow	114 Stillmeadow	Perry	✓ 2018	not paid		
Stillmeadow	110 Stillmeadow	Reader	✓ 2018			
Sunrise	119 Sunrise	Allison/Presson	✓ 2018	left to new owner		
Sunrise	114 Sunrise	Baron, Stacia	✓	ck#2261		
Sunrise	127 Sunrise	Carlino/Leathers	✓ first round	✓	1000	
Sunrise	118 Sunrise	Dickerson, Sheryl		#1421		
Sunrise	107 Sunrise	Hadley	✓			
Sunrise	106 Sunrise	Harvey	✓ first round			
Sunrise	134 Sunrise	Henson	✓ first round			
Sunrise	130 Sunrise	Hoskins				
Sunrise	110 Sunrise	Kliens				
Sunrise	111 Sunrise	Livesay				
Sunrise	115 Sunrise	McDonald	✓ first round	✓	1004	
Sunrise	122 Sunrise	McDonald	✓ first round	✓	#1014	
Sunrise	131 Sunrise	Rein	✓ first round	✓	1011	
Sunrise	118 Sunrise	Roe	✓	ck#1354		
Sunrise	123 Sunrise	Sipe	✓ 2018	✓		
Sunrise	103 Sunrise	Tucker	✓ first round	✓	✓ 1017	
Sunrise	138 Sunrise	Wasson				
Sunrise	102 Sunrise	Welling	✓ 2018	✓ ck#1840		
Third	401 W. Third	Baber	✓ 2018	ck#1340		
Third	408 W. Third	Hobble	✓ 2018	1339	X	
Third	410 W. Third	Smith, David	✓	ck #6991		
Third	414 W. Third	Smith, David	✓	ck #6991		
		empty lot	✓	ck#361		
		Hendricks Regional Health	WANTS IN			

APPENDIX R

**Expected Life Study
EPA Guidance Excerpt**

Proceedings of the 17th Plastic Pipes Conference
PPXVII
September 22-24, 2014, Chicago, Illinois, USA

VALIDATION OF THE LONG LIFE OF PVC PIPES

Steven Folkman
Utah State University
Logan, UT, USA

ABSTRACT

Several analytical studies have estimated that PVC pipe can have a useful life of over 100 years. The earliest widespread use of PVC pipes was in Germany in the late 1930's. These early pipes lacked proper extrusion technology. Extrusion technology was greatly developed during the 1950's and 1960's. Use of PVC pipe in the USA started in the early 1960's. It was desired to try to validate the expected long life of PVC pipe. Recently, Utah State University conducted several tests on PVC pipes that had been in use between 20 and 49 years. The tests conducted include acetone immersion and burst pressure or hydrostatic integrity tests. The purpose of these tests was to examine if the pipe still met the quality control standards that were in place when they were manufactured. The results show that when the material has proper gelation, all of the quality control tests were successfully passed. This paper will also review these test results along with testing done by other researchers examining the long life expectancy of PVC pipe.

INTRODUCTION

In the United States and Canada, underground water infrastructure was installed during three main time periods because of the population growth in the 1800s, 1900–1945, and post 1945. Pipes made of iron constructed in each of these three eras will all start to fail at nearly the same time over the next couple of decades due to the corrosion of the iron pipes. Additionally, the life span of the materials used since the 1960's has changed. Grey cast iron pipes are no longer manufactured and the new ductile iron material has been made thinner to reduce costs, but as a result, the pipe life expectancy has become shorter with each new investment cycle (1). In 2013, the American Society of Civil Engineers issued a USA Infrastructure Report Card and gave an overall "D" grade to drinking water and wastewater infrastructure which included the piping infrastructure. In an update to the "Dawn of Replacement" (2), AWWA has published "Buried No Longer" which states "More than a million miles of pipes are nearing the end of its useful life and approaching the age at which it needs to be replaced" (3). These water pipe replacement costs combined with projected expansion costs will exceed \$1 trillion over the next couple of decades. The cost of underground pipe infrastructure is only 60% of the US water industry's total funding requirement. In addition, sewer and storm drain funding needs also drive up the cost burden on rate payers. Municipalities continue to struggle with balancing water service affordability against the rise in service interruptions and declining water quality. With the introduction of piping materials such as PVC, utilities were able to address the issue of iron pipe degradation due to corrosion.

Infrastructure asset management is an approach which can help utilities bring together the concepts, tools, and techniques to manage assets at an acceptable service level at the lowest life-cycle cost. Asset management practices applied to underground infrastructure help utilities understand the timing and costs associated with replacement activities. The knowledge gained from these efforts also helps in the development of effective pipe material selection through comparative financial analysis called "life cycle costing" as part of the replacement strategies and funding plans. Understanding the longevity of a pipe improves the ability for management to make better infrastructure investment decisions with improved affordability results for customers.

THE AFFORDABILITY ISSUE

Traditionally, there has been a lack of analysis which would combine both underground pipe performance and affordability. Existing practices tended to ignore the effect of environmental conditions on different pipe materials. Yet, every engineer understands how the complexity of underground infrastructure has increased along with the array of choices. The ability to change old habits and consider new materials requires additional analysis, and improved design and installation practices. This enhanced analysis of pipe design, selection and installation sets forth the longevity and life-cycle costs critically influencing water service affordability for the next 100-200 years.

There have been many studies on water main failures rates in the US, Canada, Australia, and Europe over the last three decades. These studies mainly compared the number of pipe breaks by general pipe type and by length. While these studies have been very helpful to the water industry, the new driver has been concerned with the ability to make underground pipe decisions to improve the repair and replacement costs in an effort to address the affordability of water services to customers. This new level of fiscal accountability and demand for transparent utility management back to their owners and stakeholders has increased the need of additional evidence to demonstrate the improved decision making. Dig-up reports and pipe performance and longevity studies form the next body of evidence needed to collaborate water main break surveys and studies.

The simple formula in a life cycle cost framework is essentially that "a pipe which has a long life at a low cost is the most affordable." Engineers are to make available every alternative which would answer the simple question of longevity and cost at each relevant point within the underground network providing service. A key issue in the life cycle cost framework is the expected life of a pipe. Clark, et al (4) presents an analysis of a single utility in Laramie, Wyoming that would indicate that initially the survival probability of a PVC pipe is much lower than for a ductile iron pipe. That conclusion is at odds with a survey by Folkman et. al. (5) of 188 utilities across the US and Canada showed that PVC pipe has the lowest overall failure rate when compared to cast iron, ductile iron, concrete, steel and asbestos cement pipes. One very important conclusion from Folkman et. al. is that failure rates vary widely between utilities and thus drawing conclusions from the results of one or a few utilities is not recommended.

The analysis of pipe breakage is incomplete without the assessment of why the pipe failed. This knowledge is then applied to the cost analysis of repairing and replacing the pipe. Once again, analysis would dictate that if a pipe is failing in less than 100 years then one or more of the following factors should be considered; a) the pipe has identified manufacturing defect, b) the recommended installation procedures were not followed, c) the design process did not correctly address the actual operating conditions, and/or d) the pipe material originally selected needs to be changed. The 2013 United States Conference of Mayor's report on Municipal Procurement (6) highlighted the importance of such procurement policies.

WATER MAIN BREAK STUDIES

Water main break studies over the last 30 years demonstrate the changing trends based on the use of various pipe types.

- In 1981 Kirby (7) published an early study of water main failure rates in England. Kirby noticed that first PVC installations in 1965 suffered from higher failure rates than cast iron pipes. Most of these failures were related to improper installation procedures. By 1979, the failure rates of PVC had dropped to well below that of cast iron due to improved pipe installation procedures.
- In 1981 Bjorklund (8) looked at water main failure rates in Sweden. He noted the improved performance of PVC pipes.
- In 2005 Burn, et. al. (9) conducted a small survey of water utilities in Australia, Canada, and US. Important observations include the low overall failure rate of PVC relative to other pipe materials. Variability in survey data indicated that early failures were very likely attributed to installation practices.
- As previously mentioned, the 2012 US Water Main Breaks Study by Folkman, et. al. (5) reported results of a survey of 188 utilities across the US and Canada. That survey demonstrated that PVC pipe has the lowest overall failure rate when compared to cast iron, ductile iron, concrete,

steel and asbestos cement pipes. Corrosion was indicated as the primary cause of failure. PVC currently represents about 23% of the total length of pipe installed in US water systems. PVC dominates the rural water systems and the sewer underground infrastructure. The report also found that 8.4% of water mains are described as beyond their useful life. The average age of failing water mains is 47 years.

THE DIG-UP REPORTS: EVIDENCE OF PERFORMANCE AND LONGEVITY

Dig-up reports have occurred globally, but mainly occurring in Australia, Europe, Canada and the United States. In these reports, the pipes were subjected to a range of mechanical tests in order to assess whether there had been any deterioration during their service. Dig-up reports are valuable because they show results from pipe installed by contractors and in use for decades. Laboratory testing has a difficult time simulating real world installation and operation conditions.

UNITED KINGDOM AND EUROPEAN STUDIES

In 1985, Lancashire (10) investigated whether the performance of PVC-U pipe is affected by time in service. Lancashire studied PVC water pipes exhumed after 4 to 16 years' service and concluded that ageing was not a significant factor influencing the performance of the pipes. Material quality, particularly good gelation and small size of inclusions, was found to have the overwhelming influence on performance. The pipes were 4 inch, Class C (operating pressure 9 bar) from a single manufacturer. They performed stress regression testing and concluded that initial pipe quality is the overriding influence in determining pipe performance. All of the pipes tested would be expected to exceed a 100 year life under normal operating conditions.

In 1996, Alferink et al (11) tested exhumed PVC pressure pipes ranging up to 37 years of age. It was concluded there was virtually no change in the mechanical properties of the pipes due to ageing. The report summarized results of testing a total of 19 pipe samples. The tensile tests showed that the material modulus does not decrease with pipe age. There did not appear to be any changes in tensile strength and impact strength with pipe age. Stress regression testing showed that PVC pipes after 35 years of service still were meeting CEN stress regression requirements. They concluded that "old PVC water pressure pipes still fulfill the most important functional requirements. Ductility and resistance to internal pressure have been virtually unaffected by ageing, and are still on the same level as for new pipes."

Hülsmann (12) in 2004 reported on tests of some of the first PVC pipes installed in Germany. One set of tests examined 15 pipe specimens were exhumed after being in use for 23 years. They ranged in diameter from 20-48 mm (0.787-1.890 in) and were subjected to long term hydrostatic pressure testing. The testing was completed at 60°C and then the Arrhenius equation was used to scale the results back to 20°C. The extrapolation of the stress regression data was taken out to 10⁹ hours (114 years). Hülsmann concluded that under realistic conditions in the Bitterfeld location and at 4-5 bar (58-83 psi) water pressure, it may be assumed that another 100 years of safe operation could be expected. An additional nine pipe specimens, 4 coming from a 32.5 mm (1.28 in) pipe and 5 coming from a 25.2 mm (1.0 in) pipe, were in operation as potable water pipes for 53 years at 4-5 bar (58-83 psi) operation pressure. The 9 samples were subjected to long term hydrostatic pressure test at 60°C. An extrapolation of the stress regression data was to 10⁶ hours (114 years). In conclusion, these pipes would last another 100 years of operation even at 7 bar (102 psi) and 60°C (140°F) operating conditions. If the temperature is between 20-40°C (68-104°F) and the operating pressure is doubled to 8-10 bar (116-145 psi), the pipe would easily operate for 100 years as a potable water pipe with a safety factor of 1.5.

The following year in 2005, Boersma and Breen (13) examined chemical and physical ageing of PVC pressure pipe. They defined chemical ageing by a change in the chemical structure of a polymer and physical ageing as a change in the physical structure. He notes that "Chemical ageing at 15°C seems not to have a significant influence on the quality of PVC water distribution pipes." Physical ageing was investigated by examining the free volume relaxation by measuring yield stress. Accelerated aging of PVC pipe at 60°C leads to an increase in yield stress and thus yield stress is an indication of the pipe age. However, measured yield strength of pipes in service up to 30 years does not show any trends indicating changes in yield strength with pipe age. He concluded that "Physical ageing at 15°C seems not

to have a significant influence on the quality of water distribution pipes." They also tested PVC pipes for craze initiation, stress regression, slow crack growth, and fatigue and concluded that the service life of high quality PVC should exceed 100 years.

In 2006, Breen (14) studied five excavated pressure pipe specimens produced between 1959 and 1997 with pipe diameters between 160 and 400 mm (6.3 and 15.7 inch). He performed chemical and physical ageing tests on the PVC along with tensile, craze initiation, burst test, slow crack growth, impact test, and fatigue measurements. He concluded that the "existing PVC tap water pipe systems in the Netherlands will operate for at least 100 years provided that the internal and external loads do not result in hoop stresses which will exceed 12.5 MPa and that no micro-crack and mechanical damages are present in the PVC pipes."

AUSTRALIAN TESTING SHOWS NO PIPE DEGRADATION AFTER 30 YEARS

The testing methodology used by Stahmer and Whittle (15) takes into consideration the field performance of the PVC pressure pipes as well as the actual testing based on the Australian Standards. The pipes which were exhumed in 1996 after 25 years of operation were subjected to the following tests:

- Resistance to flattening per Australian Standard AS 1462.2
- Resistance to impact per Australian Standard AS 1462.3
- The dispersion of the resin in the pipes was assessed on samples approximately 0.02 mm thick under low power magnification.
- Tensile properties of the PVC were determined on four pipe samples, using the average of five determinations for each.
- The fracture toughness of the pipes was determined using the notched C-ring method per Australian Standard Draft No. 2570.

It was reported that these PVC pressure pipes were installed in a variety of terrains including sandy soil and solid limestone. The performance was reported to have been satisfactory in all situations. In addition, the pipes in the system traverse both roads and rail lines. In neither instance was the pressure class of the pipe upgraded to accommodate the dynamic loads imposed by passing road traffic or trains. Nevertheless, no failures have been reported as a consequence of dynamic loading. The long-term performance of the system has been clearly dependent upon the initial pipe quality, handling and installation. Degradation of the PVC material has not occurred. For the four pipes tested, the tensile strength at yield and elongation-at-break were essentially the same. Moreover, the results are the same as expected for contemporary pipes tested at the time of manufacture. Thus it can be concluded there has been no degradation in the strength or elongation characteristics of the PVC during the service life of the pipes. The exhumed pipes have not suffered any loss of strength as a consequence of operating under pressure for almost 30 years.

These results imply there has been no deterioration in the fracture toughness during a service life approaching 30 years. A number of studies have been made of exhumed PVC pipes in order to test the premise that material degradation is neither occurring nor adversely affecting potential service life. The findings of the Australian pipe testing support the earlier works by Lancashire (10), Alferink et al (11) and Bauer (16).

Numerous studies on the fatigue failure characteristics of PVC pipe have been conducted. In 2005 Whittle and Teo (17) summarized previous research and conducted rotating beam experiments with notched PVC specimens and were able to match fatigue failure test results from pressure cycling PVC pipes. Their results show that an endurance limit exists in PVC-U pipes such that stress amplitudes less than 2.5 MPa (362 psi) would have negligible effect on the life of a pipe. This stress range is well below that expected in a typical municipal water system.

The Water Research Foundation funded a study published in 2005 titled "Long-Term Performance Predictions for PVC Pipes," Burn, et. al. (9). This report is a comprehensive review of methods to analyze the expected life of PVC pipe. They report that 100 years is a conservative estimate for a "properly designed and installed pipe." A survey was sent out to 44 water utilities in Australia, Canada, and the USA. Of the 44 participants, 17 water utilities provided detailed data. Fracture mechanics-based

models were produced to predict the conditions under which pipe failure will occur in service. These models were calibrated against failure rates recorded in several North American and Australian utilities.

NORTH AMERICAN STUDIES

Moser and Kellogg in 1994 (18) published a AWWARF funded survey of water utilities and performed impact and acetone immersion tests on 59 PVC pipe samples from 16 different utilities that were being installed in 1992. The samples provided came from ten different PVC pipe manufacturers. All of the samples passed the acetone immersion test and only four samples failed the impact tests. The survey results found some evidence of early PVC pipe failure but these problems usually occurred in the first year of operation and were usually attributed to improper pipe installation.

Moser and Folkman (19) reviewed previous studies of fatigue failure in PVC pipe and guidelines to prevent failures. They also conducted numerous pressure cycling tests of 6-inch PVC pipe and combined their results with previously reported data.

In 2013, EPCOR's Seargeant (20) reported on water main breaks in the system in Edmonton, Canada. The highly corrosive soil in Edmonton necessitated a transition from cast iron to asbestos cement pipes in 1966 and then to PVC starting in 1977. The transition to PVC has produced a dramatic reduction in water main break rates for the city. EPCOR also demonstrated that a PVC water main could be frozen in winter and not burst. This evidence is critically important for geographic areas facing climate change with severe winter conditions and freezing storms and flooding. Three PVC pipes were excavated and tested. One pipe had been in service for 17 years and the other two had been in service for 25 years. Quality control tests including quick burst, impact resistance, flattening, and acetone immersion were completed and the tests demonstrated the pipe met virtually all new pipe requirements.

RECENTLY COMPLETED DIG-UP TESTS

In 2013, Folkman and Barfuss (21) reported on quality control tests on PVC pipe that had been in use for a number of years. Subsequent to that effort, additional quality control tests of excavated PVC pipes were completed. The pipes tested are summarized in Table 1 and had been in continuous use for between 20 and 49 years. Note that samples #1, 4, and 6 were manufactured under an early commercial standards CS 256 or PS 22-70. The CS 256 and PS 22-70 standards were replaced with ASTM D2241 and the standards are nearly identical. The tests included pipe dimensions, acetone immersion, and pressure tests. The burst pressure test was used for samples that were manufactured to CS-256, PS 22-70, and ASTM D2241 standards. The hydrostatic integrity test was applied to sample #3 which was made to the AWWA C905 standard. Table 2 lists the specifications used for these quality control tests. Figure 1 is a photograph of Sample #3 prior to the hydrostatic integrity test.

Table 1. Description of PVC Pipe Tested at USU

Sample Number	Size (inches)	SDR	Usage	Standard	Year Installed	Year Excavated	Years of Service
1	4	21	Water Main	CS-256	1964	2012	49
2	4	21	Water Main	ASTM D2241	1987	2012	26
3	24	18	Forced Sewer	AWWA C905	1990's	2012	~20
4	2	26	Water Main	CS-256	1980's	2014	~42
5	4	26	Water Main	ASTM D2241	1980's	2014	~38
6	6	26	Water Main	PS 22-70	1980's	2014	~38
7	6	26	Water Main	ASTM D2241	1994	2014	20
8	6	26	Water Main	ASTM D2241	1979	2014	35

Table 2. Quality Control Test Specifications

Test	Test condition	Applicable Standards
Pipe Dimensions	6 specimens at 8 points	AWWA C905 & ASTM D2122
Acetone Immersion	8 samples	ASTM D2152
Burst Pressure	SDR 21, 630 psi in 60 s	CS-256, PS 22-70, ASTM D2241 &

	SDR 26, 510 psi in 60 s	D1599
Hydrostatic Integrity	SDR 18, 470 psi in 60 s	AWWA C905 & ASTM D1599

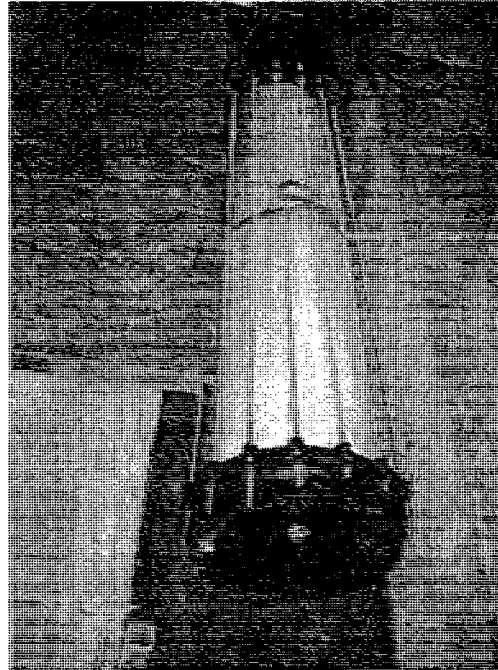


Figure 1. Photo of sample #3 prior to structural integrity testing.

The results of the testing is summarized in Table 3. As previously reported, during the 1970's a few manufacturers did have problems with their extrusion equipment and did not always obtain proper gelation as shown by the failures of samples 4 and 6 to pass the acetone test. The failure of sample 4 to pass the Burst Pressure test is attributed to improper gelation. Note that samples 4 and 6 were both manufactured under the early PS 22-70 standard. After passing the burst test, the samples were pressurized until failure. The failure pressure was consistently more than 20% higher than the specified burst test pressure called out in Table 2. Thus, where proper fusion of the PVC was obtained, there are no indications from these quality control tests that there has been any degradation in these PVC pipe specimens

Table 3. Results of Quality Control Tests

Sample	Pipe Dimensions	Acetone Test	Burst or Hydrostatic Integrity Test
1	Pass	Pass	Pass
2	Pass	Pass	Pass
3	Pass	Pass	Pass
4	Pass	Fail	Fail
5	Pass	Pass	Pass
6	Pass	Fail	Pass
7	Pass	Pass	Pass
8	Pass	Pass	Pass

It is significant to note that this was the second round of testing performed on sample #1. In 1987 Eckstein (22) reported that samples of this pipe was excavated in 1987 after 22 years of use and subjected to chemical extractant tests for water quality, stress regression tests per ASTM D1598 and D2837, acetone immersion testing per ASTM D2152, flattening tests per ASTM D2412, and impact resistance tests per ASTM D2444. All of these quality control tests were passed. The latest round of testing of sample #1 verifies that the ability of the 49 year-old pipe to perform its intended purpose has not changed. The pipe has the same water pressure capacity it had when it was first installed 49 years previously.

DIG-UP TEST RESULT SUMMARY

Accelerated ageing studies all indicate that PVC pressure pipe can be expected to provide reliable service for in excess of 100 years. Accelerated ageing tests provide the best estimates a laboratory can provide for longevity. Validation of PVC expected long term performance with exhumed samples provides additional confidence to the end user. With many installations of PVC pipe reaching 50 years with no indication of loss of capacity, this provides further validation of PVC pipe's long life.



Examples can be found of PVC pipe failures with very short life spans. When an early PVC failure occurs, it has been the experience of the author that there will be two possible causes. The failure could be due to a defective pipe usually caused by incomplete gelation of the PVC. Quality control tests by manufacturers on each lot of pipe should prevent this occurrence. The primary cause of early PVC pipe failure is improper installation procedures. Regardless of the pipe material chosen, a quality installation procedure will provide enhanced pipe life.

SEWER PIPE STUDIES

Bauer (16) tested PVC sewer pipe exhumed after 15 years of service and in 1990 reported on tests that no measurable degradation of the material occurred in this period. In particular it was reported that there was no embrittlement and no decrease in modulus or pipe stiffness.

Meerman (23) in 2008 conducted inspections of sewer pipe up to 25 years old. A number of pipes were recovered from their service sites and subjected to a range of visual, microscopic and other test to assess their condition. The tests included: visual and microscopic inspections, geometrical analysis and deformations, and surface roughness and degradation. He concluded that the existing PVC sewer pipe systems will operate for at least 100 years.

CONCLUSION AND RECOMMENDATIONS

Our water and sewer underground infrastructure is now in decline after decades of service. The signs of distress surface daily as water mains break, creating floods and sink holes. The loss of service is more than an inconvenience, causing significant social and economic disruptions at ever increasing costs. The downturn of the economy has also given rise to new issues on the affordability of water services when total price tag of regulatory issues and replacement costs are considered. These issues create a more complex environment for utility management, including an increased amount of public awareness and a greater demand for transparency and accountability. In an effort to provide solutions to these new utility business requirements, additional processes and tools are needed as part of the underground pipe infrastructure evaluation and selection process. Many utilities have fallen short in producing appropriate cost and life cycle comparison of pipe performance. When PVC pipes are included in life cycle costing with accurate expected life assumptions, utilities will see significant possible savings.

As previously mentioned, the average age of a failing water main is 47 years. This is unacceptable and unsustainable. Studies on the expected life of PVC pipe from researchers around the world consistently has confirmed a 100+ year benchmark for PVC pipes. These results are based on "dig-up" studies of pipe in use and installed by contractors. All pipe installations, regardless of the pipe material, require a quality installation. Attention to installation will pay dividends in terms of extended life.

ACKNOWLEDGMENTS

Partial support of this project was provided by Uni-Bell PVC Pipe Association.

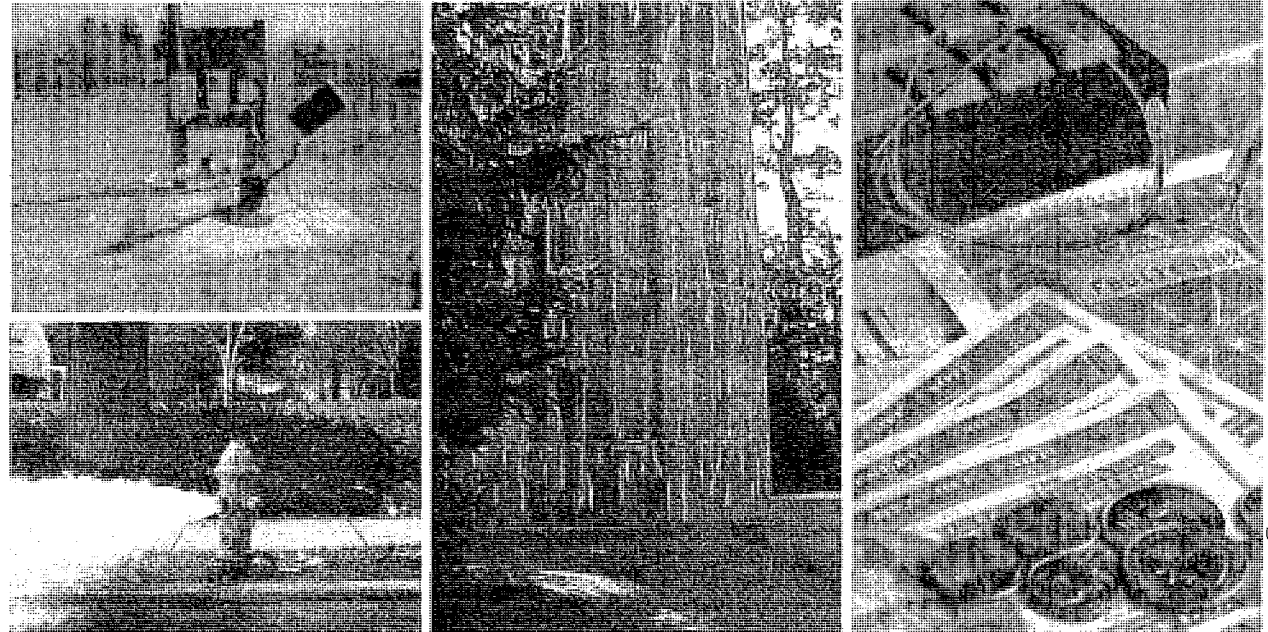
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Asset Management: A Handbook for Small Water Systems

One of the Simple Tools for Effective
Performance (STEP) Guide Series



Citizens Energy Water Capacity Availability for Town of Lizton

300N Booster Station Firm Capacity	3.6 MGD	
300N Tank Elevated Storage Capacity	2 MG	
Lizton Tank Elevated Storage Capacity	1 MG	
Current Water Demand		
	2017 Average Day Demand	Hydraulic Model Peak Day Demand
Pittsboro	0.22 MGD	0.30 MGD
Brownsburg	0.24 MGD	0.88 MGD
Tri-West Schools	0.006 MGD	0.54 MGD
Residential	0.09 MGD	
Other Non-Residential	0.19 MGD	
Non-Revenue Water	0.17 MGD	0.17 MGD
Total Demand	0.92 MGD	1.89 MGD
Available for Lizton and Future Demand		
Available for Lizton and Future Demand		1.71 MGD
Proposed Demand for Lizton		0.25 MGD
Available for Future Demand		1.46 MGD



Legend

Facilities

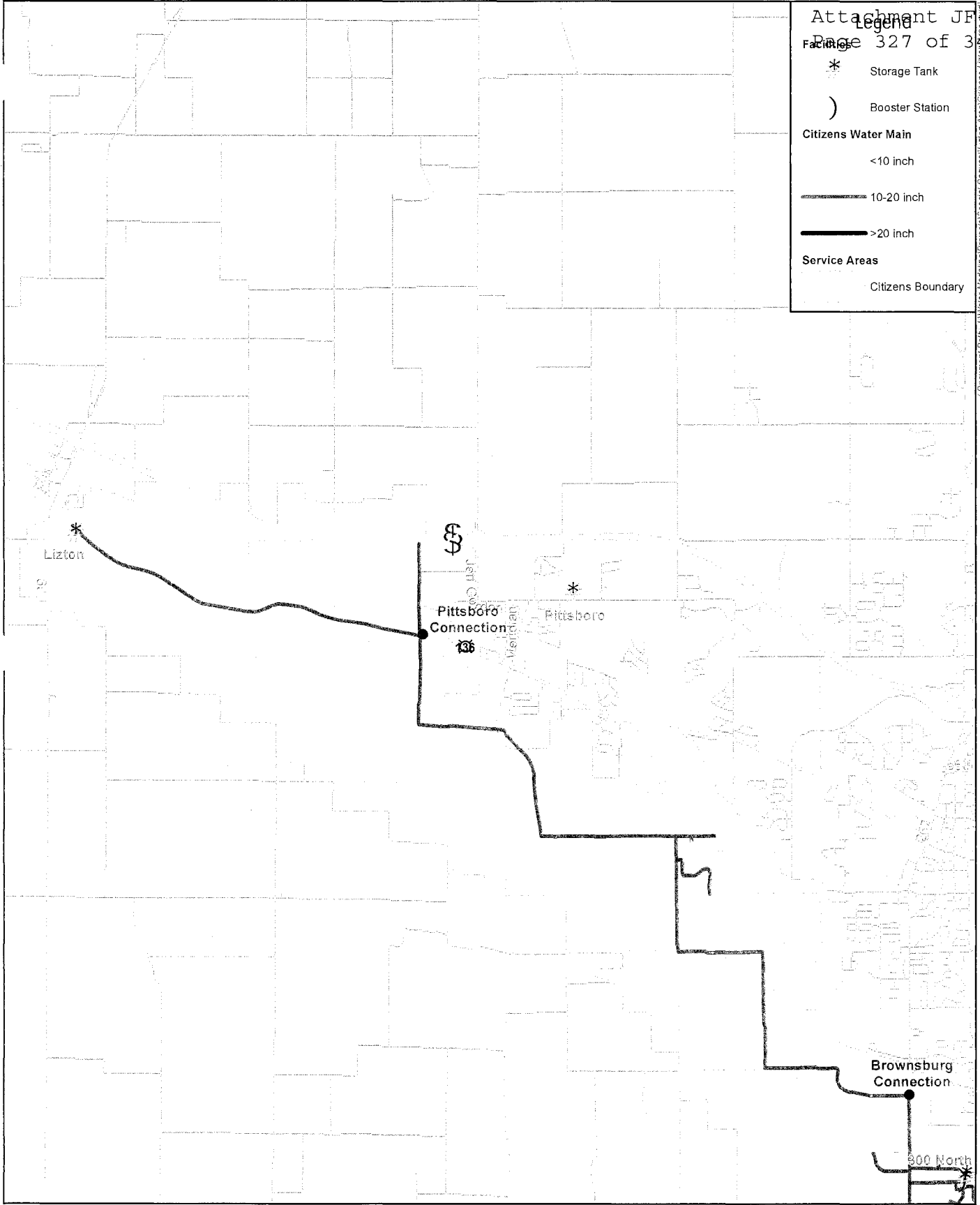
- * Storage Tank
-) Booster Station

Citizens Water Main

- <10 inch
- 10-20 inch
- >20 inch

Service Areas

- Citizens Boundary



C:\Document Path - J:\Water Modeling\Projects\Special Requests\Lizton Area\Citizens\Location Map



Citizens Water / Lizton Area



Revised 10/1/2018

APPENDIX T
Community Notification

Minutes of the Lizton Water Project Public Hearing

Monday April 9, 2018 @ 7:00 PM – Lizton Town Hall

The Lizton meeting was called to order at 7:00 PM by Town Council President Bob Uhrick who then opened the public hearing and introduced Lou Savka of Triad Associates, Inc.

Mr. Savka explained that the public hearing was serving a dual purpose this evening and that there are two separate sign in sheets being passed around and for everyone present to sign both. The public hearing was to meet a requirement of the Office of Community and Rural Affairs, which is one of the sources of intended funding for the proposed water project to serve the town. The town will be applying to this agency for \$700,000.00 in grant funds to help pay for the project. Proposals are due on May 25, and the final application is due on July 20 with awards being announced on August 16.

Mr. Savka explained how the town will be seeking a low interest long-term loan from the State Revolving Fund Program. In order to be funded, one of the steps in the process is to prepare what is called a preliminary engineering report. Prior to submitting this report to the agency, one of the requirements is to hold a public hearing to present the report as we are doing this evening followed by the council passing resolutions to authorize Bob Uhrick as the signatory and to approve and accept the report.

Mr. Savka explained that after examining options, it is the best option to connect to the Citizens Water system that has a 16-inch water main and a water tower right at our doorstep and that we will be constructing a water distribution system throughout town to serve the residents and businesses within the corporate limits. Mr. Savka had 24 x 36 sized exhibits showing the water distribution system that he walked the public through. An added component to the project is to extend mains to serve the INDOT garage at I-74 and SR 39 as well as the rest areas along I-74 west of town which currently have chronically problematic wells. INDOT will be putting money into the project to pay for their share of the project.

The total project cost has been estimated to be \$3.77 million dollars with \$700,000.00 coming from the intended grant, money from INDOT, and just over \$1 million dollars in the SRF loan. Based on having approximately 200 customers, the preliminary estimated monthly cost for users consuming 4,000 gallons per month is \$57.05. Obviously, if one uses more or less water, your bill will be more or less than that figure. The water rates are based on bringing in enough money to pay the debt on the loan, the wholesale purchase of water from Citizens and to operate the system including reading meters, and accounting needs. All of the new water mains will be installed within the public road right of way.

There is a 5 day period after tonight's public hearing for public comments concerning this project. Comments can be directed here to the Town Hall. With that, Mr. Savka opened the floor for any questions or comments.

A question was asked about Pittsboro possibly getting off of the Citizens system and putting in their own because of high rates. Mr. Savka said he was aware of such and offered that under our circumstances, having a water main and water tower on the east edge of town was the most economical and beneficial way to get us water. The other option would either be extending a large water main a great distance or installing our own wells, a treatment plant and a water tower. It would be very expensive compared to connecting to a water main right here that already has clean, safe, potable water with a water tower in our backyard. Water well data in the Lizton community is not conducive for large enough wells to serve all of you. The costs to operate a system of our own wells and treatment would be much more than the operating costs we have included in our budget under this plan. In terms of the Citizens wholesale rate, they are under the Indiana Utility Regulatory Commission and increases in water rates is a process where we as a customer would be notified in advance of a commission proceeding.

The question of getting a plumber to offer a discount to do all of the hookups was asked. Council member Lise Crouch stated that we will be looking into that. Mr. Savka stated that a conversation relative to that subject was talked about at length at the public meeting we had at the high school and that there could be a substantial cost benefit just like buying in bulk quantity is for anyone.

Another comment was made regarding development and how this could help. Mr. Savka stated that it would, however, the SRF loan program is not in place necessarily for economic development and the OCRA grant is to help us fund clean and safe water. No doubt, having a municipal water system would be attractive to development if the town wants to grow.

The Clerk-Treasurer informed the audience that they are still getting commitment forms for water service turned in by property owners and that we are currently around 127 with the apartments counted as one, but that there are about 20 units there. There are a couple businesses that haven't committed yet nor has the 16 units on the west side. We encouraged everyone to spread the word to get the commitments in. Mr. Savka explained that anyone who signs a commitment for water will have a water service line, a water meter pit and meter installed to the edge of their property as part of the project.

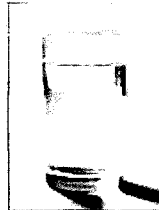
The Council then read and passed the Signatory Authorization Resolution, the PER Acceptance Resolution and signed all forms including the letter of transmittal.

om



WATER IS COMING TO LIZTON !!

The final piece of financing for the new Lizton Water System is in place with the announcement on January 17 that Lizton will receive a \$700,000.00 Grant to help pay for this much anticipated project. Our engineers have now begun the drawings for water lines and water meter services to ONLY those homes and businesses that have signed up for water.



The Deadline to sign up has been extended to April 1

We have chosen to extend the deadline to give anyone that was undecided one final chance to sign up now.

A \$250.00 fee and your signature on a commitment form is all that is required. By signing up, you are guaranteed a water tap and meter for your property that will be included in the project cost.

Get to the Town Hall and see Clerk-Treasurer, Tonya Perry to sign up

By missing the deadline, you will be required to pay the full cost of the tap and meter connection out of your own pocket!

That tap & connected meter will cost you over \$2,000.00 if you delay

PROPOSED LIZTON WATER UTILITY

Proposed Lizton Water Utility

Important Information

Due to a few key financing opportunities, Lizton should undertake a project to bring municipal water to its citizens and businesses.

WHY?

1. Availability of a \$700,000.00 Grant.
2. Indiana Department of Transportation needs to provide water to the I-74 Rest Areas and the INDOT Garage at I-74 and S.R. 39 and their willingness to put up to \$2 million dollars into this coordinated effort between INDOT and the Town of Lizton.
3. Very Low Interest Rate and Long Term Loan Availability.

There is no time better for us than Today!

Water is available right at our doorstep. Lizton would purchase water on a wholesale rate basis from Citizens Water who owns the water tower on U.S. 136 near Tri-West Schools.

The average anticipated water bill is expected to be about \$57.05 per month for 4,000 gallons per month. That is an average bill based on the expected costs and financing terms at our disposal today. If you use more water, your bill will be slightly higher.

If you commit today to connect to the new water system, you will be required to fill out a commitment form and pay a commitment fee of \$250.00. When the water main is installed past your property, a service line and water meter will be installed in front of your property.

If you do not commit and if you want to connect later on, you can do so, however, the cost to you will be much higher. The service line from the main, the water meter pit, piping and meter costs will all have to be paid by you. There may also be an additional cost required to offset the original main expense born by those who made the original commitment.

Each property owner will have to hire a local plumber to connect your business or home from your structure out to the water meter pit. For a typical home, the cost of running a small diameter water service pipe from the meter pit to your home will vary depending on the distance from the street to your dwelling or structure. We anticipate the cost to run between \$15-\$20 per lineal foot plus any plumbing fittings and work specific to your home or business.

You will also be required to disconnect your well from your household plumbing system. There absolutely cannot be a connection between your well and the new municipal water system.

If property owners are adamant about keeping their well for lawn watering, the well system will have to be piped so that it is totally isolated from the municipal water. Those property owners who would like to retain their well for such, will need to report it to the Town and the installation will have to be inspected and signed approved.

Once the water utility is established, no more new wells will be allowed to be constructed within the Town of Lizton.

Proposed Lizton Water Project Information



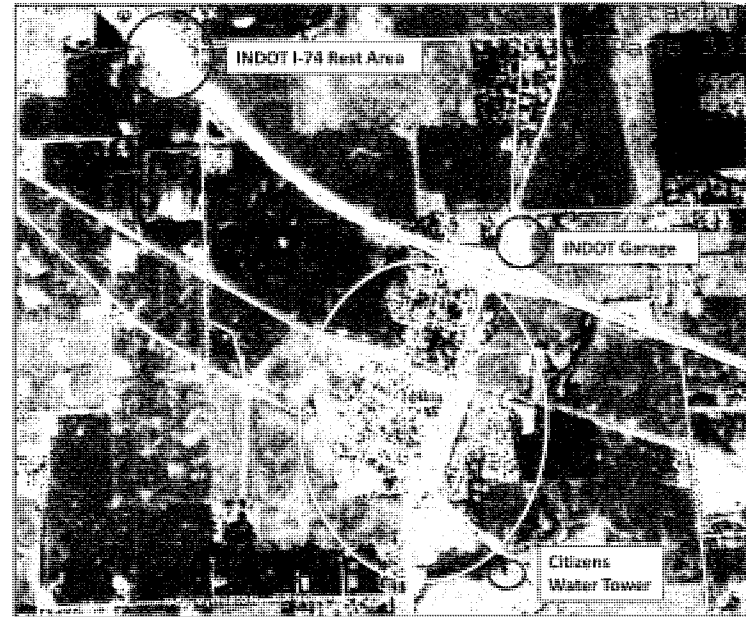
Lizton has a great opportunity to establish a water utility and bring water to the homes and businesses in our community.

As you may be aware, Citizens Water Company has a water tower and a water main on 136 by the Tri-West Schools that we can connect to and purchase water from on a wholesale rate basis.

The Indiana Department of Transportation is in need of extending water service to both the INDOT Garage at S.R. 39 & I-74 as well as the Rest Areas on I-74 just west of us. INDOT is planning to run a water main simply to serve their specific needs, but instead of going it alone, we have an opportunity to partner with their effort and install water mains throughout our town as well. INDOT will be putting a substantial amount of money into the project.

We also have the opportunity to apply for grant money to help lower the project cost as well as an infrastructure loan program with a very low interest rate.

We Will Never Have This Kind Of Opportunity Again!



Proposed Lizton Water Utility

1. Need to Design, Permit, Construct & Fund the Project

2. Need to Purchase the Water

3. Need to Operate the Utility

- Read the Meters
- Send out the Monthly Bills & Collect
- Pay the Bills
- Maintain the System



These three (3) items will make up our water bill

Item #1

1. Need to Design, Permit, Construct & Fund the Project

Total Project Cost: \$3,770,000.00
Less Grant Money: < \$ 700,000.00 >
Less INDOT Funds: < \$2,000,000.00 >
Amount to Borrow: \$1,070,000.00

The Town will borrow the money thru the State Revolving Fund Program

Loan Term: 35 Years @ 2.5% Interest Rate

Each User will pay in **\$24.08 per month** (included in the water bill)

This amount is based on having 200 customers

Item #3

Need to Operate the Utility

- Read the Meters
- Send out the Monthly Bills & Collect
- Pay the Bills
- Maintain the System

We've Budgeted \$30,000.00 Per Year To Do This
 \$30,000.00/200 Users = \$150.00 Per Year Per User

\$150.00 Per Year/12 Months = \$12.50 Per Month

Summary of Water Bill Components

Item #1	
Debt to Fund the Project	\$24.08
Item #2	
Wholesale Purchase of Water	\$20.47
Item #3	
Operate the Utility	\$12.50
Total Estimated Monthly Water Bill:	\$57.05

Item #2

2. Need to Purchase the Water

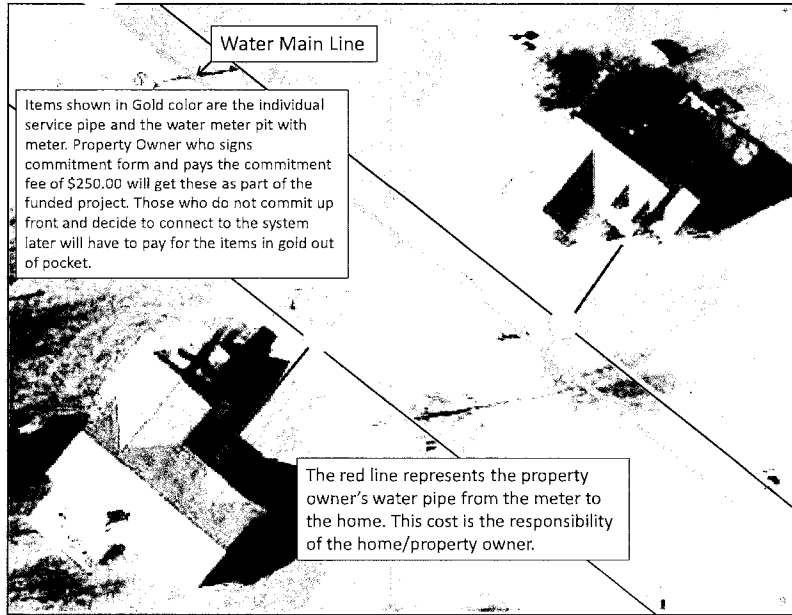
Lizton will be Buying Water on a Wholesale Rate Basis from Citizens Water (CWA)

The basis we use in the Industry to quantify/rate/fund water:

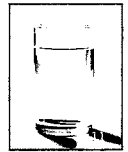
- 4,000 Gallons of Water Per Month Per Average User
- 4,000 Gallons X 200 Users = 800,000 Gallons-Per-Month
- That volume will cost us about \$4,094.00/Month

\$4,094/200 Users = \$20.47 Per Month Per User For the Water

If You Support This Effort and Want To Bring Water To Lizton...



1. Tell Our Town Leadership that You Want Water.
2. There is a Commitment Form that needs to be filled out by you the property owner and turned in to the Clerk-Treasurer's Office by March 31, 2018. The Commitment Forms are available at the Town Hall and on the Town Website at townoflizton.com
3. In order to have a municipal water service line and meter pit installed to the edge of your property...a \$250.00 Commitment Fee is Due by April 30, 2018.
4. Look for other Important Informational Postings on the website and facebook.



Benefits of a Lizton Water Utility

Water 24/7.....No Power = No Problem

No more filters, iron out, salts, etc.

System of Fire Suppression with Fire Hydrants throughout Town

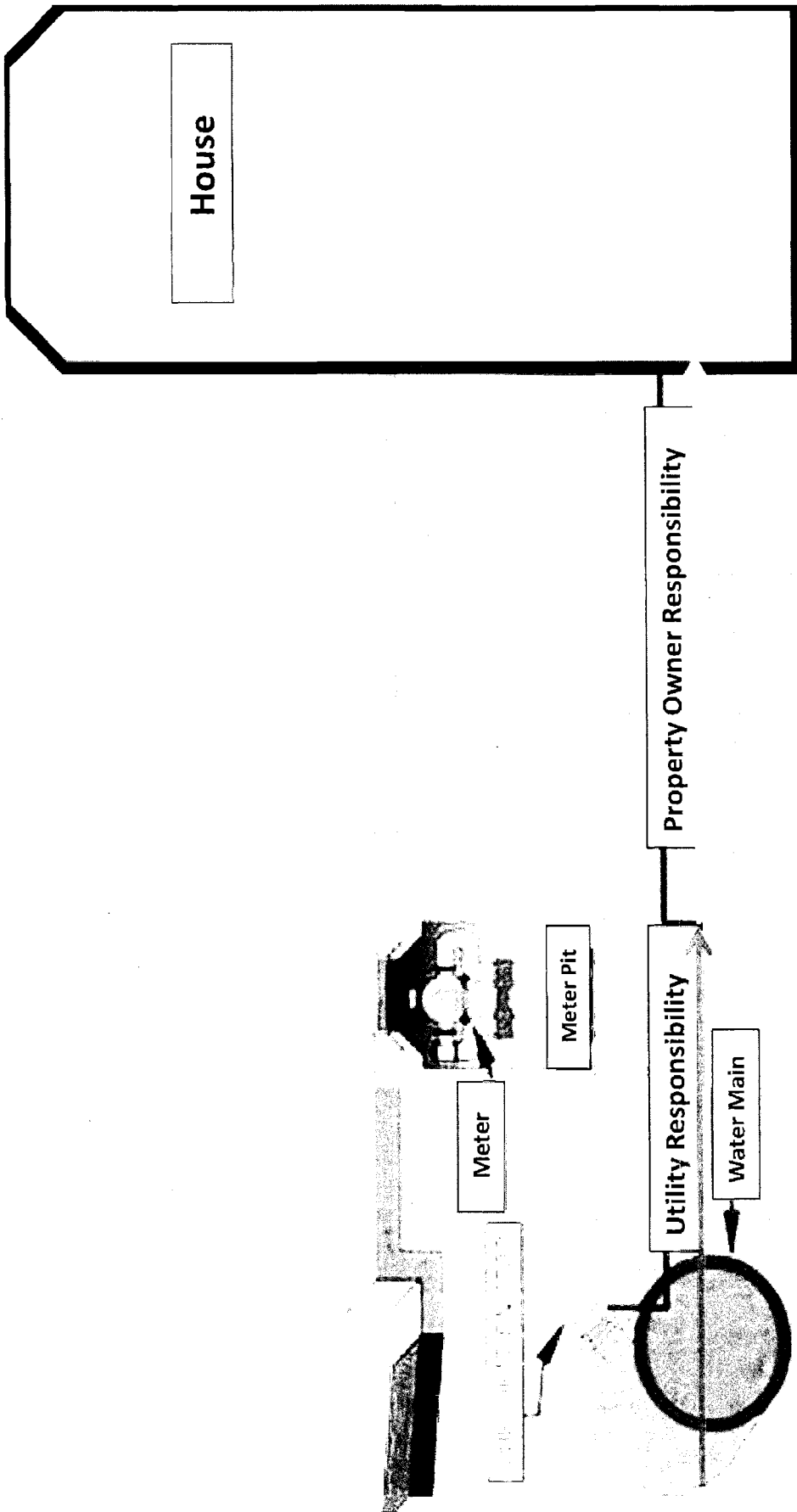


Property Owners Insurance Should Go Down

Treated & Tested Safe Potable Water

Will Benefit Your Re-Sale Value





APPENDIX U
Population Projections

FIPS	Description	Population Change						
		2015 to 2020	2020 to 2025	2025 to 2030	2030 to 2035	2035 to 2040	2040 to 2045	2045 to 2050
0	Indiana	125,805	150,979	125,328	91,743	65,079	49,820	51,057
1	Adams	541	570	459	359	448	478	484
3	Allen	11,631	12,574	10,703	8,618	7,717	7,068	7,384
5	Bartholomew	3,561	2,320	1,569	1,106	966	1,006	1,016
7	Benton	-167	-67	-141	-228	-304	-325	-213
9	Blackford	-528	-549	-618	-610	-543	-501	-485
11	Boone	7,156	7,076	6,117	4,885	3,377	2,905	3,028
13	Brown	-288	-141	-319	-429	-525	-583	-540
15	Carroll	-381	-246	-302	-383	-463	-578	-578
17	Cass	-883	-663	-890	-1,009	-1,052	-998	-873
19	Clark	4,854	5,040	4,086	3,417	3,339	3,280	3,273
21	Clay	-103	5	-141	-360	-382	-406	-363
23	Clinton	-439	-362	-378	-417	-470	-507	-464
25	Crawford	-180	-189	-274	-349	-328	-334	-320
27	Daviess	1,115	1,293	1,225	1,215	1,226	1,221	1,313
29	Dearborn	114	1,241	923	392	-156	-544	-494
31	Decatur	613	488	291	68	-87	-152	-98
33	DeKalb	503	599	373	12	-355	-601	-642
35	Delaware	-1,877	-1,444	-1,064	-1,012	-1,002	-825	-660
37	Dubois	712	1,046	1,039	579	24	-435	-507
39	Elkhart	6,406	7,138	6,564	5,987	5,557	5,104	5,175
41	Fayette	-856	-660	-718	-792	-858	-848	-768
43	Floyd	2,065	1,529	990	442	-36	-331	-423
45	Fountain	-590	-264	-423	-558	-656	-654	-541
47	Franklin	-27	525	334	38	-220	-423	-313
49	Fulton	-218	-52	-192	-331	-379	-357	-311
51	Gibson	315	444	262	64	51	6	46
53	Grant	-2,007	-1,701	-1,751	-1,907	-1,774	-1,653	-1,642
55	Greene	-647	-488	-647	-699	-755	-831	-764
57	Hamilton	34,007	36,299	38,276	34,535	27,552	23,982	23,759
59	Hancock	3,961	4,523	4,167	3,667	3,135	2,475	2,323
61	Harrison	997	1,455	1,066	715	603	452	-66
63	Hendricks	12,264	13,699	13,880	13,453	10,982	9,191	7,987
65	Henry	-853	-1,168	-1,282	-1,447	-1,530	-1,505	-1,344
67	Howard	-193	-505	-1,097	-1,520	-1,671	-1,712	-1,608
69	Huntington	-417	-378	-478	-627	-786	-873	-859
71	Jackson	1,085	538	258	-24	18	-65	-129
73	Jasper	378	1,304	1,125	901	697	455	457
75	Jay	-6	-40	-134	-251	-212	-166	-124
77	Jefferson	-37	10	-173	-384	-431	-448	-423
79	Jennings	-560	-106	-114	-236	-238	-276	-208
81	Johnson	9,375	9,410	8,794	7,798	6,534	5,912	5,723
83	Knox	-484	-404	-401	-421	-451	-407	-309
85	Kosciusko	1,339	1,912	1,295	653	269	52	158

We Protect Hoosiers and Our Environment.



100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

**CERTIFICATION OF DEMONSTRATION OF CAPACITY
FOR A NEW PUBLIC WATER SUPPLY**

June 14, 2019

Mr. Robert Uhrick, Council President
The Incorporated Town of Lizton
PO Box 136
Lizton, IN 46149

Re: Demonstration of Capacity
Town of Lizton Water Utility
Proposed PWSID # IN5232026

Dear Mr. Uhrick:

You are hereby notified that the Drinking Water Branch of the Office of Water Quality has determined that the Water System Management Plan, originally submitted on June 8, 2018 including additional information submitted thereafter, for the proposed Town of Lizton Water Utility public water supply PWSID # IN5232026 to be located at or near 106 N. Lebanon Street, Lizton, Indiana, meets the technical, managerial, and financial capacity requirements specified under 327 IAC 8-3.6 with the following conditions:

- Financial capacity still remains as an area of concern for the proposed Lizton Water Utility. In order for the utility to achieve a positive cash flow and remain financially viable it will be necessary that the project funding contributions outlined in the WSMP including the full \$2,000,000.00 from INDOT as well as all of the potential customers who made deposits as commitment to connect do so as soon as the system comes online and they begin paying rates.
- Additionally, approval of the **Petition for Rates and Financing** by the Indiana Utility Regulatory Commission must be achieved for this approved demonstration of capacity to remain valid.
- The proposed operator of the water system currently does not possess the required certification to operate the system. Prior to the Town of Lizton Water Utility being activated, an operator with a valid certification at the appropriate grade for the system must be in place.

This Certification does not constitute a construction permit. You must obtain a valid construction permit prior to the construction or installation of the proposed new public water system. Any fundamental change in the information provided in this water system management plan which may affect drinking water quality, operations, or public health must be resubmitted for review and approval by this agency.

Demonstration of Capacity
Town of Lizton Water Utility
Proposed PWSID # IN5232026

This Certification may be modified, suspended, or revoked for cause including, but not limited to the following:

Violation of any term or condition of this certification; or,
Obtaining this certification by misrepresentation or failure to fully disclose all relevant facts.

Nothing herein will be construed as guaranteeing that the proposed public water supply facility will meet standards, limitations or requirements of this or any other agency of state or federal government, as this agency has no direct control over the actual construction, operation, and maintenance of the proposed project.

If you wish to challenge this action, you must file a Petition for Administrative Review with the Office of Environmental Adjudication (OEA), and serve a copy of the petition upon IDEM. The requirements for filing a Petition for Administrative Review are found in IC 4-21.5-3-7 and 315 IAC 1-3-2. A summary of the requirements of these laws is provided below.

A Petition for Administrative Review must be filed with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the issuance this notice (eighteen (18) days if you received this notice by U.S. Mail), and a copy must be served upon IDEM.

Addresses are:

Director
Office of Environmental Adjudication
Indiana Government Center North
Room N103
100 North Senate Avenue
Indianapolis, Indiana 46204

Commissioner
IDEM
Indiana Government Center North
Room 1301
100 North Senate Avenue
Indianapolis, Indiana 46204

The petition must contain the following information:

1. The name, address and telephone number of each petitioner.
2. An identification of each petitioner's interest in the subject of the petition.
3. A statement of facts demonstrating that each petitioner is:
 - a. a person to whom the order is directed;
 - b. aggrieved or adversely affected by the determination; or
 - c. entitled to administrative review under any law.
4. The reasons for the request for administrative review.
5. The particular legal issues proposed for review.
6. The facts, terms or conditions of the action for which the petitioner requests review.
7. The identity of any persons represented by the petitioner.
8. The identity of the person against whom administrative review is sought.
9. A copy of the action that is the basis of the petition.
10. A statement identifying petitioner's attorney or other representative, if any.

Failure to meet the requirements of the law with respect to a Petition for Administrative Review may result in a waiver of your right to seek administrative review. Examples are:

Demonstration of Capacity
Town of Lizton Water Utility
Proposed PWSID # IN5232026

1. Failure to file a Petition by the applicable deadline;
2. Failure to serve a copy of the Petition upon IDEM when it is filed; or
3. Failure to include the information required by law.

If you seek to have an action stayed during the administrative review, you may need to file a Petition for a Stay of Effectiveness. The specific requirements for such a Petition can be found in 315 IAC 1-3-2 and 315 IAC 1-3-2.1.

Pursuant to IC 4-21.5-3-17, OEA will provide all parties with notice of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action. If you are entitled to notice under IC 4-21.5-3-5(b) and would like to obtain notices of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action without intervening in the proceeding you must submit a written request to OEA at the address above.

If you have questions regarding your Petition for Administrative Review by the Office of Environmental Adjudication please refer to the FAQs on OEA's website at <http://www.in.gov/oea>.

In order to assist the permit staff in tracking appeals, we request that you submit a copy of your petition to Liz Melvin, Capacity Development, Operator Certification and Permits Section Chief, OWQ Drinking Water Branch – Mail Code 66-34, 100 N. Senate Ave, Indianapolis, Indiana 46204-2251.

If you have any questions regarding this matter, please contact Liz Melvin, Permit, Capacity, Certification Section Chief at 317/234-7418 or Travis Goodwin, Capacity Development Coordinator, Drinking Water Branch, at 317/234-7426.

Sincerely,



Matthew Prater, Chief
Drinking Water Branch
Office of Water Quality

cc: James W. Frazell, Triad Associates Inc.
Hendricks County Health Department
Matthew Prater, Chief, Drinking Water Branch
Liz Melvin, Section Chief, Permit, Certification, and Capacity IDEM/DWB
Travis Goodwin, Capacity Development IDEM/DWB
Lucio Ternieden, Chief, Field Inspection Section IDEM/DWB
Lance Mabry, Permit Section IDEM/DWB
Dana Lynn, Indiana Utility Regulatory Commission
Scott Bell, Office of the Utility Consumer Counselor