

**DISTRICT PLAN  
(PRELIMINARY ENGINEERING REPORT)**

**FOR**

**WELLS COUNTY REGIONAL SEWER DISTRICT**

**WASTEWATER COLLECTION AND TREATMENT  
FOR MCKINNEY/PAXSON AREA**

**MARCH 2012**



**111 West Columbia Street, Suite 100  
Fort Wayne, Indiana 46802  
(260) 420-3114**

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## CHAPTER 1 – GENERAL

### Background

The McKinney/Paxson Area is semi-rural residential and served by individual on-site sewage systems consisting of septic tanks and leach or absorption fields. These fields are areas in which effluent from a septic tank is distributed into the soil. According to the “Soil Survey of Wells County”, most of the soils within the area are considered as “severe” in that they have a very slow rate of water transmission, poor filtering capabilities and are subject to high ground water levels.

A Warning of Noncompliance was issued on July 11, 2001 by the Indiana Department of Environmental Management. The warning was based on Wells County Health Department observations and documentation of discharges of sewage into McKinney and Paxson Ditches, county drainage ditches, which flow into the Wabash River. Water samples taken from the ditches at various times during 1999 and 2000 were tested for E.coli bacteria, as an indicator of surface water quality. The threshold value that is considered as stream pollution by State and Federal environmental agencies is 235 organism count per 100 ml. Results of sample analysis showed significant elevated counts of E.coli bacteria, an indication of improperly treated sewage from local septic systems according to the Wells County Health Department.

More recent collection of samples and analysis done in November 2008 by the County Health Department showed no change in elevated E.coli levels.

An Agreed Order was adopted on September 26, 2005 by the Indiana Department of Environmental Management that orders the Wells County Commissioners, to (A) form a Regional Sewer District, and (B) “handle wastewater infrastructure needs and to cease the inadequately treated discharges from septic tank systems from discharging to the ground surface, entering ditches or other surface waters, beginning with the McKinney/Paxson Ditch area.”

On June 3, 2009, the Wells County Regional Sewer District was formed per the IDEM formation Order.

### Project Scope

The selected plan includes serving approximately 75 residential customers:

- By providing sanitary sewers using a combination of individual sewage pumps and small diameter, low pressure force main to tie into the existing Vera Cruz force main, along with gravity sewer to tie into the existing Bluffton SR 124 pump station.
- The ultimate treatment would be at the Bluffton wastewater treatment plant.

Acceptance of Wastewater Flow by Bluffton

The City of Bluffton acknowledges that their WWTP has capacity to accept additional wastewater flow from the McKinney/Paxson Area. The wastewater flow collected from the McKinney/Paxson Area is proposed to be routed through the SR 124 pump station.

Anticipated Project Costs and User Rates

The opinion of probable construction cost for the recommended project is \$1,565,000 with an annual operation, maintenance, and replacement budget of \$17,900, based on 2012 dollars.

The Wells County RSD intends to pursue a loan and grant through the USDA Rural Development. The service area is eligible for a grant and loan at the intermediate rate. A recently completed rate study done by H.J. Umbaugh & Associates shows the anticipated user rates to be as follows:

Assuming a loan through USDA Rural Development (39 year term at 3.00% interest rate)

Monthly Bill per Customer (assuming no Grant)	\$149/month
(with 45% RD Grant)	\$111/month
(with Grant and up-front fee of \$2,000/customer)	\$103/month

The Umbaugh rate study is in **APPENDIX 1**.

## CHAPTER 2 - PROJECT PLANNING AREA

### Project Planning Area, Service Area and Project Location

The *project planning area* is located within Harrison and Lancaster Townships of Wells County in an unincorporated area east of the City of Bluffton. The *service area* is considered the same area and is referred to as the McKinney/Paxson Area. This area includes homes on the north and south side of SR 124 from the Bluffton corporate limits west to 500 E, homes along 500 E and SR 201, homes along Elm Grove and several homes on 100 S. The proposed project includes collection of wastewater with a combination of gravity sewer, grinder pumps, small diameter force main with discharge to the City of Bluffton for treatment at their wastewater treatment plant. The Town of Vera Cruz, located approximately 5 miles southeast of Bluffton, collects and pumps wastewater to a Bluffton Utility pump station located on SR 124 at the east boundary of the City corporate limits. Fourteen homes in the McKinney/Paxson area are connected to the Vera Cruz force main.

The selected *project location* includes the collection system in the McKinney/Paxson area with discharge to the Bluffton collection system ahead of the existing pump station on SR 124 west of Elm Grove.

The Town of Craigville, located approximately 5 miles northeast of Bluffton, was initially considered for inclusion in this study for collection and treatment, but it was determined early on to not be cost effective to include the community in this project.

### USGS Information

The service area is contained within Sections 34, 35, 36 of Township 27N, Range 12E, and in Sections 1, 2, 3 of Township 26N, Range 12E, as included on the Bluffton, Indiana USGS Quadrangle Map. Refer to **FIGURE 1** for a Project Location Map showing project planning area and outlining the service area.

### Property Information and Construction Challenges

Many individual property owners will be required to allow grinder pump stations and controls to be constructed on their private property. For these instances, a right-of-entry (easement) will be obtained for construction and maintenance. The gravity sewer and/or force main sanitary collection system will be within road right-of-way.

### Environmental Resources Present

The environmental impacts of the proposed sewers, pump stations and force main are described in the Environmental Report, submitted concurrently as a separate document. The overall impact of this project will preserve and help improved water quality in the McKinney and Paxson Ditches as well as the Wabash River, and improve area groundwater supplies.

Current Population

The McKinney/Paxson service area has approximately 90 residential addresses based on the Wells County GIS mapping system. Fourteen of these residents are served by Bluffton. The average household size for Harrison and Lancaster Townships is 2.5 persons per household, which generates a population of 225. This population data was taken from STATS Indiana, the website developed and maintained by the Indiana Business Research Center at Indiana University’s Kelley School of Business.

Population Projections

Wells County Population Townships Census for 1990 and 2000

	<u>1990 Census Report</u>	<u>2000 Census Report</u>	<u>Percent Change (%)</u>
Wells County	25,948	27,600	6.37
Harrison Twp	8,836	8,616	-2.5
Lancaster Twp	4,625	5,411	17.0
City of Bluffton	9,020	9,536	5.7

The average percent change using the above data is 6.64 percent growth rate per 10 years. Applying this to the current population in the McKinney/Paxson area [225 x (1.0664)(1.0664)] results in a 20-year (year 2032) projected population estimate of 256.

Design Flows

All of the wastewater from the McKinney/Paxson study area is domestic sewage. Wastewater flow from the Vera Cruz force main includes a church and a park. For purposes of estimating wastewater flows for non-residential, the following has been used from 327 IAC Article 3:

Church with kitchen - 5 gpd per sanctuary seat

Church without kitchen – 3 gpd per sanctuary seat

Future Flow Estimates

Current McKinney/Paxson population is estimated 225 with the future population projected at 256. Using 2.5 persons per household, and a flow per household of 200 gpd, the future wastewater flow projected for the McKinney/Paxson area and the flow already being transported by the Vera Cruz force main is:

Flow Volume Projected from McKinney/Paxson Area:

$(256/2.5) \times 200 \text{ gpd per household} = 20,480 \text{ gpd}$



Flow Volume Being Transported by Vera Cruz Force Main:

Church 100 seats x 3 gpd = 300 gpd

State Park Campground (from flowmeter) 5,000 gpd

Vera Cruz 52 households x 200 gpd = 10,400 gpd

McKinney/Paxson and Vera Cruz Force Main Total: 36,180 gpd

Flow Volume from New Service Area:

(McKinney/Paxson minus 14 homes already connected to Vera Cruz):

75 homes x 2.5 persons per household = 187 population

187 x (1.0664)(1.0664) = 212 future population

(212/2.5) x 200 gpd per household = 16,960 gpd

## CHAPTER 3 EXISTING FACILITIES

### Location Map

The location map showing the McKinney/Paxson Area located east of the City of Bluffton is **FIGURE 1** in the Appendix.

### History

Warning of Noncompliance: A letter of noncompliance was issued by IDEM to the Wells County Commissioners on July 11, 2001. This noncompliance was based on observations and documentation of discharges of sewage into the McKinney and Paxson Ditches, and county drainage ditches which flow to the Wabash River. Several water samples were taken by the County Health Department in 1999 and 2000 and showed significantly elevated counts of E.coli bacteria, an indicator of improperly treated sewage from local septic systems according to the Wells County Health Department. The letter requested that a plan for corrective measures be submitted. The Warning of Noncompliance letter is in **APPENDIX 2**.

A report entitled “Wells County Regional Sewer District Feasibility Study”, dated December 2002 was completed. In the report, options for the McKinney/Paxson area included collecting the sewage and transporting it to the Bluffton sewer system directly and by way of the Vera Cruz force main. No action was taken based on this study.

The McKinney Ditch watershed sampling results from 1999 are in **APPENDIX 3**. In November 2008, the Wells County Commissioners asked the Wells County Health Official to take additional samples at the same locations. The test results are similar, with high levels of E.coli. These sample results are included in **APPENDIX 4**.

Agreed Order: An Agreed Order was adopted on September 26, 2005 by the Indiana Department of Environmental Management that orders the Wells County Commissioners, to (A) form a Regional Sewer District, and (B) “handle wastewater infrastructure needs and to cease the inadequately treated discharges from septic tank systems from discharging to the ground surface, entering ditched or other surface waters, beginning with the McKinney/Paxson Ditch area.” The Agreed Order document is in **APPENDIX 5**.

RSD Formation: On October 23, 2006, the Wells County Commissioners and the Wells County Council petitioned IDEM for an Order to establish a regional sewer district in Wells County.

More recent collection of samples and analysis done in November 2008 by the County Health Department showed no change in elevated E.coli levels.

On June 3, 2009 IDEM approved the Findings of Facts and Recommended Order to establish the Wells County RSD to include all unincorporated areas of Wells County, Indiana. The Wells County RSD is to provide for the collection, treatment, and disposal of sewage that is currently

being managed by individual septic tanks or other on-site systems. The Recommended Order states that the Wells County RSD shall file with the Commissioner of IDEM, a detailed plan for the construction and operation of Wells County facilities. Specifically, the McKinney/Paxson Ditch area is to be addressed based on the Warning of Noncompliance and Agreed Order. This document is in **APPENDIX 6**.

A subsequent document, IDEM Modification of Order, dated January 7, 2011, to extend the District Plan submittal to June 1, 2011 is in **APPENDIX 7**.

The Wells County RSD submitted a District Plan on May 26, 2011. A Letter of Noncompliance with the Agreed Order dated July 28, 2011 was received. In order to address the District Plan deficiencies, the Regional Sewer District requested another extension to submit a complete District Plan to include a feasible solution/project, a detailed time schedule, a plan for financing and the updated Wells county Sewer Use Ordinance. An extension to March 31, 2012 was agreed upon by IDEM. This documentation is in **APPENDIX 8**.

#### Existing Sanitary System

The area is residential and farmland and served by individual on-site sewage systems consisting of septic tanks and leach or absorption fields. These fields are areas in which effluent from a septic tank is distributed into the soil. According to the "Soil Survey of Wells county", most of the soils within the area are considered as "severe" in that they have poor filtering capabilities and are subject to high ground water levels. This area of Wells County falls within the Moraine protocol for new septic systems. The soils in the area have up to 70 percent clay. Only a few of the existing on-site septic systems meet the more strict Moraine protocol standards for new systems. Most of the existing systems are not self contained and runoff to drainage ditches and streams. No new on-site septic systems have been approved in this area for the past several years. All of the new homes built in the McKinney/Paxson area have been required to connect into the Vera Cruz force main that discharges to the City of Bluffton's wastewater collection system.

#### City of Bluffton Wastewater Collection System and Treatment Plant

The Bluffton wastewater treatment plant (WWTP) is in good condition and has capacity to accept the proposed waste flow generated by the McKinney/Paxson area, however, during wet weather, the portion of the collection system that could provide the closest connection point does not have additional capacity. The sewer is a 24-inch interceptor which carries a large part of the City's wastewater flow and becomes a bottleneck and surcharges during wet weather. The Bluffton WWTP has an average daily flow capacity of 6 million gallons per day (mgd) and a peak flow capacity of 9 mgd. The average daily flow to the plant between 2008 and 2010 was 1.94 mgd.

The manhole where the Vera Cruz force main originally discharged into the City of Bluffton collection system, those manholes downstream and the SR 124 pump station wet well and pump

station structures have sustained concrete deterioration due to the septic quality and hydrogen sulfide content of the wastewater from Vera Cruz. The Vera Cruz force main has since been routed past the gravity sewer to discharge immediately upstream of the SR 124 pump station. Also, the force main discharge structures including the pump station were rehabilitated with epoxy coating in 2010.

### Vera Cruz

Vera Cruz is a small community located approximately five miles southeast of Bluffton. They have a collection system, pump station and force main that transports wastewater to the City of Bluffton. This system serves 52 homes, the Ouabache Park and a church. Over the past several years, 14 homes in the McKinney/Paxson area have also connected into this force main, due to failed septic systems or home new construction. Through an agreement with the City of Bluffton, the City of Bluffton operates and maintains the Vera Cruz pump stations and force main.

### Ouabache State Park and Recreation Area

The State Park is also connected to the Vera Cruz force main. From the 2002 Feasibility Report, the flow meter from the park facility showed that between 2,000 and 7,000 gallons per day is discharged. For planning purposes, an average of 5,000 gallons per day was used.

### Sewer Rates and Tap Fees (Financial Status of Existing Sanitary System)

Customers in Vera Cruz pay \$54 per month. This is billed by the City of Bluffton. The Vera Cruz tap fee is \$1,600. The City of Bluffton tap fee is \$405 for residential and \$605 for industrial. The tap fee for McKinney/Paxson customers is \$1,100 and those connected to the Vera Cruz force main currently pay \$48.95 per month. All customers in the McKinney/Paxson area that are currently connected to the City of Bluffton collection system signed an agreement that they will not remonstrate to annexation by the City of Bluffton.

## **CHAPTER 4 – NEED FOR THE PROJECT**

The McKinney/Paxson Area is semi-rural residential and served by individual on-site sewage systems consisting of septic tanks and leach or absorption fields. These fields are areas in which effluent from a septic tank is distributed into the soil. According to the “Soil Survey of Wells County”, most of the soils within the area are considered as “severe” in that they have a very slow rate of water transmission, poor filtering capabilities and are subject to high ground water levels.

Constructing a collection system to take the remainder of the McKinney/Paxson area residents off septic systems will eliminate further pollution of the McKinney and Paxson Ditches and the Wabash River.

In recent years, the County Health Department has not been able to issue new permits for new on-site septic systems due to the poor soil conditions. Residents have not been able to make improvements to their existing property for the same reason. A new collection system will enable improvements and not impede development in the area. A letter of support for the sanitary sewer project dated February 7, 2011 from the Wells County Health Department is in **APPENDIX 9**.

## **CHAPTER 5 - ALTERNATIVES CONSIDERED**

### Feasible Alternatives for Proposed Sanitary Sewer Collection and Wastewater Treatment

#### **Alternative 0 - No Action**

Without wastewater collection and treatment improvements, the existing septic tank and absorption field systems will continue to fail and allow further contamination of the groundwater, area ditches and Wabash River and pose health issues.

#### **Alternative 1 – New Pump Station (Flow from Vera Cruz & McKinney/Paxson Area) with New Force Main to Bluffton WWTP**

This alternative will collect all flow from the Vera Cruz force main plus flow from the McKinney/Paxson area with discharge to a new pump station and new force main to the Bluffton WWTP. This alternative includes a combination of gravity sewer and grinder pumps with low pressure small diameter force main. The new pump station and force main will handle flow from the Vera Cruz force main and the McKinney/Paxson area except for nine homes that will connect into the existing pump station. The existing Bluffton SR 124 East Pump Station will then operate without flow from the Vera Cruz force main. This alternative includes:

- New pump station located at SR 124 and Elm Grove to collect flow from the Vera Cruz force main and from new gravity extended east on SR 124.
- New force main from new pump station along SR124, crossing Main St. (Route 1), south around Bank property to 30-inch interceptor south of the railroad.
- Collection by gravity along SR 124 from new pump station east to include approximately nine homes.
- Collection by small diameter force main and individual grinder pumps for three homes south of SR 124.
- New pump station on SR 124 with collection by gravity along SR 124 from the west and east, from 450 E (to serve 37 homes).
- Force main from proposed pump station on SR 124 to the existing manhole on SR 201.
- Connect three homes into existing gravity sewer along SR 201.
- Upgrade existing duplex pump station located on SR 201 near Elm Grove.
- Collection by new small diameter force main and individual grinder pumps for six additional homes on 500 E with connection to the Vera Cruz force main.
- Collection by small diameter force main and individual grinder pumps for twelve homes on 100 S with connection to the Vera Cruz force main.
- Connect ten homes along Elm Grove to the Vera Cruz force main with individual grinder pumps.

## **Alternative 2 – Upgrade Existing SR 124 East Pump Station (All Existing Flow Plus Flow from McKinney/Paxson Area) with New Force Main to Bluffton WWTP**

This alternative will collect all flow from the Vera Cruz force main plus flow from the McKinney/Paxson area with discharge to the existing SR 124 East Pump Station, upgrade of the existing pump station from 450 gpm to larger capacity pumps (650 to 800 gpm) with new force main to the Bluffton WWTP. This alternative includes a combination of gravity sewer and grinder pumps with low pressure small diameter force main. This alternative includes:

- Upgrade SR124 East Pump Station.
- New force main from existing SR 124 East Pump Station, crossing Main St. (Route 1), south around Bank property to 30-inch interceptor south of the railroad.
- Collection by gravity sewer for nine homes along SR 124 with connection to existing manhole on the north side of SR 124, to Bluffton collection system.
- Collection by small diameter force main and individual grinder pumps for three homes south of SR 124.
- New pump station on SR 124 with collection by gravity along SR 124 from the west and east, from 450 E (to serve 37 homes).
- Force main from proposed pump station on SR 124 to the existing manhole on SR 201.
- Connect three homes into existing gravity sewer along SR 201.
- Upgrade existing duplex pump station located on SR 201 near Elm Grove.
- Collection by new small diameter force main and individual grinder pumps for six homes on 500 E with connection to the Vera Cruz force main.
- Collection by small diameter force main and individual grinder pumps for twelve homes on 100 S with connection to the Vera Cruz force main.
- Connect ten homes along Elm Grove to the Vera Cruz force main with individual grinder pumps.

## **Alternative 3 – WWTP With Discharge to Wabash River**

This alternative will collect flow from the remaining 75 homes in the McKinney/Paxson area with transport to a package WWTP and discharge to the Wabash River. This alternative includes combination of gravity sewer and grinder pumps with low pressure small diameter force main. The Vera Cruz force main flow will not be collected, but remain as it is. This alternative includes:

- Collection by small diameter force main and individual grinder pumps for nine homes along SR 124 east to proposed pump station on SR 124.
- Collection by small diameter force main and individual grinder pumps for three homes south of SR 124.
- New pump station on SR 124 with collection by gravity along SR 124 from the west and east, from 450 E (to serve 46 homes).

- Force main from proposed pump station on SR 124, south along SR 201, southeast along Elm Grove to the proposed WWTP on Elm Grove.
- Collection by small diameter force main and individual grinder pumps for six homes on 500 E, south on 500 E to proposed WWTP on Elm Grove.
- Collection by small diameter force main and individual grinder pumps for twelve homes on 100 S with connection to the force main from 500 E.
- Proposed new WWTP located on the north side of Elm Grove (SR 201).
- Gravity outfall sewer for treated WWTP effluent to Wabash River.
- Vera Cruz force main and homes in the McKinney/Paxson area connected into the existing force main would remain as is, with flow discharged to the Bluffton East SR 124 pump station.

#### **Alternative 4 – Lagoon Treatment System with Discharge to Wabash River**

This alternative is virtually the same as Alternative 3, except with lagoon treatment instead of a package WWTP. Collection of flow from the remaining 75 homes in the McKinney/Paxson area with transport to a lagoon treatment system with discharge to the Wabash River. This alternative includes combination of gravity sewer and grinder pumps with low pressure small diameter force main. The Vera Cruz force main flow will not be collected, but remain as it is. This alternative includes:

- Collection by small diameter force main and individual grinder pumps for nine homes along SR 124 east to proposed pump station on SR 124.
- Collection by small diameter force main and individual grinder pumps for three homes south of SR 124.
- New pump station on SR 124 with collection by gravity along SR 124 from the west and east, from 450 E (to serve 46 homes).
- Force main from proposed pump station on SR 124, south along SR 201, southeast along Elm Grove to the proposed WWTP on Elm Grove.
- Collection by small diameter force main and individual grinder pumps for six homes on 500 E, south on 500 E to proposed WWTP on Elm Grove.
- Collection by small diameter force main and individual grinder pumps for twelve homes on 100 S with connection to the force main from 500 E.
- Proposed new lagoon treatment system located on the north side of Elm Grove (SR 201).
- Gravity outfall sewer for treated lagoon system effluent to Wabash River.
- Vera Cruz force main and homes in the McKinney/Paxson area connected to the existing force main to remain as is, with flow discharge to the Bluffton East SR 124 pump station.



## **Alternative 5 – Gravity Sewer Along SR 124, Collection with Small Diameter Force Main to Vera Cruz FM with Discharge to Bluffton Collection System Upstream of Existing SR 124 Pump Station**

This alternative will extend gravity sewer east along SR 124, and collect all flow from the Vera Cruz force main plus flow from the McKinney/Paxson area, discharged to the Bluffton collection system upstream of the existing SR 124 Pump Station. This alternative includes a combination of gravity sewer and grinder pumps with low pressure small diameter force main. This alternative includes:

- Collection by gravity sewer for nine homes along SR 124 with connection to existing manhole on the north side of SR 124, to Bluffton collection system.
- Collection by small diameter force main and individual grinder pumps for 37 homes along SR 124 with discharge to existing gravity sewer on SR 201.
- Connect three homes into existing gravity sewer along SR 201.
- Upgrade existing duplex pump station located on SR 201 near Elm Grove.
- Collection by small diameter force main and individual grinder pumps for six homes on 500 E with connection to existing small diameter force main that is connected to the Vera Cruz force main.
- Collection by small diameter force main and individual grinder pumps for twelve homes on 100 S with connection to the Vera Cruz force main.
- Connect ten homes along Elm Grove to the Vera Cruz force main with individual grinder pumps.

### **Evaluation of Alternatives**

- A. Collection System: The following collection system alternatives have been considered.
1. Low pressure force mains with grinder pump stations
    - a. Description: This alternative includes low pressure force mains with individual grinder pump stations.
    - b. Design Criteria: The low pressure force main system shall maintain scouring velocity with no point in the collection system piping exceeding the maximum recommended total dynamic head (TDH) for each pump. A spreadsheet model would be developed based on TDH for each pump based on pipe sizes, number of grinder pumps and elevation of pumps.
    - c. Map: See Alternative Maps.
    - d. Environmental Impacts: Short term impacts during construction include disruption of traffic, noise, open cut for horizontal directional drilling for stream crossings, and temporary erosion control. Location of individual wells will be considered when locating grinder pumps. Stream crossings with low pressure

force main will be by horizontally directional drilling with the force main encased in piping.

e. Land Requirements: Grinder pump units will be located on private property with rights-of-entry and/or easements required. Where easements are required for grinder pumps, they shall be 20 feet wide at the road right-of-way and up to 20 feet into the property.

f. Construction Problems: Existing utilities will have to be marked and found to avoid conflicts. Pressure relief/vacuum valve structures may be required along the force main.

g. Cost Estimates: See alternative construction cost tables.

h. Advantages/Disadvantages: The force mains can be directionally drilled, allowing for less disruption during construction. Low pressure force mains can be installed along the contours of the land with a minimum cover of five feet resulting in a lower installation cost than gravity sewer. Grinder pumps will require an electrical drop. Easements and/or rights-of-entry will be required for construction and maintenance of the grinder pump stations.

2. Gravity sewers and conventional lift stations

a. Description: This alternative includes gravity sewers and lift stations for the wastewater collection along SR 124, where the homes are dense.

b. Design Criteria: Minimum sewer diameter of 8 inches with minimum slopes for gravity.

c. Map: See Alternative Maps.

d. Environmental Impacts: Short term impacts during construction include disruption of traffic, noise, open cut trenching, and temporary erosion control.

e. Land Requirements: Gravity sewer will be located within road right-of-way. Where land is required for pump stations, the RSD shall purchase the land. Approximately 20 feet by 20 feet will be required. The pump station (s) may be able to be located within the road right-of-way.

f. Construction Problems: Existing utilities will have to be marked and found to avoid conflicts. If trenches are deeper, some dewatering may be required. Special backfill will be required under and adjacent to pavement. Without easements, construction is limited to the public right-of-way.

g. Cost Estimates: See alternative construction cost tables.

h. Advantages/Disadvantages: Land purchase will be required for the small pump station on SR 124, and for the large pump station on SR 124 near the existing Bluffton pump station.

B. Force Main to Bluffton: The following pumping alternatives have been considered.

1. Force main from new or upgraded pump station on SR 124 to the Bluffton WWTP.

- a. Description: This force main includes approximately 5,600 LF of force main. The force main shall be by open cut and/or directional drilling method (HDD). HDD shall be at creek crossings and jack and bore at the railroad crossing.
- b. Design Criteria: Force main design size is based on the total dynamic head for the conventional pump station pumping rate.
- c. Map: See Alternative Maps.
- d. Environmental Impacts: Short term impacts during construction include disruption of traffic due to open cut for pits for HDD and jack and bore of the force main construction, noise and temporary erosion control.
- e. Land Requirements: The force main will follow the county road right-of-way and may require easements for the cross county segment.
- f. Construction Problems: Water table may be encountered during excavation of pits for force main HDD and jack and bore.
- g. Cost Estimates: See Cost Tables.
- h. Advantages/Disadvantages: No certified operator required.

C. Wastewater Treatment: The following treatment options have been considered.

1. Package Wastewater Treatment Plant

- a. Description: A new Package WWTP is to include coarse screening, a comminutor, aerated flow equalization, biological treatment with aeration, two final clarifiers, two sand filters for tertiary treatment for ammonia-nitrogen removal, ultra-violet disinfection, and flow metering. Sludge handling includes aerated sludge digester/holding.
- b. Design Criteria: WWTP capacity 18,000 gallons per day average daily flow, to treat domestic sewage with 230 mg/l BOD, 250 mg/l TSS and 40 mg/l ammonia-nitrogen. Effluent limits are anticipated to be 10 mg/l BOD, 12 mg/l TSS and 1.1 mg/l (monthly average) ammonia-nitrogen.
- c. Map: See Alternative Maps.
- d. Environmental Impacts: A new WWTP's treated effluent will impact the receiving stream in quantity of flow and effluent water quality.
- e. Land Requirements: To allow for isolation from existing dwellings approximately one acre of land is required. A 500-foot setback from dwellings is required for wastewater treatment facilities.
- f. Construction Problems: Groundwater may be encountered during excavation for the treatment plant structures.
- g. Cost Estimates: See Alternative Cost Tables.
- h. Advantages/Disadvantages: The District will have control over their treatment system. Land will have to be purchased for the treatment facilities. The District will have to hire a certified operator to operate and maintain the WWTP, take samples and have them tested, as well as certify plant monthly operating records.

2. Lagoon Treatment System
  - a. Description: A new lagoon system is to include coarse screening, two lagoon cells with diffused aeration, two cell submerged attached growth reactor, ultra-violet disinfection, and flow metering.
  - b. Design Criteria: Lagoon system capacity 18,000 gallons per day average daily flow, to treat domestic sewage with 230 mg/l BOD, 250 mg/l TSS and 40 mg/l ammonia-nitrogen. Effluent limits are anticipated to be 10 mg/l BOD, 12 mg/l TSS and 1.1 mg/l (monthly average) ammonia-nitrogen.
  - c. Map: See Alternative Maps.
  - d. Environmental Impacts: A new lagoon system treated effluent will impact the receiving stream in quantity of flow and effluent water quality.
  - e. Land Requirements: To allow for isolation from existing dwellings approximately two acres of land is required. A ¼-mile setback from dwellings is required for lagoons.
  - f. Construction Problems: Groundwater may be encountered during excavation for the lagoon treatment structures.
  - g. Cost Estimates: See Alternative Cost Tables.
  - h. Advantages/Disadvantages: The District will have control over their treatment system. Land will have to be purchased for the treatment facilities. The District will have to hire a certified operator to operate and maintain the WWTP, take samples and have them tested, as well as certify plant monthly operating records.

## CHAPTER 6 – SELECTION OF ALTERNATIVE

### Cost Analysis of Feasible Alternatives

The present worth analysis table at the end of this chapter presents estimated costs for construction, non-construction, annual operation, maintenance and replacement, salvage value and total present worth for the collection system, and wastewater treatment alternatives. The construction costs include construction contingency of 20 percent. The preliminary estimate of probable construction costs are shown on the following tables:

- Table 6-1 Alternative 1 – New Pump Station (Vera Cruz + M/P Area) to Bluffton WWTP
- Table 6-2 Alternative 2 – Upgrade SR 124 Pump Station (All Flow) to Bluffton WWTP
- Table 6-3 Alternative 3 – WWTP w/Discharge to Wabash River
- Table 6-3A Alternative 3 – Detailed Breakdown of WWTP Costs
- Table 6-4 Alternative 4 – Lagoon System w/Discharge to Wabash River
- Table 6-4A Alternative 4 – Detailed Breakdown of Lagoon System Costs
- Table 6-5 Alternative 5 – Discharge to Bluffton Collection System Upstream of SR 124 Pump Station
- Table 6-1B Alternative 1 – Operation, Maintenance & Replacement and Salvage Value
- Table 6-2B Alternative 2 – Operation, Maintenance & Replacement and Salvage Value
- Table 6-3B Alternative 3 – Operation, Maintenance & Replacement and Salvage Value
- Table 6-4B Alternative 4 – Operation, Maintenance & Replacement and Salvage Value
- Table 6-5B Alternative 5 – Operation, Maintenance & Replacement and Salvage Value
- Table 6-6 Present Worth Analysis for all alternatives using USDA RD with a 40 year loan term at an interest rate of 3.0%

Construction cost estimates are based on similar projects recently bid for sewers, manholes, force main, and pump station structures. Costs for pumping equipment, package WWTP, lagoon system, aeration equipment and grinder pumps are based on equipment quotes from manufacturers.

Other annual operation and maintenance costs are based on using a percentage of the facilities capital cost:

- Piping, 0.5%
- Equipment such as pumps, aeration equipment, ultra-violet disinfection equipment and the lagoon system, 4%
- Package WWTP, 7%



## CHAPTER 7 – PROPOSED PROJECT (RECOMMENDED ALTERNATIVE)

### Selected Project Design

The selected alternative, Alternative 5, will collect all flow from the Vera Cruz force main plus flow from the McKinney/Paxson area, to be discharged to the Bluffton collection system upstream of the existing SR 124 Pump Station. This alternative includes a combination of gravity sewer and grinder pumps with low pressure small diameter force main. The selected alternative includes:

- Collection by gravity sewer for nine homes along S.R. 124 with discharge to existing manhole on the north side of S.R. 124, to Bluffton collection system.
- Collection by small diameter force main and individual grinder pumps for 37 homes along S.R. 124 with discharge to existing gravity sewer on S.R. 201.
- Connect three homes into existing gravity sewer along S.R. 201.
- Upgrade existing duplex pump station located on S.R. 201 near Elm Grove.
- Collection by small diameter force main and individual grinder pumps for six homes on 500 E with tie-in to existing small diameter force main that is connected to the Vera Cruz force main.
- Collection by small diameter force main and individual grinder pumps for twelve homes on 100 S with tie-in to the Vera Cruz force main.
- Connect ten homes along Elm Grove to the Vera Cruz force main with individual grinder pumps.
- The existing Vera Cruz force main will be used to handle most of the added flow from the McKinney/Paxson area and discharge upstream of the existing S.R. 124 pump station.

For lengths, sizes and materials, see Cost Table 6-5. The collection system facilities layout is shown on **FIGURE 6**.

### Total Project Cost Estimate

Construction Cost Estimate: \$1,565,000

### Annual Operating Budget

Collection System: The annual operating cost for the collection system is based on using 0.5% of the capital cost for piping, manholes and valves; using 4% of the capital cost for equipment including grinder pumps and pump stations. These costs are shown on Table 6-5B.

Replacement Cost: The replacement cost for grinder pumps and equipment was based on total replacement cost after 20 years. The replacement costs for the collection system items are shown in Table 6-5B.

Administrative Cost: The annual administrative cost for customer billing has been estimated to be \$10.00 per customer. (Umbaugh)

Debt Repayment: The proposed financing is from a Rural Utility Service loan with a 39 year loan at 3.00 percent interest rate.

Reserves:

- Debt Service Reserve: Funded over a ten year period and included in the rate study.
- Short-Lived Asset Reserve: Replacement costs of pump station and wastewater treatment equipment has been included with the operation and maintenance cost estimates.

The selected plan cost summary is as follows:

<b>TABLE 7-1</b>		
<b>SELECTED PLAN COST SUMMARY</b>		
Item		Total Cost
<b>Non-Construction Costs (Items 1-6) (20% of Construction Cost)</b>		
1	Administrative and Legal	\$45,000
2	Land, Structures, Rights-of-way, Appraisals, etc.	\$0
3	Relocation Expenses and Payments	\$0
<b>Engineering Fees</b>		
4	Architectural and Engineering Fees (Design)	\$118,000
5	Other Arch. and Engineering Fees (Constr. Admin.)	\$20,000
6	Project Inspection Fees	\$78,000
<b>Construction (Items 7-11) (\$1,086,000)</b>		
7	Site Work	\$30,000
8	Demolition and Removal	\$0
9	Construction	\$948,000
10	Equipment	\$0
11	Miscellaneous	\$108,000
12	<b>Subtotal (sum of items 1-11)</b>	\$1,347,000
13	<b>Construction Contingencies (20% of items 7-11)</b>	\$218,000
14	<b>Subtotal</b>	\$1,565,000
15	<b>Project (Program) Income</b>	0
<b>TOTAL PROJECT COSTS ( subtract item 15 from item 14)</b>		<b>\$1,565,000</b>



### Project Schedule

The proposed schedule for the Rural Development (RD) funded District Plan (DP) is as follows:

Activity	Date
DP Submittal to USDA	March 2012
Anticipated DP Approval	June 2012
Begin Design of Collection System	July 2012
Plans & Specification Submittal	December 2012
Plans & Specifications Approval	January 2013
Land and Easement Acquisition	February 2013
Advertise for Bids	March 2013
Loan Closing (after bids are received)	April 2013
Contract Award	May 2013
Initiation of Construction	June 2013
Substantial Completion of Construction	March 2014
Initiation of Operation	May 2014

### Median Household Income Data

The McKinney/Paxson service area is almost all within Harrison Township of Wells County. The township division line in SR 124 also called Division Road. Homes north of SR 124 are in Lancaster Township. The Census 2000 Median Household Income (MHI) table from Stats Indiana shows that the MHI for Harrison Township is \$39,650. This is below the Indiana State average MHI of \$41,567. This puts the project into the low to moderate income bracket.

A loan and grant intended to be pursued through the USDA Rural Development. Currently for the low to moderate income bracket, the interest rate is at 3.00% and the project is eligible to apply for a 45 percent grant.

### Preliminary Estimated User Rate

A preliminary rate study has been completed by H.J. Umbaugh, see **APPENDIX 1**. The opinion of probable construction cost for the recommended project is \$1,565,000 with an annual operation, maintenance, and replacement budget of \$17,900. The non-construction cost has been estimated at 20% of the construction cost, \$218,000.

Assuming a loan through USDA Rural Development (39 year term at 3.00% interest rate), the rate study shows that the user rates are as follows:

Monthly Bill per Customer (no Grant)	\$149/month
(with 45% RD Grant)	\$111/month
(with 45% Grant and up-front fee of \$2,000/customer)	\$103/month

## **CHAPTER 8 - CONCLUSIONS AND RECOMMENDATION**

### Selected Plan

- Collection System: Extension of gravity sanitary sewer along SR 124, low pressure small diameter force main and grinder pumps, upgrade of existing duplex pump station on SR 201 near Elm Grove with most of the services being tied into the existing Vera Cruz force main. The McKinney/Paxson area customer base is 75.
- Most of the collected wastewater will discharge to the Bluffton collection system at a location upstream of the existing SR 124 East pump station via the existing Vera Cruz force main. A portion of the wastewater will be collected by gravity sewer along SR 124 and discharge into an existing Bluffton sewer upstream of the SR 124 East pump station.

### Project Cost

The total cost of this project is estimated to be \$1,565,000. In order to finance this project the monthly user charge per Equivalent Single Family Dwelling Unit (ESFDU) is anticipated to be approximately \$111. This is based on the Preliminary Rate Study done by H. J. Umbaugh & Associates. A copy of the rate study is in **APPENDIX 1**.

### Project Financing

Financing for the project is expected to come from the following sources:

- Rural Development – Rural Utility Service Loan Program with a 39 year loan at 3.00% interest rate, plus a 45% grant.

### Letters of Intent

Letters of Intent to provide site access, permanent easement, or transfer of ownership will be prepared for execution by each property owner affected by the prosecution of the work.

### Inter-local Governmental Agreement and/or Contracts

There will need to be an Inter-local Governmental Agreement and/or Contracts required between the Wells County Regional Sewer District and the City of Bluffton and also with the Town of Vera Cruz since the project proposes using the Vera Cruz force main for conveyance of wastewater from the McKinney/Paxson area, with discharge to the Bluffton collection system and treatment at the Bluffton wastewater treatment plant.

# FIGURES

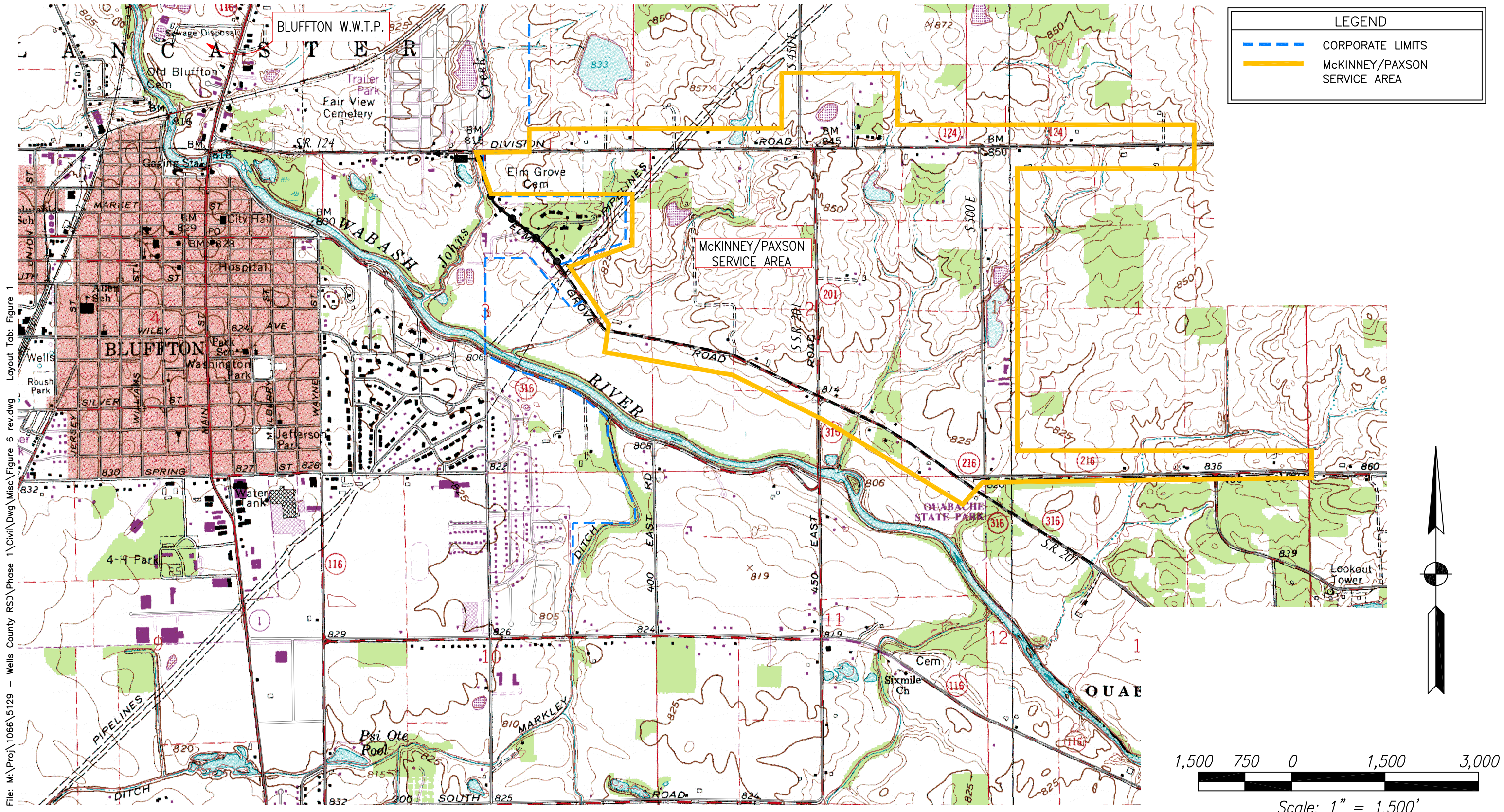


FIGURE 1 – PROJECT LOCATION MAP 2012  
 USGS QUADRANGLE MAP  
 BLUFFTON, IND.  
 WELLS COUNTY REGIONAL SEWER DISTRICT

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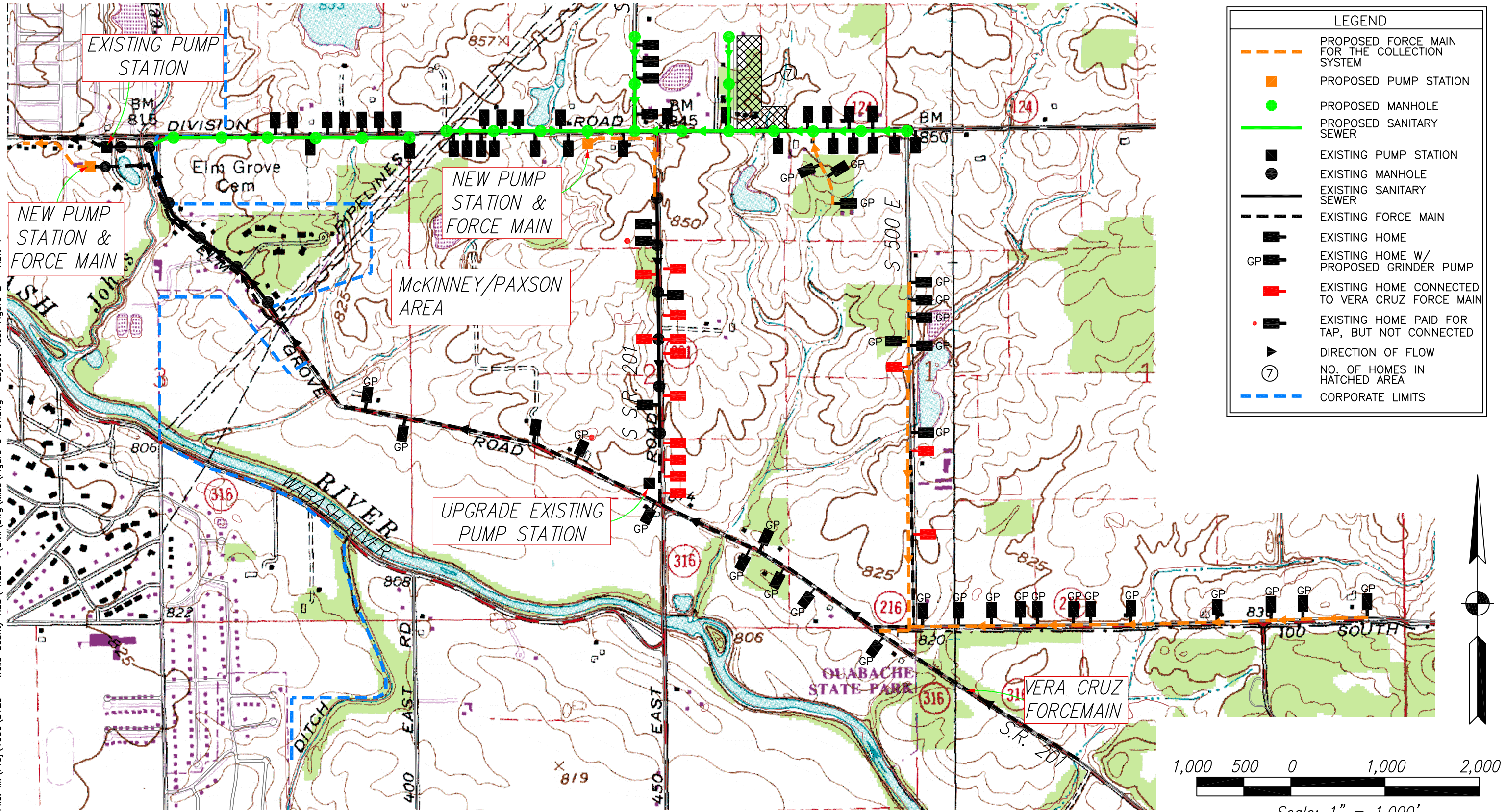


FIGURE 2 – COLLECTION SYSTEM MAP 2012  
 MCKINNEY/PAXSON AREA  
 WELLS COUNTY REGIONAL SEWER DISTRICT  
 ALT. 1 – NEW PUMP STATION & FORCE MAIN TO BLUFFTON WWTP

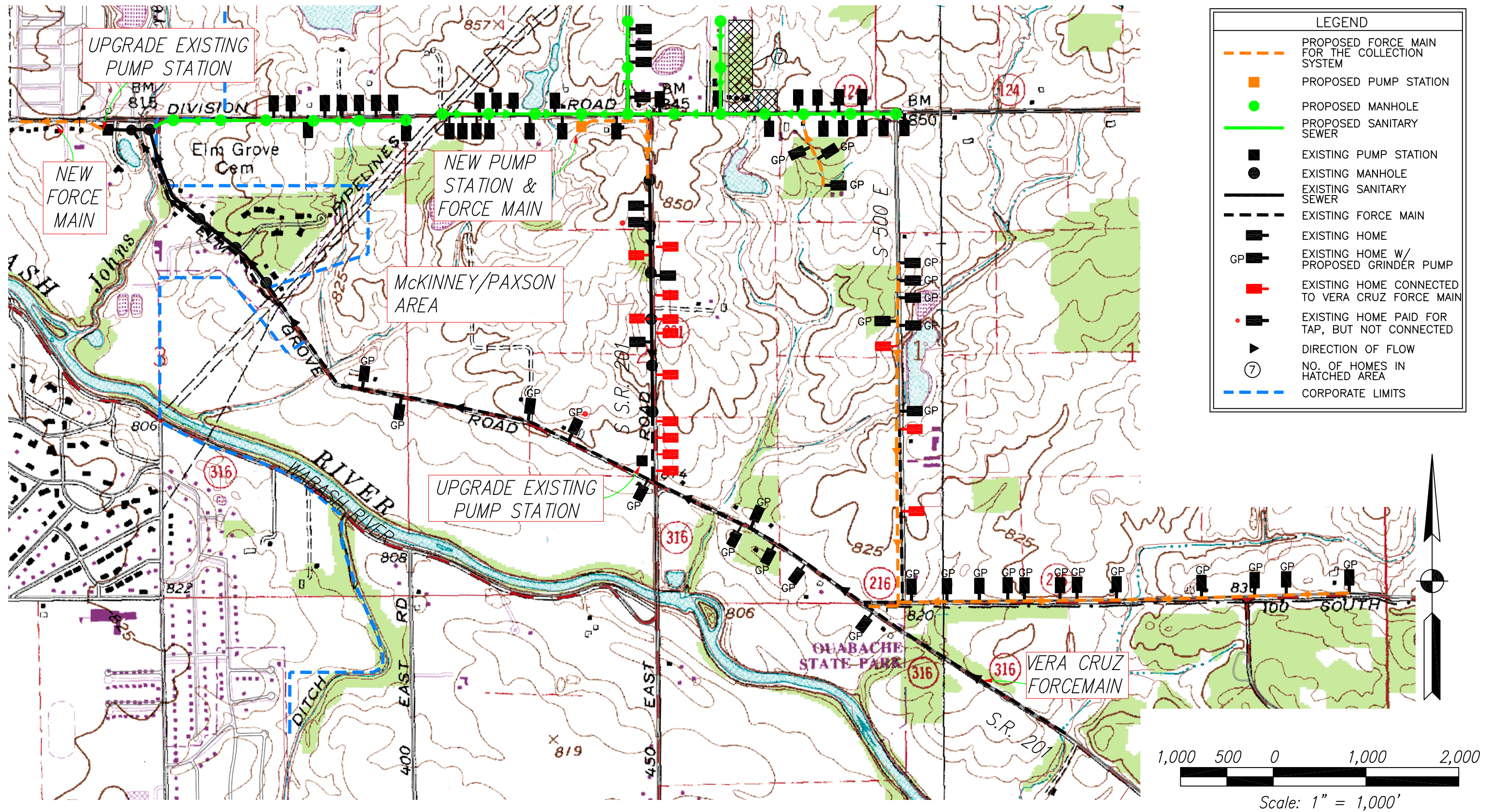


FIGURE 3 – COLLECTION SYSTEM MAP 2012  
 MCKINNEY/PAXSON AREA  
 WELLS COUNTY REGIONAL SEWER DISTRICT  
 ALT. 2 – UPGRADE PUMP STATION & NEW FORCE MAIN TO BLUFFTON WWTP

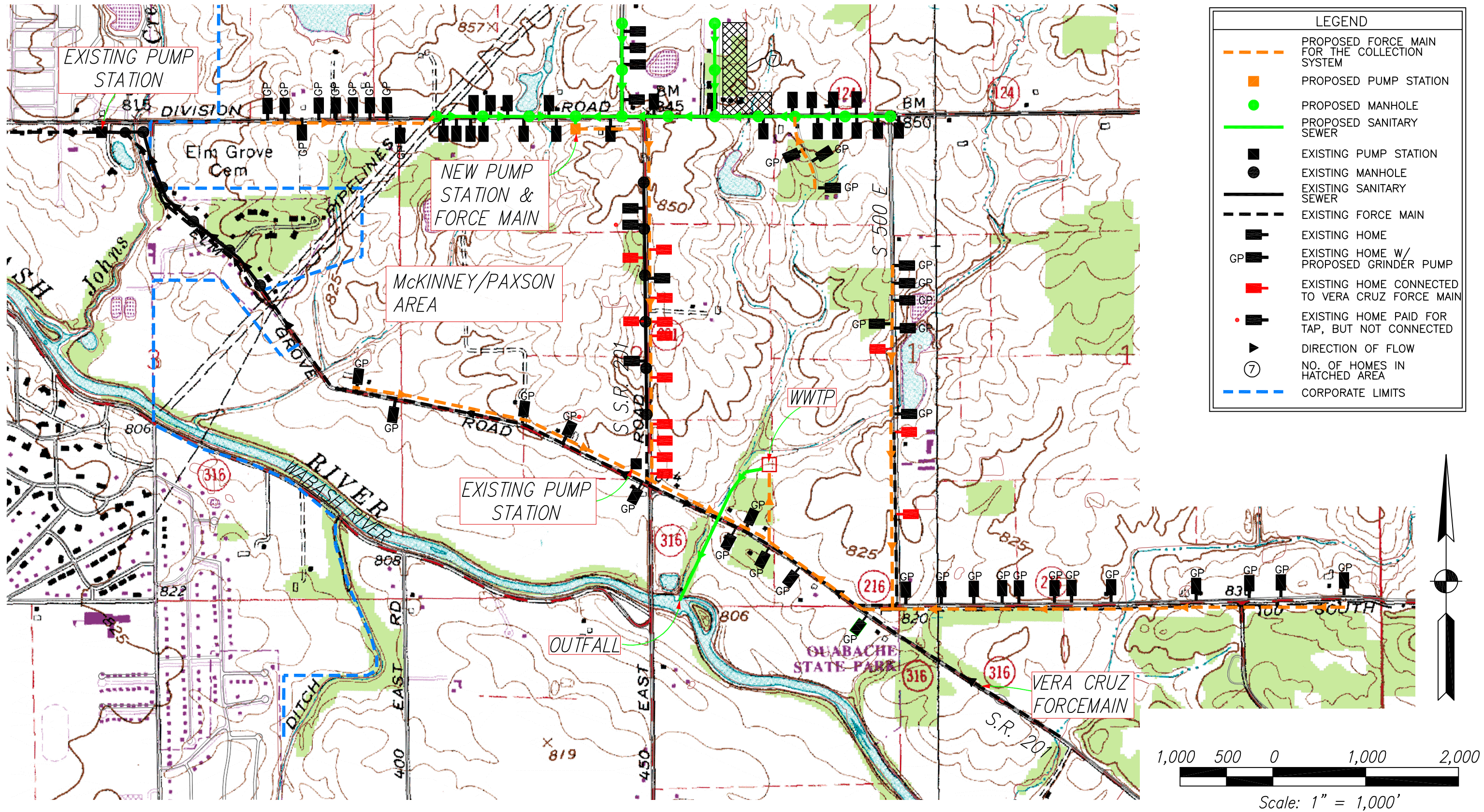


FIGURE 4 – COLLECTION SYSTEM MAP 2012  
 MCKINNEY/PAXSON AREA  
 WELLS COUNTY REGIONAL SEWER DISTRICT  
 ALT. 3 – WASTEWATER TREATMENT PLANT



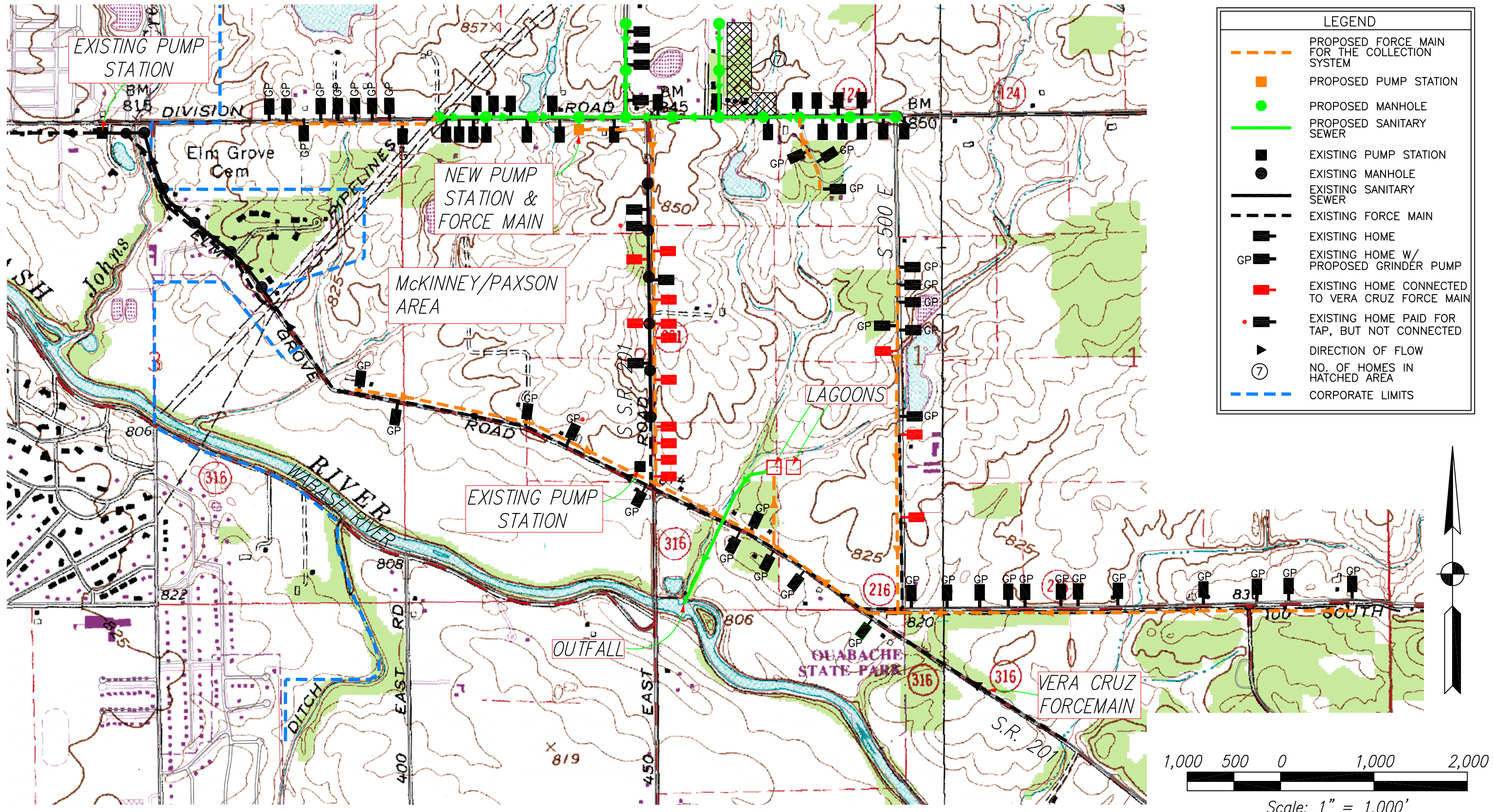


FIGURE 5 – COLLECTION SYSTEM MAP 2012  
 McKinney/Paxson Area  
 Wells County Regional Sewer District  
 Alt. 4 – Lagoon Treatment System



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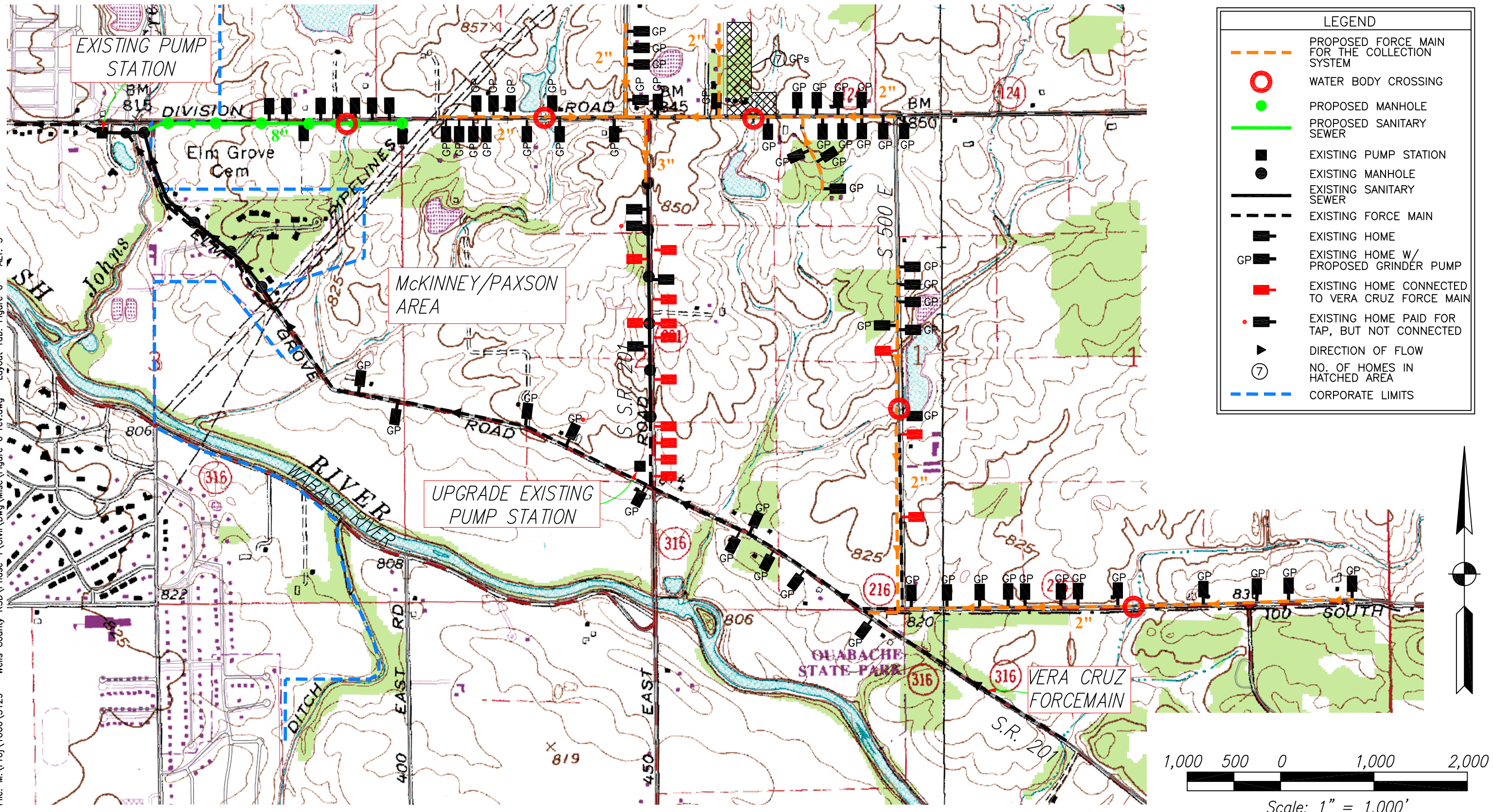


FIGURE 6 – COLLECTION SYSTEM MAP 2012  
 MCKINNEY/PAXSON AREA  
 WELLS COUNTY REGIONAL SEWER DISTRICT  
 ALT. 5 – GRAVITY & FORCE MAIN ALONG SR124 W/ DISCHARGE TO BLUFFTON COLLECTION SYSTEM

# **TABLES**

**Table 6-1**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 1 - New Pump Station (Vera Cruz + M/P Area) to Bluffton WWTP**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Asphalt Roadway Reconstruction	5,200	SY	\$30	\$156,000
2	Special Backfill (53/73)	8,400	CY	\$25	\$210,000
3	8" Gravity Sewer	10,300	LF	\$40	\$412,000
4	4' Diameter Manholes	21	EA	\$3,000	\$63,000
5	Pump Station (for 37 homes)	1	EA	\$40,000	\$40,000
6	Grinder Pump Stations	31	EA	\$4,000	\$124,000
7	3" Force Main to MH on S.R. 201	2,000	LF	\$25	\$50,000
8	2" Force Main on 500 E & S. off SR 124	8,200	LF	\$20	\$164,000
9	1 1/2" service connections 31 x 150'	4,650	LF	\$14	\$65,100
10	Curb Box/Check Valves	31	EA	\$350	\$10,850
11	Misc. 2" & 3" Valves	4	EA	\$200	\$800
12	Air Release Valves	2	EA	\$2,500	\$5,000
13	New Pump Station at SR 124	1	EA	\$120,000	\$120,000
14	Upgrade Existing PS on SR 201	1	LS	\$20,000	\$20,000
15	6" Force Main to Bluffton WWTP	5,600	LS	\$35	\$196,000
16	Tie-in at MH south of WWTP	1	EA	\$500	\$500
17	Restoration and Seeding	1	LS	\$30,000	\$30,000
18	General Construction Costs* (11%)	1	LS	\$181,000	\$181,000
Construction Contingency (20%)					\$370,000
Construction Subtotal					<b>\$2,219,000</b>
Non-Construction (20%)					\$444,000
<b>Total (rounded up)</b>					<b>\$2,663,000</b>

\*Includes mobilization/demobilization (5%), erosion control, maintenance of traffic, record documents (3%), and construction site layout and staking (3%).

**Table 6-2**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 2 - Upgrade Pump Station All Flow to Bluffton WWTP**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Asphalt Roadway Reconstruction	5,200	SY	\$30	\$156,000
2	Special Backfill (53/73)	8,400	CY	\$25	\$210,000
3	8" Gravity Sewer	10,300	LF	\$40	\$412,000
4	4' Diameter Manholes	21	EA	\$3,000	\$63,000
5	Pump Station (for 37 homes)	1	EA	\$40,000	\$40,000
6	Grinder Pump Stations	31	EA	\$4,000	\$124,000
7	3" Force Main to MH on S.R. 201	2,000	LF	\$25	\$50,000
8	2" Force Main on 500 E & S. off SR 124	8,200	LF	\$20	\$164,000
9	1 1/2" service connections 31 x 150'	4,650	LF	\$14	\$65,100
10	Curb Box/Check Valves	31	EA	\$350	\$10,850
11	Misc. 2" & 3" Valves	4	EA	\$200	\$800
12	Air Release Valves	2	EA	\$2,500	\$5,000
13	Upgrade Exist. Pump Station SR 124	1	EA	\$80,000	\$80,000
14	Upgrade Exist. PS on SR 201	1	EA	\$20,000	\$20,000
15	10" Force Main to Bluffton WWTP	5,250	EA	\$45	\$236,250
16	Tie-in at MH at Bluffton WWTP	1	EA	\$500	\$500
17	Restoration and Seeding	1	LS	\$30,000	\$30,000
18	General Construction Costs* (11%)	1	LS	\$181,000	\$181,000
Construction Contingency (20%)					\$370,000
Construction Subtotal					<b>\$2,219,000</b>
Non-Construction (20%)					\$444,000
<b>Total (rounded up)</b>					<b>\$2,663,000</b>

\*Includes mobilization/demobilization (5%), erosion control, maintenance of traffic, record documents (3%), and construction site layout and staking (3%).

**Table 6-3**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 3 - WWTP Discharge to Wabash River**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Asphalt Roadway Reconstruction	4,500	SY	\$30	\$135,000
2	Special Backfill (53/73)	6,500	CY	\$25	\$162,500
3	8" Gravity Sewer	7,000	LF	\$40	\$280,000
4	4' Diameter Manholes	15	EA	\$3,000	\$45,000
5	Pump Station (for 46 homes)	1	EA	\$40,000	\$40,000
6	Grinder Pump Stations	43	EA	\$4,000	\$172,000
7	3" Force Main along Elm Grove	3,600	LF	\$25	\$90,000
8	2" Force Main on 500 E & 100 S	10,000	LF	\$20	\$200,000
9	4" Force Main New PS to WWTP	10,000	EA	\$30	\$300,000
10	1 1/2" Service Connections 43 x 150'	6,450	LF	\$14	\$90,300
11	Curb Box/Check Valves	43	EA	\$350	\$15,050
12	Misc. 2", 3" & 4" Valves	6	EA	\$200	\$1,200
13	Air Release Valves	4	EA	\$2,500	\$10,000
14	WWTP & Tertiary Filters	1	LS	\$510,000	\$510,000
15	Restoration and Seeding	1	LS	\$30,000	\$30,000
16	General Construction Costs* (11%)	1	LS	\$226,000	\$226,000
Construction Contingency (20%)					\$462,000
Construction Subtotal					<b>\$2,770,000</b>
Non-Construction (20%)					\$554,000
<b>Total (rounded up)</b>					<b>\$3,324,000</b>

\*Includes mobilization/demobilization (5%), erosion control, maintenance of traffic, record documents (3%), and construction site layout and staking (3%).

Land acquisition cost for WWTP facilities is not included.

**Table 6-3A - Detail**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 3 - WWTP Discharge to Wabash River**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Package Plant	1	EA	\$250,000	\$250,000
2	Common Excavation for Tankage	450	CY	\$15	\$6,750
3	Foundation Slab	32	CY	\$500	\$16,000
4	Adder for concrete tankage	1	LS	\$25,000	\$25,000
5	Trogan UV	1	EA	\$16,000	\$16,000
6	Site Work (drive, parking, seeding, fence)	1	LS	\$50,000	\$50,000
7	Yard Piping	1	LS	\$20,000	\$20,000
8	Electrical Site	1	LS	\$10,000	\$10,000
9	Electrical Equipment Controls & Panels	1	LS	\$5,000	\$5,000
10	Standby Generator	1	EA	\$40,000	\$40,000
11	Plant Effluent (8" gravity sewer)	1,600	LF	\$40	\$64,000
12	Manholes on Effluent Sewer	2	EA	\$3,000	\$6,000
13	Outfall Structure at river	1	EA	\$1,000	\$1,000
	<b>Sub Total (Item 14 Table 6-3)</b>				<b>\$510,000</b>

**Table 6-4**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 4 - Lagoon System Discharge to Wabash River**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Asphalt Roadway Reconstruction	4,500	SY	\$30	\$135,000
2	Special Backfill (53/73)	6,500	CY	\$25	\$162,500
3	8" Gravity Sewer	7,000	LF	\$40	\$280,000
4	4' Diameter Manholes	15	EA	\$3,000	\$45,000
5	Pump Station (for 46 homes)	1	EA	\$40,000	\$40,000
6	Grinder Pump Stations	43	EA	\$4,000	\$172,000
7	3" Force Main along Elm Grove	3,600	LF	\$25	\$90,000
8	2" Force Main on 500 E & 100 S	10,000	LF	\$20	\$200,000
9	4" Force Main New PS to Lagoons	10,000	EA	\$30	\$300,000
10	1 1/2" Service Connections 43 x 150'	6,450	LF	\$14	\$90,300
11	Curb Box/Check Valves	43	EA	\$350	\$15,050
12	Misc. 2", 3" & 4" Valves	6	EA	\$200	\$1,200
13	Air Release Valves	4	EA	\$2,500	\$10,000
14	Lagoon System	1	LS	\$512,000	\$512,000
15	Restoration and Seeding	1	LS	\$30,000	\$30,000
16	General Construction Costs* (11%)	1	LS	\$226,000	\$226,000
Construction Contingency (20%)					\$462,000
Construction Subtotal					<b>\$2,772,000</b>
Non-Construction (20%)					\$555,000
<b>Total (rounded up)</b>					<b>\$3,327,000</b>

\*Includes mobilization/demobilization (5%), erosion control, maintenance of traffic, record documents (3%), and construction site layout and staking (3%).

Land acquisition cost for lagoon system facilities is not included.



**Table 6-4A - Detail**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 4 -Lagoon System Discharge to Wabash River**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Lagoons & Attached Growth Reactor	1	EA	\$185,000	\$185,000
2	Common Excavation (3,490 +463 cy)	4,053	CY	\$15	\$60,795
3	Place Lagoon Berms and Clay liner	530	CY	\$40	\$21,200
4	Blower Building (Enclosure)	1	EA	\$3,000	\$3,000
5	Trogan UV	1	EA	\$16,000	\$16,000
6	Site Work (drive, parking, seeding, fence)	1	LS	\$75,000	\$75,000
7	Yard Piping	1	LS	\$25,000	\$25,000
8	Electrical Site	1	LS	\$10,000	\$10,000
9	Electrical Equipment Controls & Panels	1	LS	\$5,000	\$5,000
10	Standby Generator	1	EA	\$40,000	\$40,000
11	Plant Effluent (8" gravity sewer)	1,600	LF	\$40	\$64,000
12	Manholes on Effluent Sewer	2	EA	\$3,000	\$6,000
13	Outfall Structure at river	1	EA	\$1,000	\$1,000
	<b>Sub Total (Item 14 Table 6-4)</b>				<b>\$512,000</b>

**Table 6-5**  
**McKinney/Paxson Area PER**  
**Preliminary Estimate of Probable Construction Cost**  
**Alt. 5: Gravity & FM Along SR 124, Connect to Vera Cruz FM**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>QTY</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Total</b>
1	Asphalt Roadway Reconstruction	700	SY	\$30	\$21,000
2	Special Backfill (53/73)	2,300	CY	\$25	\$57,500
3	8" Gravity Sewer (on SR 124)	3,000	LF	\$40	\$120,000
4	4' Diameter Manholes	6	EA	\$3,000	\$18,000
5	Grinder Pump Stations	65	EA	\$4,000	\$260,000
6	3" Force Main to MH on S.R. 201	700	LF	\$20	\$14,000
7	2" Force Main on 500 E & S. off SR 124	16,400	LF	\$16	\$262,400
8	1 1/2" service connections 65 x 150'	9,750	LF	\$14	\$136,500
9	Curb Box/Check Valve	65	EA	\$350	\$22,750
10	Misc. 2" valves	6	EA	\$200	\$1,200
11	Air Release Valves	3	EA	\$2,500	\$7,500
12	Flushing/Cleanout Structures	7	EA	\$1,000	\$7,000
13	Upgrade PS @ SR 201 and Elm Grove	1	LS	\$20,000	\$20,000
14	Restoration & Seeding	1	LS	\$30,000	\$30,000
15	General Construction Costs** (11%)	1	LS	\$108,000	\$108,000
Construction Contingency (20%)					\$218,000
Construction Subtotal					<b>\$1,304,000</b>
Non-Construction (20%)					\$261,000
<b>Total (rounded up)</b>					<b>\$1,565,000</b>

\*Cost of land acquisition not included.

\*\*Includes mobilization/demobilization (5%), erosion control, maintenance of traffic, record documents (3%), and construction site layout and staking (3%).

**Table 6-1B**  
**McKinney/Paxson Area PER**  
**Operation, Maintenance & Replacement and Salvage Value**  
**Alt. 1 - New Pump Station (Vera Cruz + M/P Area) to Bluffton WWTP**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>Capital Cost</b>	<b>Annual O&amp;M</b>	<b>Salvage</b>	<b>Replacement</b>
1	Asphalt Roadway Reconstruction	\$156,000			
2	Special Backfill (53/73)	\$210,000			
3	8" Gravity Sewer	\$412,000	\$2,060		
4	4' Diameter Manholes	\$63,000	\$315		
5	Pump Station (for 37 homes)	\$40,000	\$1,600	\$10,000	\$20,000
6	Grinder Pump Stations	\$124,000	\$4,960	\$62,000	\$124,000
7	3" Force Main to MH on S.R. 201	\$50,000	\$250		
8	2" Force Main on 500 E & S. off SR	\$164,000	\$820		
9	1 1/2" Service Connections	\$65,100	\$326		
10	Curb Box/Check Valves	\$10,850	\$54		
11	Misc. 2" & 3" Valves	\$800	\$4		
12	Air Release Valves	\$5,000	\$25		
13	New Pump Station at SR 124	\$120,000	\$4,800	\$30,000	\$60,000
14	Upgrade Exist. PS on SR 201	\$20,000			
15	6" Force Main to Bluffton WWTP	\$196,000	\$980		
16	Tie-in at MH at WWTP	\$500			
	Sub Totals		\$16,194	<b>\$102,000</b>	\$204,000
	Annual Replacement		\$7,589		
	Annual OM&R				<b>\$23,800</b>

Annual O&M for piping is 0.5% of capital cost. Annual O&M for equipment is 4% of capital cost.

**Table 6-2B**  
**McKinney/Paxson Area PER**  
**Operation, Maintenance & Replacement and Salvage Value**  
**Alt. 2 - Upgrade Pump Station All Flow to Bluffton WWTP**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>Capital Cost</b>	<b>Annual O&amp;M</b>	<b>Salvage</b>	<b>Replacement</b>
1	Asphalt Roadway Reconstruction	\$156,000			
2	Special Backfill (53/73)	\$210,000			
3	8" Gravity Sewer	\$412,000	\$2,060		
4	4' Diameter Manholes	\$63,000	\$315		
5	Pump Station (for 37 homes)	\$40,000	\$1,600	\$10,000	\$20,000
6	Grinder Pump Stations	\$124,000	\$4,960	\$62,000	\$124,000
7	3" Force Main to MH on S.R. 201	\$50,000	\$250		
8	2" Force Main on 500 E & S. off SR	\$164,000	\$820		
9	1 1/2" Service Connections	\$65,100	\$326		
10	Curb Box/Check Valves	\$10,850	\$54		
11	Misc. 2" & 3" Valves	\$800	\$4		
12	Air Release Valves	\$5,000	\$25		
13	Upgrade Exist. Pump Sta.- SR 124	\$80,000	\$3,200	\$40,000	\$80,000
14	Upgrade Exist. PS on SR 201	\$20,000			
15	10" Force Main to Bluffton WWTP	\$236,250	\$1,181		
16	Tie-in at MH at WWTP	\$500			
	Sub Totals		\$14,795	<b>\$112,000</b>	\$224,000
	Annual Replacement		\$8,333		
	Annual OM&R				<b>\$23,200</b>

Annual O&M for piping is 0.5% of capital cost. Annual O&M for equipment is 4% of capital cost.

**Table 6-3B**  
**McKinney/Paxson Area PER**  
**Operation, Maintenance & Replacement and Salvage Value**  
**Alt. 3 - WWTP Discharge to Wabash River**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>Capital Cost</b>	<b>Annual O&amp;M</b>	<b>Salvage</b>	<b>Replacement</b>
1	Asphalt Roadway Reconstruction	\$135,000			
2	Special Backfill (53/73)	\$162,500			
3	8" Gravity Sewer	\$280,000	\$1,400		
4	4' Diameter Manholes	\$45,000	\$225		
5	Pump Station (for 46 homes)	\$40,000	\$1,600	\$10,000	\$20,000
6	Grinder Pump Stations	\$160,000	\$6,400	\$80,000	\$160,000
7	3" Force Main along Elm Grove	\$90,000	\$450		
8	2" Force Main on 500 E & 100 S	\$200,000	\$1,000		
9	4" Force Main N PS to WWTP	\$300,000	\$1,500		
10	1 1/2" Service Connections	\$90,300	\$452		
11	Curb Box/Check Valves	\$15,050	\$75		
12	Misc. 2", 3" & 4" Valves	\$1,200	\$6		
13	Air Release Valves	\$10,000	\$50		
14	WWTP & Tertiary Filters	\$510,000	\$35,700	\$128,000	\$261,000
	Sub Totals		\$48,858	<b>\$218,000</b>	\$441,000
	Annual Replacement		\$16,405		
	Annual OM&R				<b>\$65,300</b>

Annual O&M for piping is 0.5% of capital cost. Annual O&M for equipment is 4% of capital cost.  
Annual O&M for WWTP is 7% of capital cost.

**Table 6-4B**  
**McKinney/Paxson Area PER**  
**Operation, Maintenance & Replacement and Salvage Value**  
**Alt. 4 - Lagoon System Discharge to Wabash River**  
**Feb-12**

<b>Item</b>	<b>Description</b>	<b>Capital Cost</b>	<b>Annual O&amp;M</b>	<b>Salvage</b>	<b>Replacement</b>
1	Asphalt Roadway Reconstruction	\$135,000			
2	Special Backfill (53/73)	\$162,500			
3	8" Gravity Sewer	\$280,000	\$1,400		
4	4' Diameter Manholes	\$45,000	\$225		
5	Pump Station (for 46 homes)	\$40,000	\$1,600	\$10,000	\$20,000
6	Grinder Pump Stations	\$172,000	\$6,880	\$86,000	\$172,000
7	3" Force Main along Elm Grove	\$90,000	\$450		
8	2" Force Main on 500 E & 100 S	\$200,000	\$1,000		
9	4" Force Main N PS to Lagoons	\$300,000	\$1,500		
10	1 1/2" Service Connections	\$90,300	\$452		
11	Curb Box/Check Valves	\$15,050	\$75		
12	Misc. 2", 3" & 4" Valves	\$1,200	\$6		
13	Air Release Valves	\$10,000	\$50		
14	Lagoon System	\$512,000	\$20,480	\$123,000	\$206,000
	Sub Totals		\$34,118	<b>\$219,000</b>	\$398,000
	Annual Replacement		\$14,806		
	Annual OM&R				<b>\$49,000</b>

Annual O&M for piping is 0.5% of capital cost. Annual O&M for equipment is 4% of capital cost. Annual O&M for Lagoon system is 4% of capital cost.

**Table 6-5B**

**McKinney/Paxson Area PER  
 Operation, Maintenance & Replacement and Salvage Value  
 Alt.5 - Gravity & FM Along SR 124, Connect to Vera Cruz FM  
 Feb-12**

<b>Item</b>	<b>Description</b>	<b>Capital Cost</b>	<b>Annual O&amp;M</b>	<b>Salvage</b>	<b>Replacement</b>
1	Asphalt Roadway Reconstruction	\$21,000			
2	Special Backfill (53/73)	\$57,500			
3	8" Gravity Sewer	\$120,000	\$600		
4	4' Diameter Manholes	\$18,000	\$90		
5	Grinder Pump Stations (65)	\$260,000	\$10,400	\$130,000	\$260,000
6	3" Force Main to MH on S.R. 201	\$14,000	\$70		
7	2" Force Main on 500 E & S. off SR 12	\$262,400	\$1,312		
8	1 1/2" service connections 65 x 150'	\$136,500	\$683		
9	Curb Box/Check Valve	\$22,750	\$114		
10	Misc. 2" Valves	\$1,200	\$6		
11	Air Release Valves	\$7,500	\$38		
12	Flushing/Cleanout Structures	\$7,000	\$35		
13	Upgrade Exist. PS on SR 201	\$20,000	\$800	\$10,000	\$20,000
	<b>Sub Totals</b>		<b>\$14,147</b>	<b>\$140,000</b>	<b>\$280,000</b>
	Annual Replacement		<b>\$3,724</b>		
	Annual OM&R				<b>\$17,900</b>

Annual O&M for piping is 0.5% of capital cost. Annual O&M for equipment is 4% of capital cost.





# **APPENDIX 1**



H. J. Umbaugh & Associates  
Certified Public Accountants, LLP  
925 Dora Lane  
Suite 1  
P.O. Box 697  
Plymouth, IN 46563-0697  
Phone: 574-935-5178  
Fax: 574-935-5928  
www.umbaugh.com

February 1, 2012

Wells County Regional Sewer District  
1001 Sycamore Lane  
Bluffton, Indiana 46714

Re: Wells County Regional Sewer District  
Proposed Sewage Works Project and Rate Analysis

Dear Members of the Board:

The attached schedules (listed below) present unaudited and limited information for the purpose of discussion and consideration of a preliminary rate study by the appropriate officers, officials and advisors of the District. The use of these schedules should be restricted to this purpose, for internal use only, as the information is subject to future revision and final report.

Page(s)

2	Schedule of Estimated Project Costs and Funding
3	Pro Forma Annual Operation, Maintenance and Replacements Disbursements
4	Pro Forma Annual Revenue Requirements and Resulting Monthly Bill per Equivalent Dwelling Unit

We would appreciate your questions or comments on this information and would provide additional information upon request.

Very truly yours,

UMBAUGH

A handwritten signature in black ink, appearing to read "John D. Julien", is written over the printed name. The signature is stylized with large loops and a long horizontal stroke at the end.

John D. Julien

**WELLS COUNTY REGIONAL SEWER DISTRICT**

**SCHEDULE OF ESTIMATED PROJECT COSTS AND FUNDING**

**(Per Consulting Engineer)**

**ESTIMATED PROJECT COSTS**

Construction Costs and Contingencies:

Asphalt roadway reconstruction	\$21,000
Special backfill	57,500
8" gravity sewer	120,000
4' diameter manholes	18,000
Grinder pump stations	260,000
3" force main to manhole on SR 201	14,000
2" force main on 500 E & S off SR 124	262,400
1 1/2" service connections	136,500
Curb box/check valve	22,750
Miscellaneous 2" valves	1,200
Air release valves	7,500
Flushing/cleanout structures	7,000
Upgrade existing pump station SR 201 and Elm Grove	20,000
Restoration and seeding	30,000
General construction costs (11%)	<u>108,000</u>

Sub-total 1,085,850

Construction contingency (20%) and rounding 218,150

Total Construction Costs and Contingencies 1,304,000

Non-Construction Costs (20%) 261,000

Total Estimated Project Costs \$1,565,000

**PROJECT FUNDING**

Proposed Sewage Works Revenue Bonds of 2012 \$1,565,000

Note: Project costs do not include connection fees potentially payable to the City of Bluffton.

(Subject to the attached letter dated February 1, 2012)

(Preliminary - Subject to Change)

(Internal Use Only)

**WELLS COUNTY REGIONAL SEWER DISTRICT**

**PRO FORMA ANNUAL OPERATION, MAINTENANCE AND  
REPLACEMENTS DISBURSEMENTS**  
(Amounts rounded to the nearest \$100)

Estimated Operation, Maintenance and Replacement Disbursements:

Collection system operation and maintenance (1)	\$14,200
Labor (2)	6,000
Purchased treatment (3)	25,900
Replacements (4)	3,500
Billing and administrative (5)	<u>9,000</u>
 Total Estimated Operation, Maintenance and Replacement Disbursements	 <u><u>\$58,600</u></u>

(1) Annual O&M for piping is 0.5% of capital costs. Annual O&M for equipment is 4% of capital costs, per consulting engineer.

(2) Estimated annual collection system labor, per the consulting engineer:

Part time operator (contract)	<u>\$6,000</u>
-------------------------------	----------------

(3) Annual purchased treatment is based on estimated annual wastewater volume from 75 households of 700,000 cubic feet per year, per consulting engineer. The estimated annual purchased treatment expense is calculated as follows:

First 300 cu. ft. of volume per month (300 cu. ft. times 12 months)	3,600	
Times Bluffton Utilities user charge per 100 cu. ft. for the first 300 cu. ft.	<u>\$4.02</u>	
 Cost of first 300 cu. ft. of volume per month (rounded)		\$145
 All volume over 300 cu. ft. per month (700,000 minus 3,600)	696,400	
Times Bluffton Utilities user charge per 100 cu. ft. for all volume over 300 cu. ft.	<u>\$3.70</u>	
 Cost of all volume over 300 cu. ft. per month (rounded)		<u>25,767</u>
 Estimated Annual Purchased Treatment		<u><u>\$25,912</u></u>

(4) Per consulting engineer.

(5) Estimated billing and administrative disbursements are assumed to be \$10.00 per month, per customer, calculated as follows:

Assumed monthly billing and administrative cost per customer	\$10.00
Times estimated number of connections, per consulting engineer	<u>75</u>
 Estimated monthly billing and administrative disbursements	750
Times twelve months	<u>12</u>
 Estimated Annual Billing and Administrative Disbursements	<u><u>\$9,000</u></u>

(Subject to the attached letter dated February 1, 2012)  
(Preliminary - Subject to Change)  
(Internal Use Only)

WELLS COUNTY REGIONAL SEWER DISTRICT

PRO FORMA ANNUAL REVENUE REQUIREMENTS AND RESULTING  
MONTHLY BILL PER EQUIVALENT DWELLING UNIT  
(Amounts rounded to the nearest \$100)

Estimated Revenue Requirements:	Rural Development		
	No Grant	45% RD Grant	45% RD Grant/ Connection Fee
Administrative and billing (1) Divided by annual bills (2)	\$9,000 900	\$9,000 900	\$9,000 900
Administrative and billing charge	\$10.00	\$10.00	\$10.00
Operations, maintenance and replacements (1) Divided by annual EDU's (2)	\$49,600 900	\$49,600 900	\$49,600 900
O, M, & R charge	55.11	55.11	55.11
Average annual debt service Debt service reserve (6)	\$68,600 (3) 6,900	\$37,700 (4) 3,800	\$31,200 (5) 3,100
Total debt service Divided by annual EDU's	75,500 900	41,500 900	34,300 900
Debt service charge	83.89	46.11	38.11
Resulting Monthly Bill Per Equivalent Dwelling Unit	\$149.00	\$111.22	\$103.22

- (1) See page 3.
- (2) Equal to 75 residential connections times 12 months, per consulting engineers.
- (3) Average annual debt service assumes a \$1,565,000 Rural Development bond issue amortized over 39 years at an assumed Intermediate interest rate of 3.00%.
- (4) Assumes District will receive a 45% RD grant in the amount of \$704,000 and an RD bond issue of \$861,000 over 39 years at 3.00%.
- (5) Assumes District will receive a 45% RD grant in the amount of \$704,000, user connection fees of \$150,000, and an RD bond issue of \$711,000 over 39 years at 3.00%. The connection fees are based on an assumed up-front fee of \$2,000 per EDU.
- (6) To provide an allowance for a debt service reserve account to be funded over a ten year period.

(Subject to the attached letter dated February 1, 2012)  
(Preliminary - Subject to Change)  
(Internal Use Only)

# **APPENDIX 2**



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live*

Frank O'Bannon  
Governor

Lori F. Kaplan  
Commissioner

July 11, 2001

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
[www.state.in.us/idem](http://www.state.in.us/idem)

VIA CERTIFIED MAIL: 7000 0520 0023 5045 0540

Wells County Commissioners  
Mr. Paul I. Bonham  
Mr. Kevin S. Woodward  
Mr. Randal Plummer  
102 West Market Street  
Bluffton, Indiana 46714

Dear County Commissioners:

Re: Noncompliance with Indiana Code  
and Indiana Administrative Code

### WARNING OF NONCOMPLIANCE

You are hereby notified that this office has been advised by the Wells County Health Department of their observations and documentation of discharges of sewage into McKinney and Paxson Ditches, county drainage ditches, which then flow to the Wabash River. A number of water samples taken at different times during 1999 and 2000 were tested for E.coli bacteria, as an indicator of surface water quality. Results showed significantly elevated counts of the bacteria, an indication of improperly treated sewage from local septic systems. Recent inspection of McKinney and Paxson Ditches indicates this problem is ongoing.

This discharge of sewage into waters of the State is in violation of the Indiana Code (IC) and the Indiana Administrative Code (IAC). Specifically, the following provisions have been violated:

IC 13-30-2-1 which states, in part, "A person may not discharge, emit, cause, allow, or threaten to discharge, emit, cause, or allow any contaminant or waste, including any noxious odor, either alone or in combination with contaminants from other sources, into:

- (1) the environment; or
- (2) any publicly owned treatment works;

in any form that causes or would cause pollution that violates or would violate rules, standards, or discharge or emission requirements adopted by the appropriate board under the environmental management laws."

IC 13-18-4-5 which states, in part, "A person may not:

- (1) throw, run, drain, or otherwise dispose into any of the streams or waters of Indiana; or
- (2) cause, permit, or suffer to be thrown, run, drained, allowed to seep, or otherwise disposed into any waters;

any organic or inorganic matter that causes or contributes to a polluted condition of any waters..."

327 IAC 2-1-6(a)(1) which states, in part, "All waters at all times and at all places, including the mixing zone, shall meet the minimum conditions of being free from substances, materials, floating debris, oil, or scum attributable to municipal, industrial, agricultural, and other land use practices, or other discharges:

- (A) that will settle to form putrescent or otherwise objectionable deposits;
- (B) that are in amounts sufficient to be unsightly or deleterious;
- (C) that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
- (D) which are in amounts sufficient to be acutely toxic to, or to otherwise severely injure or kill aquatic life, other animals, plants, or humans"

This situation is a public health and environmental hazard. We have been informed that soil characteristics in this general area of Wells County have been found to be inappropriate to support effective on-site sewage treatment systems, therefore construction of a sewage collection and treatment system may be the only solution.

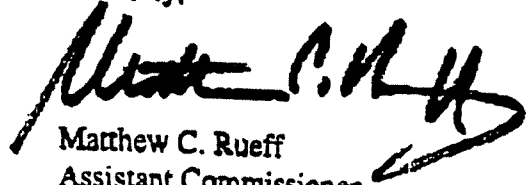
It is the belief of this office that the above noted violations are of a serious nature and deserve your immediate attention to return to compliance with the Indiana Code and the Indiana Administrative Code. It is therefore requested that you advise the Compliance Evaluation Section, Office of Water Quality, in writing, within thirty (30) days of the date of this correspondence, of the reasons for the violations as herein noted, along with any mitigating circumstances as to why enforcement action should not be pursued by this office.

Specifically, please submit a plan describing the corrective measures which will be taken to assure compliance in the future. *The correspondence must be submitted and signed by you, the Wells County Commissioners*, and directed to the attention of Pam Grams. Failure to adequately respond to this notice will prompt this office to initiate an enforcement action, which would include fines and penalties.



8651. If you have any questions concerning this notice, please contact Pam Grams at 317/232-

Sincerely,



Matthew C. Rueff  
Assistant Commissioner  
Office of Water Quality

c: Indiana State Dept. of Health  
Residential Sewage Disposal,  
Sanitary Engineering  
Wells County Health Department  
Attn: Linda Mauller

# **APPENDIX 3**

## **McKinney Ditch Watershed Sampling Results**

Water samples were taken in ten (10) locations within the McKinney Watershed area. The locations of the samples are as shown on the following map. The sample test results from the Indiana State Department of health are also included. Samples were taken at the same locations on April 6, 1999 and October 28, 1999. The results show the quantity of both Fecal Coliform and E. Coli.

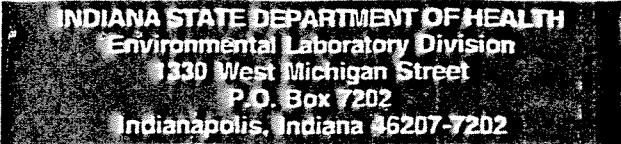








C



APR 12 1999 11

Sample Number 00133

APR 06 1999

Date Rep.

Date Received

SAMPLES SUBMITTED WITHOUT COMPLETED FORM WILL NOT BE ANALYZED. USE BLACK INK. Indiana State Department of Health is to mail report to:

WELLS COUNTY HEALTH DEPT.

(Name) 223 W. Washington, Suite 202
(Street) BLUFFTON, IN 46714-1955
(219)-824-6489
IN
(City or Town) (Zip)

ANALYSIS DATA-TO BE COMPLETED BY LAB

TEST: TOTAL COLIFORM

METHOD:

MF MPN LST P/A MMO-MUG P/A

RESULT:

PRESENT ABSENT

ANALYST:

SAMPLE SUBMITTED BY: Linda J. Mauler

HEALTH OFFICIAL Wells (COUNTY)

IDENTIFICATION NUMBER BOTTLE NUMBER

9040001 06

TEST: FECAL COLIFORM E. COLI

METHOD:

MF MPN E. C. P/A MMO-MUG P/A

RESULT:

PRESENT ABSENT 98000

ANALYST:

SAMPLE SOURCE (CHECK ONE):

- Drinking Water Swimming Pool Spa/Hot Tub
Bathing Beach Surface Water-Ditch, etc. Ice
Meat/Poultry Plant Bottled Water Dairy

\*If MPN is checked the result is the most probable number of organisms per 100ml. If MF is checked the result is organisms per 100 ml. If P/A is checked the result is presence (P) or absence (A).

Incidental Pseudomonas Detected

HETEROTROPHIC

PLATE COUNT /1.0 ML /0.1 ML

OTHER

NAME/ORGANIZATION Walter McKinney Watershed

ADDRESS 1/4 mile west of 5002 South of SR 124

LOCATION concrete structure n sw 1/4 road

PHONE N/A

DATE COLLECTED 4-6-99 TIME COLLECTED 9:40 a.m.

ADDITIONAL REPORTS ARE TO BE MAILED TO:

Name Street City State Zip

Report of Samples

- SATISFACTORY: At examination time, this water was bacteriologically safe based on USEPA standards.
UNSATISFACTORY: At examination time, this water was bacteriologically unsafe.
PLEASE SUBMIT ANOTHER SAMPLE. TEST NOT VALID BECAUSE:
Too long in transit (more than 48 hours).
Invalid/no collection date.
Incomplete information.
Other

ISDH - LABS



\*46316\*

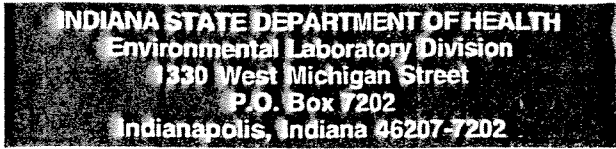
TIME OF ANALYSIS 1:25







D



Sample Number 1379  
Date Received OCT 28 1999

Date Rep. \_\_\_\_\_

SAMPLES SUBMITTED WITHOUT COMPLETED FORM WILL NOT BE ANALYZED. USE BLACK INK.  
Indiana State Department of Health is to mail report to:  
\_\_\_\_\_  
(Name)  
\_\_\_\_\_  
(Street)  
\_\_\_\_\_ IN \_\_\_\_\_  
(City or Town) (Zip)

ANALYSIS DATA--TO BE COMPLETED BY LAB  
TEST: TOTAL COLIFORM  
METHOD:\*  
 MF  MPN  LST P/A  MMO-MUG P/A  
RESULT:  
 PRESENT  ABSENT         
ANALYST:

SAMPLE SUBMITTED BY: Linda J. Mauller  
 HEALTH OFFICIAL Wells  
(COUNTY)  
IDENTIFICATION NUMBER 9 0 H 0 0 0 1 BOTTLE NUMBER 0 7

TEST:  FECAL COLIFORM  E. COLI  
METHOD:\*  
 MF  MPN  E. C. P/A  MMO-MUG P/A  
RESULT:  
 PRESENT  ABSENT       20  
ANALYST:

SAMPLE SOURCE (CHECK ONE):  
 Drinking Water  Swimming Pool  Spa/Hot Tub  
 Bathing Beach  Surface Water-Ditch, etc.  Ice  
 Meat/Poultry Plant  Bottled Water  Dairy

\*If MPN is checked the result is the most probable number of organisms per 100ml.  
If MF is checked the result is organisms per 100 ml.  
If P/A is checked the result is presence (P) or absence (A).  
Incidental Pseudomonas Detected

OTHER \_\_\_\_\_  
NAME/ORGANIZATION Walter McKinney Ditch Watershed  
ADDRESS 1/4 mile east of 500E south side of S.R. 124  
LOCATION culvert  
PHONE N/A  
DATE COLLECTED 10-28-99 TIME COLLECTED 9:10 a.m.

HETEROTROPHIC PLATE COUNT \_\_\_\_\_ /1.0 ML \_\_\_\_\_ /0.1 ML

TIME OF ANALYSIS 2:15

ADDITIONAL REPORTS ARE TO BE MAILED TO:  
\_\_\_\_\_  
(Name)  
\_\_\_\_\_  
(Street)  
\_\_\_\_\_ IN \_\_\_\_\_  
(City or Town) (Zip)

Report of Samples  
 SATISFACTORY: At examination time, this water was bacteriologically safe based on USEPA standards.  
 UNSATISFACTORY: At examination time, this water was bacteriologically unsafe.  
 PLEASE SUBMIT ANOTHER SAMPLE. TEST NOT VALID BECAUSE:  
 Too long in transit (more than 48 hours).  
 Invalid/no collection date.  
 Incomplete information.  
 Other \_\_\_\_\_

ISDH - LABS





**INDIANA STATE DEPARTMENT OF HEALTH**  
 Environmental Laboratory Division  
 1330 West Michigan Street  
 P.O. Box 7202  
 Indianapolis, Indiana 46207-7202

Sample Number 1378

Date Received OCT 28 1999

Date Rep. \_\_\_\_\_

SAMPLES SUBMITTED WITHOUT COMPLETED FORM WILL NOT BE ANALYZED. USE BLACK INK.  
 Indiana State Department of Health is to mail report to:

(Name) \_\_\_\_\_  
 (Street) \_\_\_\_\_  
 (City or Town) \_\_\_\_\_ IN \_\_\_\_\_ (Zip) \_\_\_\_\_

SAMPLE SUBMITTED BY: Linda J. Mauler

HEALTH OFFICIAL Wells  
 (COUNTY)

IDENTIFICATION NUMBER BOTTLE NUMBER  

9	0	H	0	0	0	1	0	4
---	---	---	---	---	---	---	---	---

**SAMPLE SOURCE (CHECK ONE):**

- Drinking Water     Swimming Pool     Spa/Hot Tub  
 Bathing Beach     Surface Water-Ditch, etc.     Ice  
 Meat/Poultry Plant     Bottled Water     Dairy

**TIME OF ANALYSIS** 2:15  
 OTHER \_\_\_\_\_

NAME/ORGANIZATION Walter McKinney Ditch Watershed

ADDRESS 0.15 mile north of Elm Grove Rd.

LOCATION Tile from the northwest on west side of S.R. 201

PHONE N/A

DATE COLLECTED 10-28-99 TIME COLLECTED 2:53 a.m.

ADDITIONAL REPORTS ARE TO BE MAILED TO:  
 (Name) \_\_\_\_\_  
 (Street) \_\_\_\_\_  
 (City or Town) \_\_\_\_\_ IN \_\_\_\_\_ (Zip) \_\_\_\_\_

**ANALYSIS DATA--TO BE COMPLETED BY LAB**

TEST: TOTAL COLIFORM  
 METHOD:\*  
 MF     MPN     LST P/A     MMO-MUG P/A  
 RESULT:  
 PRESENT     ABSENT    [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  
 ANALYST: \_\_\_\_\_

TEST:  FECAL COLIFORM     E. COLI  
 METHOD:\*  
 MF     MPN     E. C. P/A     MMO-MUG P/A  
 RESULT:  
 PRESENT     ABSENT    [ ] [ ] [ ] [ ] [ ] [ ] 1 3 0  
 ANALYST: \_\_\_\_\_

\*If MPN is checked the result is the most probable number of organisms per 100ml.  
 If MF is checked the result is organisms per 100 ml.  
 If P/A is checked the result is presence (P) or absence (A).

Incidental Pseudomonas Detected

HETEROTROPHIC PLATE COUNT \_\_\_\_\_ /1.0 ML    \_\_\_\_\_ /0.1 ML

**Report of Samples**

- SATISFACTORY: At examination time, this water was bacteriologically safe based on USEPA standards.  
 UNSATISFACTORY: At examination time, this water was bacteriologically unsafe.  
 PLEASE SUBMIT ANOTHER SAMPLE. TEST NOT VALID BECAUSE:  
 Too long in transit (more than 48 hours).  
 Invalid/no collection date.  
 Incomplete information.  
 Other \_\_\_\_\_







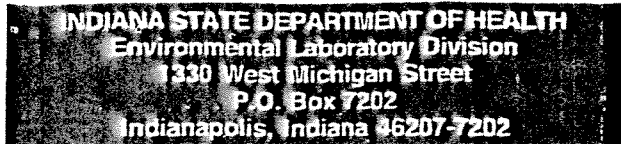












Sample Number 00135  
APR 00 1999  
Date Received \_\_\_\_\_

Date Rec. APR 12 1999 11

SAMPLES SUBMITTED WITHOUT COMPLETED FORM WILL NOT BE ANALYZED. USE BLACK INK.  
Indiana State Department of Health is to mail report to:

(Name) WELLS COUNTY HEALTH DEPT.  
223 W. Washington, Suite 202  
(Street) BLUFFTON, IN 46714-1955  
(City or Town) IN (Zip) (219)-824-6489

SAMPLE SUBMITTED BY: Linda J. Mueller

HEALTH OFFICIAL Wells  
(COUNTY)

IDENTIFICATION NUMBER 9040001 BOTTLE NUMBER 03

SAMPLE SOURCE (CHECK ONE):

- Drinking Water
- Swimming Pool
- Spa/Hot Tub
- Bathing Beach
- Surface Water-Ditch, etc.
- Ice
- Meat/Poultry Plant
- Bottled Water
- Dairy

OTHER \_\_\_\_\_

NAME/ORGANIZATION Walter McKinney Ditch Watershed

ADDRESS S.R. 201

LOCATION roadside ditch west of

PHONE NA

DATE COLLECTED 9-4-99 TIME COLLECTED 9:15 a.m.

ADDITIONAL REPORTS ARE TO BE MAILED TO:

Name) \_\_\_\_\_  
Street) \_\_\_\_\_  
IN \_\_\_\_\_  
(Zip) \_\_\_\_\_

ANALYSIS DATA-TO BE COMPLETED BY LAB

TEST: TOTAL COLIFORM

METHOD:  MF  MPN  LST P/A  MMO-MUG P/A

RESULT:  PRESENT  ABSENT [ ][ ][ ][ ][ ][ ][ ][ ][ ]

ANALYST: \_\_\_\_\_

TEST:  FECAL COLIFORM  E. COLI

METHOD:  MF  MPN  E. C. P/A  MMO-MUG P/A

RESULT:  PRESENT  ABSENT [ ][ ] 20000 [ ][ ][ ][ ]

ANALYST: \_\_\_\_\_

\*If MPN is checked the result is the most probable number of organisms per 100ml.  
If MF is checked the result is organisms per 100 ml.  
If P/A is checked the result is presence (P) or absence (A).

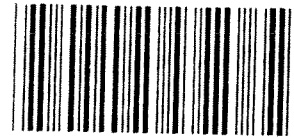
Incidental Pseudomonas Detected

HETEROTROPHIC PLATE COUNT \_\_\_\_\_ /1.0 ML \_\_\_\_\_ /0.1 ML

Report of Samples

- SATISFACTORY: At examination time, this water was bacteriologically safe based on USEPA standards.
- UNSATISFACTORY: At examination time, this water was bacteriologically unsafe.
- PLEASE SUBMIT ANOTHER SAMPLE. TEST NOT VALID, BECAUSE:
  - Too long in transit (more than 48 hours).
  - Invalid/no collection date.
  - Incomplete information.
  - Other \_\_\_\_\_

ISDH - LABS



\*46313\*

TIME OF ANALYSIS 1 : 25





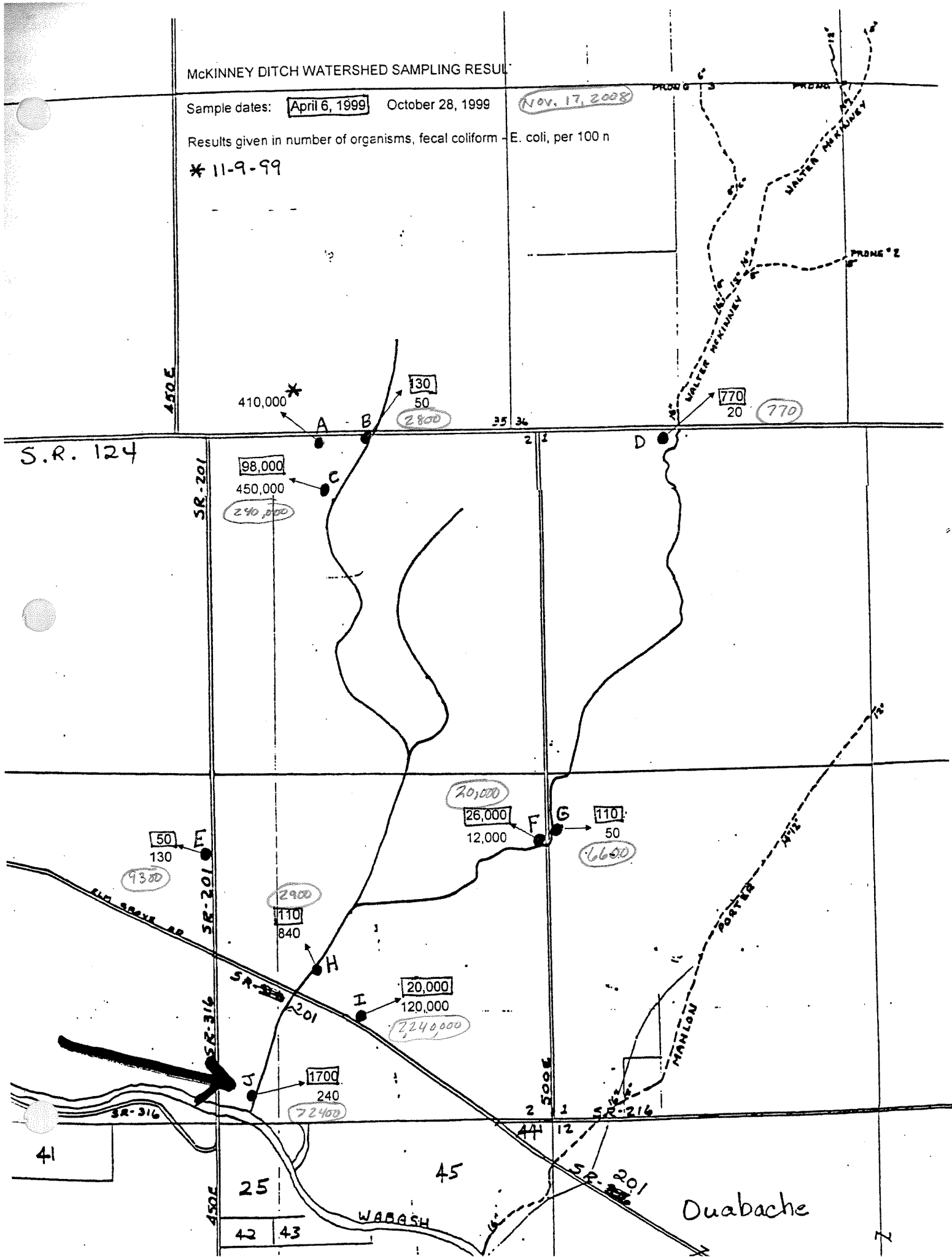
# **APPENDIX 4**

McKINNEY DITCH WATERSHED SAMPLING RESULT

Sample dates: April 6, 1999    October 28, 1999    Nov. 17, 2008

Results given in number of organisms, fecal coliform - E. coli, per 100 ml

\* 11-9-99















HEALTH OFFICIAL/POOLS & SPAS/BEACHES & LAKES REPORT

**INDIANA STATE DEPARTMENT OF HEALTH**  
**Environmental Microbiology**  
 550 W. 16<sup>th</sup> Street, Suite B  
 Indianapolis, Indiana 46202-2203

Shipping Number \_\_\_\_\_

Sample Number 813

11-14-08 09:58 RCVD

Date Received \_\_\_\_\_

te Rep NOV 17 PM 12:14

SAMPLES SUBMITTED WITHOUT COMPLETED FORM WILL NOT BE ANALYZED. USE BLACK INK.  
 Indiana State Department of Health is to mail report to:

Name: WELLS COUNTY HEALTH DEPT.  
223 W. Washington, Suite 202  
 Street: BLUFFTON, IN 46714-1955  
(260) 824-6489  
 City: \_\_\_\_\_ IN (ZIP) \_\_\_\_\_

**ANALYSIS DATA--TO BE COMPLETED BY LAB**

TEST: TOTAL COLIFORM

METHOD:\*  
 MF  MPN  LST P/A  MM P/A  MM QT

RESULT:  
 PRESENT            
 ABSENT

ANALYST: \_\_\_\_\_

SAMPLE SUBMITTED BY: Heath Butz

HEALTH OFFICIAL Wells  
 (COUNTY)

IDENTIFICATION NUMBER 90H00001 BOTTLE NUMBER 06

EMAIL hbutz@wellscounty.org

**SAMPLE SOURCE (CHECK ONE):**

- Drinking Water  Swimming Pool  Spa/Hot Tub  
 Bathing Beach  Surface Water-Ditch, etc.  Ice  
 Meat/Poultry Plant  Bottled Water  Dairy

OTHER \_\_\_\_\_

NAME/ORGANIZATION Walter McKinney Watershed

ADDRESS 25 miles west of 5006 South of SR 124

LOCATION concrete structure 250' south of road

PHONE NA

DATE COLLECTED 11-13-08 TIME COLLECTED 1:00

TEST:  FECAL COLIFORM  E. COLI

METHOD:\*  
 MF  MPN  EC P/A  MM P/A  MM QT

RESULT:  
 PRESENT            
 ABSENT

ANALYST: [Signature]

\*If MPN or MMQT is checked the result is the most probable number per 100ml.  
 If MF is checked the result is organisms per 100 ml.  
 If P/A is checked the result is presence (P) or absence (A).

Incidental Pseudomonas Detected

HETEROTROPHIC  
 PLATE COUNT \_\_\_\_\_ /1.0 ML \_\_\_\_\_ /0.1 ML

**Report of Samples**

SATISFACTORY: At examination time, this water was bacteriologically safe based on USEPA standards.

UNSATISFACTORY: At examination time, this water was bacteriologically unsafe.

PLEASE SUBMIT ANOTHER SAMPLE.  
 TEST NOT VALID BECAUSE:

Too long in transit (more than 30 hours).  
 Invalid/no collection date.  
 Incomplete information.  
 Other \_\_\_\_\_

ADDITIONAL REPORTS ARE TO BE MAILED TO:

(Name) \_\_\_\_\_  
 (Street) \_\_\_\_\_  
 (City or Town) \_\_\_\_\_ IN \_\_\_\_\_ (ZIP) \_\_\_\_\_

**SAMPLE TRANSIT TIME > 6 HOURS  
 RESULTS MAY BE INVALID**

**TIME OF ANALYSIS** 11:00

**ISDH - LABS**



\*902020\*









# **APPENDIX 5**

CE 11/17

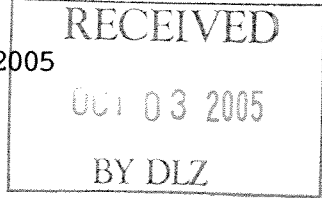


INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
*We make Indiana a cleaner, healthier place to live.*

Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

September 26, 2005



100 North Senate Avenue  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

*Via Certified Mail # 7000 0600 0027 2042 3322*  
Mr. Randal Plummer, Commissioner President  
Wells County Board of County Commissioners  
105 West Market Street, Suite 205  
Bluffton, IN 47614-2032

*Via Certified Mail # 7000 0600 0027 2042 3315*  
Mr. Peter Cole, Council President  
Wells County Council  
105 West Market Street, Suite 205  
Bluffton, IN 47614-2032

Dear Mr. Plummer and Mr. Cole:    Re:    Adoption of Agreed Order  
Commissioner of the Department of Environmental  
Management  
v.  
Wells County Board of County Commissioners and  
Wells County Council  
Case No. 2002-11499-W

This is to inform you that the Agreed Order in the above-referenced case has been approved and adopted by the Indiana Department of Environmental Management. A copy of the Agreed Order is enclosed.

You are no doubt familiar with the terms of compliance contained in the Agreed Order. The time frames for compliance are effective upon your receipt of this correspondence.

Thank you for cooperation. If you have any questions, please contact Paul Cluxton at 317/232-8432.

Sincerely,  
*Mark W. Stanifer*  
Mark W. Stanifer, Chief  
Water Section  
Office of Enforcement

Enclosure  
cc:    Trent Patterson, Attorney at Law  
      Wells County Health Department  
      Andy Dodzik, P.E.  
      <http://www.state.in.us/idem> (enclosure only)



Mitchell E. Daniels, Jr.  
 Governor

Thomas W. Easterly  
 Commissioner

100 North Senate Avenue  
 Indianapolis, Indiana 46204  
 (317) 232-8603  
 (800) 451-6027  
 www.IN.gov/idem

STATE OF INDIANA            )  
   )  
 COUNTY OF MARION         )         SS:   BEFORE THE INDIANA DEPARTMENT  
   )         OF ENVIRONMENTAL MANAGEMENT

COMMISSIONER OF THE DEPARTMENT         )  
 OF ENVIRONMENTAL MANAGEMENT,         )

                                  Complainant,         )

  v.         )

WELLS COUNTY BOARD OF COUNTY         )  
 COMMISSIONERS,                                 )

  and         )

WELLS COUNTY COUNCIL,                         )

  Respondents.         )

CASE NO. 2002-11499-W

**AGREED ORDER**

The Complainant and the Respondents desire to settle and compromise this action without hearing or adjudication of any issue of fact or law, and consent to the entry of the following Findings of Fact and Order. Pursuant to IC 13-30-3-3, entry into the terms of this Agreed Order does not constitute an admission of any violation contained herein. Respondent's entry into this Agreed Order shall not constitute a waiver of any defense, legal or equitable, which the Respondent may have in any future administrative or judicial proceeding, except a proceeding to enforce this order.

**I. FINDINGS OF FACT**

1. The Complainant is the Commissioner (Complainant) of the Indiana Department of Environmental Management, a department of the State of Indiana created by Indiana Code (IC) 13-13-1-1.
2. The Respondents are the Wells County Board of County Commissioners and the

- Wells County Council (Respondents or the Board and/or Council). The Respondents have jurisdiction over and responsibility for the septic tank systems and county ditches in the unincorporated areas of Wells County, including the McKinney and Paxson Ditches located north of the Ouabache State Park and east of the City of Bluffton in Wells County, Indiana (Site). The Wells County Board of County Commissioners (Respondent or Board) has been delegated the executive and legislative authority within the structure of Wells County government. The Wells County Council (Respondent or Council) has been delegated the fiscal responsibility and authority within the structure of the Wells County government.
3. The Indiana Department of Environmental Management (IDEM) has jurisdiction over the parties and subject matter of this action.
  4. Pursuant to IC 13-30-3-3, IDEM issued a Notice of Violation on March 22, 2005, via Certified Mail to Randal Plummer, President, Wells County Board of County Commissioners and Peter Cole, President, Wells County Council.
  5. Pursuant to IC 13-18-4-5, it is unlawful for any person to throw, run, drain, or otherwise dispose into any of the streams or waters of Indiana; or cause, permit, or suffer to be thrown, run, drained, allowed to seep, or otherwise disposed into any waters; any organic or inorganic matter that causes or contributes to a polluted condition of any waters, as determined by a rule of the board adopted under IC 13-18-4-1 and IC 13-18-4-3.
  6. Pursuant to 327 IAC 2-1-6(a)(1), all waters at all times and at all places, including the mixing zone, shall meet the minimum conditions of being free from substances, materials, floating debris, oil or scum attributable to municipal, industrial, agricultural, and other land use practices, or other discharges:
    - (A) that will settle to form putrescent or otherwise objectionable deposits;
    - (B) that are in amounts sufficient to be unsightly or deleterious;
    - (C) that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
    - (D) which are in amounts sufficient to be acutely toxic to, or to otherwise severely injure or kill aquatic life, other animals, plants or humans; and
    - (E) which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.
  7. An IDEM investigation, which included a record review of Respondents' December 2002 Regional Sewer District Feasibility Study and accompanying Wells County Health Department bacterial sampling of local ditches, indicate septic tank systems of the unincorporated area of the McKinney and Paxson Ditches in Wells County discharge sewage into the McKinney and Paxson Ditches,

which are waters of the state. The sewage discharges contain E.coli bacteria in amounts sufficient to be deleterious and to produce conditions in such degree as to create a nuisance. Furthermore, because the Respondents allowed sewage to pollute waters of the state, and because the Respondents violated 327 IAC 2-1-6, which is a rule adopted by the Water Pollution Control Board pursuant to IC 13-18-3, the Respondents are in violation of IC 13-18-4-5.

8. Pursuant to IAC 327 IAC 5-2-2, any discharge of pollutants into waters of the state as a point source discharge, except for exclusions made in 327 IAC 5-2-4, is prohibited unless in conformity with a valid National Pollutant Discharge Elimination System (NPDES) permit obtained prior to the discharge.
9. Pursuant to IC 13-30-2-1, a person may not discharge, emit, cause, allow, or threaten to discharge, emit, cause, or allow any contaminant or waste including any noxious odor, either alone or in combination with contaminants from other sources, into the environment in any form which causes or would cause pollution which violates rules, standards, or discharge or emission requirements adopted by the appropriate board under the environmental management laws.
10. An IDEM investigation, which included a record review of Respondents' December 2002 Regional Sewer District Feasibility Study and accompanying Wells County Health Department bacterial sampling of local ditches, indicate septic tank systems of the unincorporated area of the McKinney and Paxson Ditches in Wells County discharge sewage into the McKinney and Paxson Ditches, which are waters of the state, without an NPDES permit. Therefore, the Respondents are in violation of 327 IAC 5-2-2. Furthermore, because the Respondents allowed the discharge of sewage, a waste, into the environment in a manner that violated 327 IAC 2-1-6 and 327 IAC 5-2-2, which are rules that were adopted by the Water Pollution Control Board under environmental management laws, the Respondents are in violation of IC 13-30-2-1.
11. On March 23, 1999, a public meeting of McKinney Ditch residents and potentially affected landowners was held at the Ouabache State Park with 18 households represented. Presentations were made by the IDEM Regional Sewer District coordinator and the Rural Community Assistance Program. Follow up meetings were held December 1999, and March and April 2000. Eight Paxson area residents met June 13, 2000.
12. On July 11, 2001, IDEM sent a Warning of Noncompliance letter to the Wells County Commissioners concerning septic tank discharges to the McKinney & Paxson ditches documented by Wells County Health Department bacteria sampling on April 6, 1999, and follow up sampling on October 28, 1999 and November 9, 1999. A response to IDEM from the Commissioners, dated September 18, 2001, "deferred this issue to the Wells County Health Board". A study was arranged to

- be done by DLZ Indiana, LLC and included wastewater concerns in several areas east, north and west of Bluffton. Their report was presented to the Respondents in December 2002. Options for the McKinney/Paxson Watershed area include collecting the sewage and pumping it to either the Bluffton sewer system or the Vera Cruz sewer force main.
13. There is a need for current follow up planning for solution(s) and consideration of formation of a Wells County Regional Sewer District to address the McKinney/Paxson Ditch areas and other unincorporated areas in Wells County with problem septic systems that continue to discharge to ditches.
  14. On May 2, 2005, the Respondents and IDEM participated in a settlement conference to discuss the enforcement documents.
  15. In recognition of the settlement reached, the Respondents waive any right to administrative and judicial review of this Agreed Order.

## **II. ORDER**

1. This Agreed Order shall be effective (Effective Date) when it is approved by the Complainant or his delegate, and has been received by the Respondents. This Agreed Order shall have no force or effect until the Effective Date.
2. The Respondents shall comply with all applicable provisions of the Indiana Code (IC) and the Indiana Administrative Code (IAC), including, but not limited to, IC 13-30-2-1, IC 13-18-4-5, 327 IAC 2-1-6(a)(1), and 327 IAC 5-2-2.
3. Within 180 days of the Effective Date of this Agreed Order, the Respondents shall take action to address the unlawful discharge of untreated sewage to waters of the state. Such action shall include, but not necessarily be limited to the following:
  - Signing a petition formally requesting the IDEM Commissioner to sign an order forming the Wells County Regional Sewer District to handle wastewater infrastructure needs and to cease the inadequately treated discharges from septic tank systems from discharging to the ground surface, entering ditches or other surface waters, beginning with the McKinney/Paxson Ditch area.

The petition states the purpose of forming the district, the territory to be served, the public benefits, how the district board may be structured, estimates for project costs, potential rates and charges, and funding sources.

The Respondents shall notify IDEM's Office of Enforcement, in writing, within 10 days of the completion of the above action. The notification shall include a description of the action completed, the date it was completed, and shall be sent to:

Paul Cluxton, case manager  
Indiana Department of Environmental Management  
Office of Enforcement – Mail Code 60-02  
100 North Senate Avenue  
Indianapolis, IN 46204-2251

4. In the event the terms and conditions of the following Order paragraphs are violated, the Complainant may assess and the Respondents shall pay a stipulated penalty in the following amount:

<b>Order Paragraph(s) Cited</b>	<b>Violation</b>	<b>Penalty due per violation</b>
3	Failure to submit a complete and timely petition for the formation of a Regional Sewer District.	\$500 per each week or part thereof late
3	Failure to timely submit notification to the case manager	\$250 per each week or part thereof late

5. Stipulated penalties shall be due and payable within 30 days after the Respondents receive written notice that the Complainant has determined a stipulated penalty is due. Assessment and payment of stipulated penalties shall not preclude the Complainant from seeking any additional relief against the Respondents for violation of the Agreed Order. In lieu of any of the stipulated penalties given above, the Complainant may seek any other remedies or sanctions available by virtue of the Respondents' violation of this Agreed Order, or Indiana law, including but not limited to civil penalties pursuant to IC 13-30-4.
6. Stipulated penalties are jointly and severally payable by check to the Environmental Management Special Fund. Checks shall include the Case Number (2002-11499-W) of this action and shall be mailed to:

Indiana Department of Environmental Management  
Cashiers Office – Mail Code 50-10C  
100 N. Senate Avenue  
Indianapolis, IN 46204-2251



7. In the event that any stipulated penalty amount assessed pursuant to Paragraphs 4 and 5 is not paid within 30 days of the receipt of notice that it is due, the Respondents shall pay interest on the unpaid balance at the rate established by IC 24-4.6-1-101. The interest shall continue to accrue until the stipulated penalty is paid in full.
8. This Agreed Order shall apply to and be binding upon the Respondents, their successors, and assigns. The Respondents' signatories to this Agreed Order certify that they are fully authorized to execute this document and legally bind the parties they represent. No change in ownership, corporate, or partnership status of the Respondents shall in any way alter their status or responsibilities under this Agreed Order.
9. In the event that any terms of the Agreed Order are found to be invalid, the remaining terms shall remain in full force and effect and shall be construed and enforced as if the Agreed Order did not contain the invalid terms.
10. This Agreed Order is not and shall not be interpreted to be a Permit, nor shall it in any way relieve the Respondents of their obligation to comply with the requirements of any applicable federal or state law or regulation.
11. The Complainant does not, by its approval of this Agreed Order, warrant or aver in any manner that the Respondents' compliance with any aspect of this Agreed Order will result in compliance with the provisions of the Clean Water Act or state law.
12. The Respondents shall provide a copy of this Agreed Order, if in force, to any subsequent owners or successors before ownership rights are transferred. The Respondents shall ensure that all contractors, firms and other persons performing work under this Agreed Order comply with the terms of this Agreed Order.
13. This Agreed Order shall remain in effect until the Respondents comply with the terms of Order Paragraphs 3-7 and until IDEM issues a Close-Out letter to the Respondents.

**TECHNICAL RECOMMENDATION:**  
Department of Environmental Management

By: Mark W. Stanifer  
Mark W. Stanifer  
Section Chief, Water Section  
Office of Enforcement  
Date: 5-17-2005

**RESPONDENTS:**  
Wells County Board of County Commissioners

By: Randal Plummer  
Randal Plummer, President

Date: September 6, 2005

By: Paul Bonham  
Printed: Paul Bonham  
Title: Commission Vice President

Date: September 6, 2005

By: Kevin Woodward  
Printed: Kevin Woodward  
Title: Commissioner

Date: September 6, 2005

**RESPONDENTS:**  
Wells County Council

By: Peter Cole  
Printed: Peter Cole  
Title: Council President

Date: September 12, 2005

**COUNSEL FOR COMPLAINANT:**  
Department of Environmental Management

By: Joseph H. Merrick  
Joseph H. Merrick  
Office of Legal Counsel  
Date: 9/24/05

**COUNSEL FOR RESPONDENTS:**

By: Trent Patterson  
Trent Patterson, Attorney at Law  
Date: 9/16/05

APPROVED AND ADOPTED BY THE INDIANA DEPARTMENT OF ENVIRONMENTAL  
MANAGEMENT THIS 26<sup>th</sup> DAY OF September, 2005.

For the Commissioner:  
Matthew T. Klein  
Matthew T. Klein, Assistant Commissioner  
for Compliance & Enforcement



# **APPENDIX 6**

STATE OF INDIANA        )  
                                  )  
COUNTY OF MARION     )  
                                  )        SS:    BEFORE THE INDIANA DEPARTMENT  
                                  )        OF ENVIRONMENTAL MANAGEMENT

IN THE MATTER OF:        )  
THE FORMATION OF THE     )  
WELLS COUNTY REGIONAL    )  
SEWER DISTRICT            )

FINDINGS OF FACT AND RECOMMENDED ORDER  
OF THE HEARING OFFICER

FINDINGS OF FACT

1. On or about October 23, 2006, the Wells County Commissioners and the Wells County Council petitioned the Indiana Department of Environmental Management (IDEM) for an Order to establish a regional sewer district (RSD) in Wells County.
2. Two amendments were submitted to IDEM and received on April 14, 2008 and September 9, 2008.
3. The first amendment, received on April 14, 2008, added two additional trustees to the board and expanded the RSD's territory to all of the unincorporated areas within the county.
4. The second amendment, received on September 9, 2008, added Wells County Commissioner Resolution 2008-2 to the petition.
5. The submitted petition and amendments comply with the provisions of IC 13-26-2.
6. The proposed name of the regional sewer district is the Wells County Regional Sewer District (Wells County RSD).
7. A public hearing was held on October 20, 2008 at the Wells County Community Center, 1240 South 4-H Road, Bluffton, Indiana.
8. Notice of the hearing was given by publication in "The Fort Wayne Journal Gazette" on October 6, 10, 13 and 17, 2008, in the "News Banner" on October 3, 8, 14, and 17, 2008 and in the "Ossian Journal" on October 2, 9, and 16, 2008.
9. The principle office of the Wells County RSD shall be located in the office of the County Auditor, 102 W. Market Street, Suite 205, Bluffton, Indiana, 46714. The Wells County RSD Board of Trustees (Wells County RSD Board), upon formation, may relocate the office after written notice to IDEM.
10. The sanitary sewage needs of those residents now residing within the proposed Wells County RSD territory are currently being met with septic systems, some of which are failing.

11. Most of the residents of the Wells County RSD currently obtain their water for drinking and other purposes from cisterns or individual wells. Contamination from failing septic systems is detrimentally affecting the water quality and public health in the proposed Wells County RSD territory.
12. The current method of collection and disposal of the sanitary sewage of some of the residents in the proposed Wells County RSD territory is insufficient and detrimentally affects the water quality and public health within the proposed district.
13. The Wells County RSD is being formed to provide for the collection, treatment, and disposal of sewage within the district pursuant to IC 13-26-1-1.
14. Upon formation, the Wells County RSD may construct and operate a system that will collect and treat the sanitary sewage of the residents of the Wells County RSD. The Wells County RSD may contract with a district or municipality to meet the sewage treatment needs of the residents of the RSD. The RSD may implement a septic maintenance/management program as needed.
15. The proposed district has no outstanding indebtedness.
16. The Wells County RSD shall be governed by a Board of five (5) voting Trustees to be appointed as follows:
  - A. The Wells County Commissioners shall appoint two (2) Trustees. The term shall expire December 31, 2012.
  - B. The Wells County Council shall appoint two (2) Trustees. The term shall expire December 31, 2011.
  - C. The executive of a municipality contracting with the District shall appoint one (1) Trustee. If more than one municipality is utilized then the District shall define the terms in further detail through its by-laws. This term expires December 31, 2010.
  - D. All succeeding appointments after the expiration of initial terms, notwithstanding Paragraph C above, shall be for a period of four (4) years.
  - E. In the event a vacancy occurs on the Wells County RSD Board, the appointing authority for that trustee shall appoint a new trustee within thirty (30) days of notification from the Board that such a vacancy exists. The new trustee will complete the term of the vacated position.
15. The estimated monthly sewage rate is projected to be approximately \$69.00 to \$146.00, provided the Wells County RSD pursues and receives public funding as needed.

16. The Wells County RSD shall apply for available public funding as needed.
17. The operation and maintenance costs of the Wells County RSD will be derived from monthly user fees.
18. The Wells County RSD appears capable of accomplishing the purposes for which it was formed in an economically feasible manner, provided it maximizes all practicable public funding options and receives anticipated grants.
19. The Wells County RSD territory will include all unincorporated areas of Wells County, Indiana.
20. The Wells County RSD Board shall provide sufficient bond for all officers and Trustees or employees who have any power to disburse funds of the Wells County RSD.
21. On or before March 15, 2010, the Wells County RSD shall file with the Commissioner of IDEM, a detailed plan (the "District Plan") for the construction and operation of Wells County RSD's facilities.
22. Options for the treatment and collection of wastewater have been preliminarily studied and further studies will be prepared after the formation of the district.
23. Establishment of the District will be conducive to the public health, safety, convenience and welfare of the residents of the District because the District plans to collect, dispose and treat sewage that is currently being provided by individual septic tanks or other on-site systems.
24. The plan for financing the cost of operations of the Wells County RSD until it is in receipt of revenue from its operation or proceeds from the sale of bonds may include a forty (40) year loan from United States Department of Agriculture (USDA)-Rural Utility Services or the Indiana State Revolving Fund (SRF) and private contributions.

#### RECOMMENDED ORDER

The Hearing Officer recommends the following:

1. That a Regional Sewer District, to be known as the Wells County Regional Sewer District (Wells County RSD), be organized as an independent political entity of the State of Indiana as a body corporate and politic.
2. The purposes to be accomplished by the formation of the Wells County RSD are to provide for the collection, treatment, and disposal of sewage within the district pursuant to IC 13-26-1-1.
3. The territory of the Wells County RSD is to include all of the unincorporated areas of Wells County, Indiana.

4. The Wells County RSD shall be governed by a Board of five (5) voting Trustees to be appointed as follows:
  - A. The Wells County Commissioners shall appoint two (2) Trustees. The term shall expire December 31, 2012.
  - B. The Wells County Council shall appoint two (2) Trustees. The term shall expire December 31, 2011.
  - C. The executive of a municipality contracting with the District shall appoint one (1) Trustee. If more than one municipality is utilized then the District shall define the terms in further detail through its by-laws. This term expires December 31, 2010.
  - D. All succeeding appointments after the expiration of initial terms, notwithstanding Paragraph C above, shall be for a period of four (4) years.
  - E. In the event a vacancy occurs on the Wells County RSD Board, the appointing authority for that trustee shall appoint a new trustee within thirty (30) days of notification from the Board that such a vacancy exists. The new trustee will complete the term of the vacated position.
5. The Wells County RSD Board shall provide sufficient bond for all officers, trustees or employees who have any power to disburse funds of the Wells County RSD.
6. On or before March 15, 2010, the Wells County RSD shall file with the Commissioner of IDEM, a detailed plan (the "District Plan) for the construction and operation of Wells County RSD's facilities.
7. The Wells County RSD shall apply for all available public funding as needed.
8. Establishment of the District will be conducive to the public health, safety, convenience and welfare of the residents of the District because the District plans to collect, dispose and treat sewage that is currently being managed by individual septic tanks or other on-site systems.
9. Upon formation, the District may construct or contract for treatment, pumping, transmission, and storage and distribution systems for the municipal and rural supply needs.

Dated: June 2, 2009 Hearing Officer Sydney L. Newton



STATE OF INDIANA )  
 ) SS: BEFORE THE INDIANA DEPARTMENT  
 ) OF ENVIRONMENTAL MANAGEMENT  
COUNTY OF MARION )

IN THE MATTER OF: )  
THE FORMATION OF THE )  
WELLS COUNTY REGIONAL )  
SEWER DISTRICT )

ORDER ADOPTING THE FINDINGS OF FACT  
AND RECOMMENDED ORDER OF THE HEARING OFFICER  
FOR THE ORGANIZATION OF THE  
WELLS COUNTY REGIONAL SEWER DISTRICT

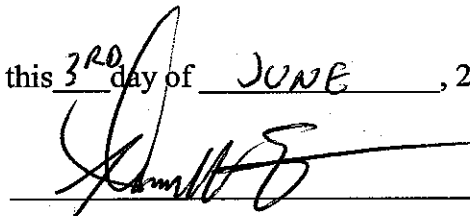
Notice is hereby given that the Hearing Officer has filed with the Commissioner of the Indiana Department of Environmental Management (Commissioner) the "FINDINGS OF FACT AND RECOMMENDED ORDER" relative to the petition requesting organization of the Wells County Regional Sewer District (RSD). Said FINDINGS and RECOMMENDED ORDER are attached to this ORDER, and consist of four (4) pages.

And the Commissioner, having reviewed the attached "FINDINGS OF FACT AND RECOMMENDED ORDER" of the Hearing Officer, now determines that the organization of the proposed RSD complies with the conditions of Indiana Code 13-26 et seq., and that the proposed RSD appears capable of accomplishing its purpose in an economically feasible manner.

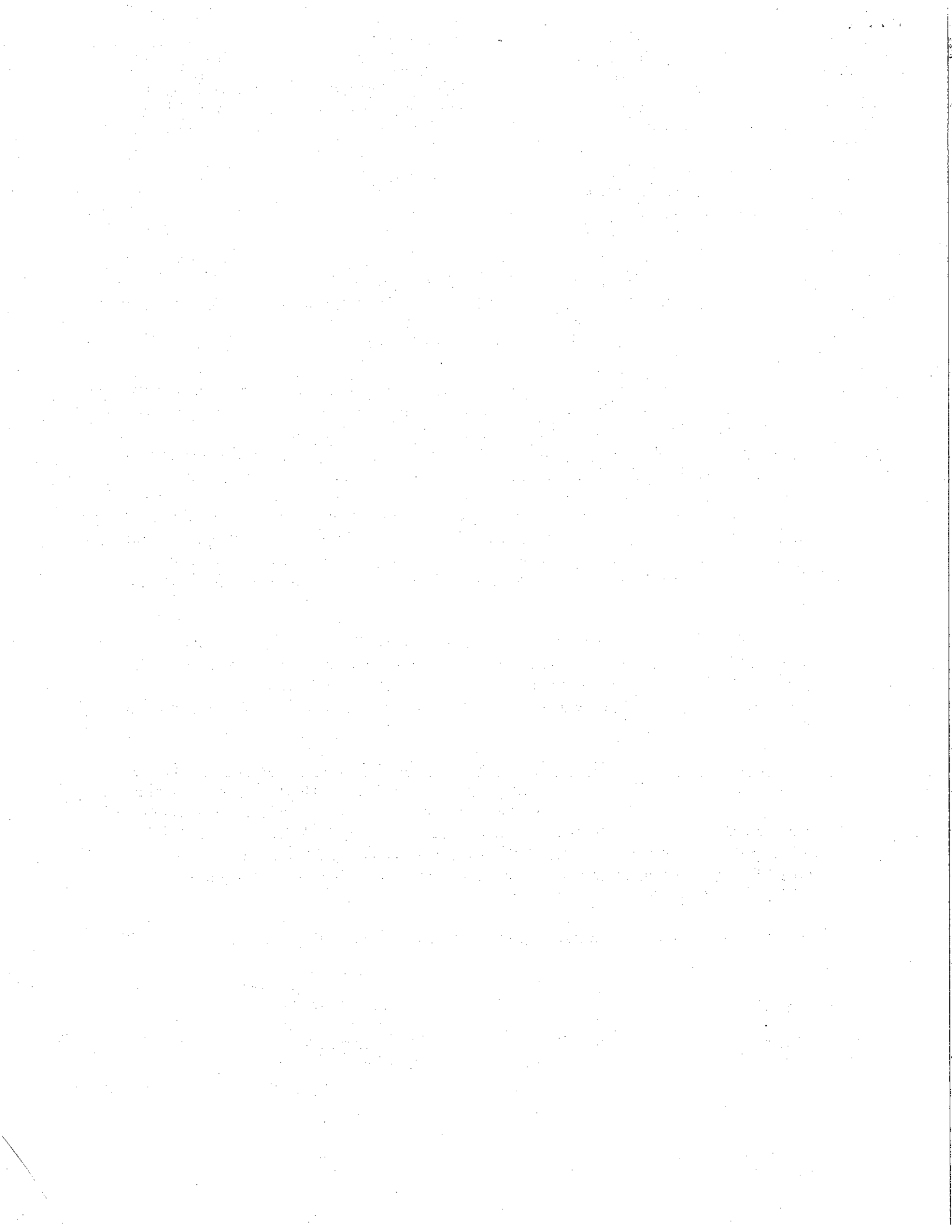
IT IS NOW ORDERED BY THE COMMISSIONER that the Wells County Regional Sewer District be organized as an independent municipal corporation pursuant to the terms and conditions set forth in the attached "FINDINGS OF FACT AND RECOMMENDED ORDER" which are adopted and approved, and deemed incorporated in this ORDER.

Pursuant to IC 13-26-2-11, IC 4-21.5-3-2 and IC 4-21.5-5-5, this ORDER becomes effective thirty-three (33) days after service through the United States mail, unless a petition for judicial review is filed before or on the thirty-third (33<sup>rd</sup>) day. Standing and substantive requirements of the verified petition for review are specified in IC 4-21.5-5-3 and IC 4-21.5-5-7, respectively. Pursuant to IC 4-21.5-5-9, a person seeking judicial review of this ORDER may, by filing a verified petition, request an order of the court staying this ORDER, pending a decision by the court.

All of which is ORDERED at Indianapolis, Indiana this 3<sup>rd</sup> day of JUNE, 2009.



Thomas W. Easterly, Commissioner  
Indiana Department of  
Environmental Management



# **APPENDIX 7**



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

RECEIVED

JAN 10 2011

WELLS COUNTY  
AUDITOR

To: Wells County Regional District  
Wells County Auditor  
102 West Market Street  
Suite 205  
Bluffton, IN 46714

January 7, 2011

Dear District,

The District has met the statutory requirements for requesting an extension of time to submit their District Plan and it has been granted. Enclosed is the Order modifying your original Order. If you have any questions, please feel free to contact me at 317-233-0476.

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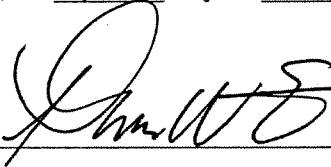
Sincerely,

Lynne Newlon  
Regional District Coordinator  
IDEM



Pursuant to I.C. § 4-21.5-3-5(f) and I.C. § 4-21.5-3-2(e), this Order modifying the original Order forming the Wells County Regional Sewer District, becomes effective eighteen (18) days after its mailing. If you wish to challenge this decision, I.C. 4-21.5-3-7 requires that a petition for administrative review be filed. The petition describing your intent must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, IGC-N, Indianapolis, Indiana 46204, within eighteen (18) days from the mailing of this notice. This petition must be filed in accordance with I.C. 4-21.5.3-7, and must include facts demonstrating that the petitioner is the applicant, a person aggrieved by this decision, or a person entitled to review by law.

DATED in Indianapolis, Indiana, on 7<sup>TH</sup> day of JANUARY, 2011.



---

Thomas W. Easterly,

Commissioner

Indiana Department of Environmental Management

# WELLS COUNTY REGIONAL SEWER DISTRICT

August 30, 2011

Paul Cluxton, Enforcement Case Manager  
Surface Water, Operations & Enforcement Branch  
Enforcement Section  
Indiana Department of Environmental Management  
Office of Water Quality – Mail Code 60-02W  
100 N. Senate Avenue  
Indianapolis, IN 46204-2251

Re: Response to Letter of Noncompliance with Agreed Order Dated July 28, 2011  
Case No. 2002-11499-W  
Wells County

Dear Mr. Cluxton:

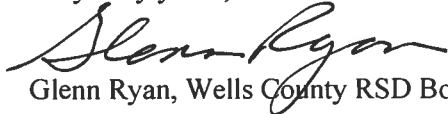
This letter serves to request an extension of six months to March 31, 2012 for submittal of a complete District Plan. This will allow the Wells County Regional Sewer District to evaluate lower cost alternatives for resolving the failing septic systems discharge problem to the McKinney/Paxson Ditches. The District will:

- Work in cooperation with the City of Bluffton who already serves some of the residents in the McKinney/Paxson Area.
- Develop a cost estimate.
- Update the rate study.
- Meet with financing agency such as SRF or USDA Rural Development.
- Submit a feasible solution/project.
- Develop a detailed time schedule.
- Submit the updated Wells County Sewer Use Ordinance which is in the process of being adopted by the County Commissioners.

The Wells County Commissioners and Wells County Council are committed to these necessary actions.

The Wells County Regional Sewer District has requested a meeting with you to discuss this further.

Very truly yours,



Glenn Ryan, Wells County RSD Board President

cc: Paul Cluxton, IDEM Enforcement  
Lynne Newlon, Regional Water & Sewer District Coordinator  
Trent M. Patterson, Wells County Attorney  
Kevin Woodward, Wells County Commissioners  
Peter Cole, President County Council  
Mary Hollingsworth, Chief Surface Water Operations and Enforcement Branch  
Heath Butz, Wells County Health Department

# **APPENDIX 8**





INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
www.idem.IN.gov

Glenn Ryan, President  
Wells County Regional Sewer District  
1001 Sycamore Lane  
Bluffton, Indiana 47614

September 2, 2011

Dear Mr. Ryan:

Re: March 31, 2012 Target Date for  
Wells County RSD District Plan Revision

On September 1, 2011, this office received your letter (copy enclosed) requesting an extension of six months to March 31, 2012, for the Wells County Regional Sewer District to revise its District Plan to include its implementation schedule for addressing failing septic systems discharges into the McKinney/Paxson Ditches. Your request is hereby granted.

Thank you for communicating the commitment of the Wells County Commissioners and Wells County Council to actions to support the determination of a feasible solution/project and to update/strengthen the County Ordinance. As you know, the process is underway for setting a discussion meeting date. If you have any questions, please contact Paul Cluxton at 317/232-8432.

Sincerely,

Mary Hollingsworth  
Branch Chief  
Surface Water, Operations and Enforcement  
Branch  
Office of Water Quality

Enclosure

cc: Peter Cole, President, Wells County Council  
Kevin Woodward, President, Wells County Commissioners  
Trent Patterson, Wells County Attorney  
Michael Lautzenheiser, Wells County Planning Director  
Andy Dodzik, DLZ Engineering  
Rob Merchant, Bluffton/Vera Cruz Wastewater Manager  
The Honorable Ted Ellis, Mayor, City of Bluffton  
Wells County Health Department  
Mike Mettler, Indiana State Department of Health, Sanitary Engineering Division

# WELLS COUNTY REGIONAL SEWER DISTRICT

August 30, 2011

Paul Cluxton, Enforcement Case Manager  
Surface Water, Operations & Enforcement Branch  
Enforcement Section  
Indiana Department of Environmental Management  
Office of Water Quality – Mail Code 60-02W  
100 N. Senate Avenue  
Indianapolis, IN 46204-2251

Re: Response to Letter of Noncompliance with Agreed Order Dated July 28, 2011  
Case No. 2002-11499-W  
Wells County

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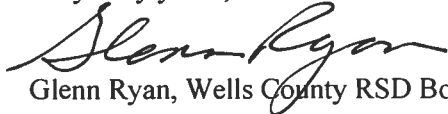
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- Work in cooperation with the City of Bluffton who already serves some of the residents in the McKinney/Paxson Area.
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Glenn Ryan, Wells County RSD Board President

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Lynne Newlon, Regional Water & Sewer District Coordinator  
Trent M. Patterson, Wells County Attorney  
Kevin Woodward, Wells County Commissioners  
Peter Cole, President County Council  
Mary Hollingsworth, Chief Surface Water Operations and Enforcement Branch  
Heath Butz, Wells County Health Department

# **APPENDIX 9**

# Wells County Health Department

223 W. Washington, Suites 200-209  
Bluffton, Indiana 46714-1955  
Phone: (260) 824-6489 • Fax: (260) 824-8803

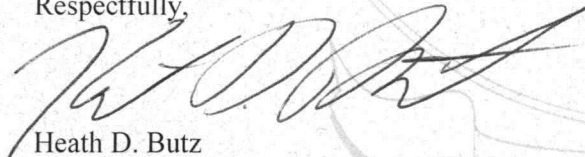
Date: February 7, 2011

Re: Regional Sewer District

Water samples were taken from the same ten locations in the McKinney Watershed on April 6, 1999 and October 28, 1999. Samples were taken again on November 13, 2008 at the request of the County Commissions to verify the results of earlier sampling. All sampling results showed significantly elevated counts of E. Coli bacteria, an indication of improperly treated sewage from local septic systems. The Wells County Health Department has observed and documented discharges of sewage into the McKinney and Paxson Ditches, county drainage ditches, which then flow to the Wabash River.

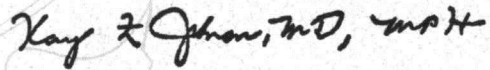
Inadequate septic systems and poor soil conditions are the main issues of concern in the McKinney/Paxson Watershed Area. The majority of soils in Wells County according to the "Soil Survey of Wells County, Indiana" are very poorly drained and considered severe or unsuitable for septic systems. The McKinney/Paxson Watershed Area is located in the Wabash Recessional Moraine which has some of the most restrictive soils in the county. On-site sewage systems have failed prematurely in these moraine soils. The Wells County Health Department supports the work of the Regional Sewer District and encourages the installation of sanitary sewer within this district in order to address the issues of concern.

Respectfully,



Heath D. Butz  
Environmental Health Specialist

Respectfully,



Kay L. Johnson, M.D.  
Health Officer