# Preliminary Engineering Report

*for the*

# Regionalization Assistance Program

Brown County, Indiana

*presented to:*

Brown County Regional Sewer District
and
Helmsburg Regional Sewer District

December, 2019

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF EXHIBITS

# EXECUTIVE SUMMARY

## INTRODUCTION

The Brown County Regional Sewer District (BCRSD) and the Helmsburg Regional Sewer District (Helmsburg), applied to the Indiana Finance Authority for a Regional Assistance Program grant. This report is written to provide options for evaluation by the two sewer districts to determine the best means of providing wastewater treatment to the specific unsewered areas of Brown County. The areas being considered in this report are Bean Blossom, Freeman Ridge Road, Fox Lake, Woodland Lake, Trevlac, Needmore and portions of Lake Lemon in the BCRSD service area and the Helmsburg RSD service area.

The areas served are in three watersheds:
Bean Blossom Creek Headwaters Watershed, which encompasses Bean Blossom, Freeman Ridge Road, Fox Lake, and Woodland Lake;
Bean Blossom Creek Lick/Bear Creek Watershed, which encompasses Helmsburg and Trevlac; and
Bean Blossom Creek Lake Lemon Wartershed, which encompasses Needmore and Lake Lemon.
The report evaluates these areas by watershed.

## CURRENT FACILITIES

Wastewater service for the majority of Brown County, Indiana is provided by on-site septic systems. Three Regional Sewer Districts (RSD), one Conservancy District (CD), and the Town of Nashville are available to provide wastewater treatment service.

The Cordry-Sweetwater CD was established on June 27, 1959 and operates under the Indiana Conservancy District Act. The District was established for three purposes: Providing water supply, including treatment and distribution for domestic, industrial and public use; providing for the collection, treatment and disposal of sewage and other liquid wastes produced within the District; and developing forests, wildlife areas, and park and recreational facilities where feasible in connection with beneficial water management. The District's plan was approved by the court on August 7, 1961. The District consists of approximately 2,300 acres and approximately 1,700 lots. The District does not currently provide wastewater service, and the service territory of the Cordry-Sweetwater CD is outside the scope of this report.

The Gnaw Bone RSD was formed by order of the Indiana Department of Environmental Management (IDEM) on January 23, 1998. The service territory of the Gnaw Bone RSD is outside the scope of this report.

The Brown County RSD was originally formed by order of the IDEM on July 21, 2006 as the Bean Blossom RSD. The name was changed by modification of the original order on April 6, 2016 and the service area was expanded to include all of Brown County with the exception of The Gnaw Bone RSD, The Helmsburg RSD and the Town of Nashville service areas. Wastewater service is not currently provided by the Brown County RSD. The documentation for the formation of the Brown County RSD can be found in Exhibit 1 of this report.

The Helmsburg RSD was formed by order of the IDEM on November 17, 1995. The service area for the District contains approximately 149 acres. The Helmsburg RSD provides wastewater service to approximately 62 customers. The collection system is comprised of grinder pumps and low-pressure force mains. The treatment plant is a packaged extended aeration treatment process with a rated capacity of 25,000 gallons per day (gpd). The documentation for the formation of the Helmsburg RSD can be found in Exhibit 2 of this report.

The Town of Nashville owns and operates a Class II Wastewater Treatment plant (WWTP) with a design capacity of .6 mgd. The treatment plant discharges to the North Fork of Salt Creek. The discharge limits are regulated through DEM, Permit No. IN0023876.

PROJECT SCOPE

This report is written to provide Brown County RSD and Helmsburg RSD with an analysis of the feasibility and costs for the following options:

1. Bean Blossom Creek Headwaters Watershed
   a. Construct a new plant in the Bean Blossom area to treat all flows, and abandon the Helmsburg WWTP. (Option BB1)
   b. Construct a new plant in Bean Blossom to treat only the flows in the Bean Blossom Headwaters Watershed. (Option BB2)
   c. Construct a new plant in Bean Blossom to treat all flows except Helmsburg RSD territory and maintain the Helmsburg WWTP to treat flows in the Helmsburg RSD territory. (Option BB3)
2. Bean Blossom Creek Lick/Bear Creeks Watershed
   a. Construct a new plant in Helmsburg to treat all flows. (Option H1)
   b. Construct a new plant in Helmsburg to treat all flows with the exception of Bean Blossom Headwaters Watershed. (Option H2)
   c. Construct a new plant in the Trevlac Area to treat all flows with the exception of Headwaters Watershed and abandon the Helmsburg WWTP. (Option T1)
3. Bean Blossom Creek Lake Lemon Watershed
   a. Transport Lake Lemon flows to Bean Blossom and maintain the Helmsburg WWTP to treat flows in the Helmsburg RSD territory. (Option BB3)
   b. Transport Lake lemon flows to Helmsburg and expand the Helmsburg WWTP. (Option H2)
   c. Transport Lake Lemon flows to a new plant in Trevlac. (Option T2)

Several of the options can be used in conjunction with one another. The collection system costs are discussed in Chapter 4, the treatment system alternatives are discussed in Chapter 5, and the combination of feasible alternatives is discussed in Chapter 6.

For the purposes of this report, a low-pressure sewer system (LPSS) collection system is used in each option. The LPSS uses individual grinder pumps at each building and a system of small diameter sewers to transport the wastewater to the treatment facility. For some of the options, additional booster stations are required to transport the flows. An analysis of the collection system options should be completed prior to any design work being completed.

## REPORT CONCLUSIONS

Based on the analysis completed in this report, it appears that it is most cost-effective to construct two regional plants to serve the areas under consideration. Table 6-11, following, provides the cost and effectiveness analysis of the various alternative combinations considered.

## Table 6-10
## Brown County/Helmsburg Alternative Combinations
## Present Worth Cost Summary*

| | Construction Cost | Contingency (10%) | Non-Constr. Cost | **Total Capital Cost** | Annual Cost (O,M & R) | Present Worth of Annual Cost | **Total Present Worth** |
|---|---|---|---|---|---|---|---|
| **Treatment Alternatives** | | | | | | | |
| BB1 - Bean Blossom Regional | $20,610,360 | $2,061,100 | $6,802,640 | **$29,474,100** | $240,000 | $4,120,500 | **$33,594,600** |
| BB2 – Bean Blossom Local | $7,111,400 | $711,200 | $2,328,600 | **$10,151,200** | $90,000 | $1,545,200 | **$11,696,400** |
| BB2/H2 - Bean Blossom Local/Helmsburg Regional | $19,501,360 | $1,950,200 | $6,449,740 | **$28,612,500** | $235,000 | $4,034,600 | **$32,647,100** |
| BB3 - Bean Blossom Regional/Helmsburg As Is | $19,849,360 | $1,985,000 | $6,562,940 | **$28,397,300** | $180,000 | $3,090,400 | **$31,487,700** |
| H1 - Helmsburg Regional | $19,921,360 | $1,992,200 | $6,564,940 | **$28,478,500** | $240,000 | $4,120,500 | **$32,599,000** |
| T1/ BB2- Trevlac Regional/ Bean Blossom Local | $17725,900 | $1,772,700 | $5,868,400 | **$25,367,000** | $235,000 | $4,034,600 | **$29,401,600** |
| T2/BB2 -Trevlac Regional/ Bean Blossom Local/ Helmsburg As Is | $16,706,900 | $1,670,800 | $5,519,400 | **$23,897,100** | $220,000 | $3,777,100 | **$27,674,200** |

*The interest rate used for determining the present worth is 1.5%, which is the "real" federal discount rate for 2019 as determined from Appendix C** of the Office of Management and Budget (OMB) Circular A-94 as recommended by RUS Bulletin 1780-3. The term used is 20 years.

**https://www.whitehouse.gov/omb/circulars_a094/a94_appx-c

# CHAPTER 1
# PROJECT LOCATIONS

## PROJECT AREA – HELMSBURG RSD

The Helmsburg Regional Sewer District (RSD) serves approximately 175 people in the unincorporated community of Helmsburg and surrounding area. The RSD service area is located in Jackson Township, on the Morgantown USGS Quadrangle map, Township 10N, Range 2E, Sections 26, 27, 34, 35. Figure 1-1 shows the boundaries of the Helmsburg RSD. The Helmsburg RSD is located in the Bean Blossom Creek-Lick/Bear Creeks Watershed and the boundaries for this watershed are identified in Figure 1-2.

## PROJECT AREA – BROWN COUNTY RSD

The Brown County RSD (BCRSD) was originally formed by order of the IDEM on July 21, 2006 as the Bean Blossom RSD. The name was changed by modification of the original order on April 6, 2016 and the service area was expanded to include all of Brown County with the exception of The Gnaw Bone RSD, the Helmsburg RSD and the Town of Nashville service areas. Wastewater service is not currently provided by the Brown County RSD. Figure 1-3 shows the boundaries of the BCRSD. Figures 1-4 and 1-5 identify the watershed maps for the BCRSD service areas included in this report.

Table 1-1 provides the location information for the proposed service areas within the BCRSD service territory, and also includes a population center in Monroe County on the North Shore of Lake Lemon.

TABLE 1-1
BROWN COUNTY RSD PROJECT LOCATION

| Service Area | Quad Map | Civil Township | Township | Range | Sections |
|---|---|---|---|---|---|
| Bean Blossom | Morgantown | Jackson | 10N | 2E | 25, 36 |
| Bean Blossom | Bean Blossom | Jackson | 10N | 3E | 30, 31 |
| Freeman Ridge | Bean Blossom | Jackson | 10N | 3E | 31, 32 |
| Freeman Ridge | Bean Blossom | Jackson, Hamblen | 9N | 3E | 5, 6 |
| Little Fox Lake | Bean Blossom | Hamblen | 10N | 3E | 29 |
| Woodland Lake | Bean Blossom | Hamblen | 10N | 3E | 28, 29 |
| Lake Lemon N - Brown County | Hindustan | Jackson | 10N | 1E | 25 |
| Lake Lemon N - Brown County | Morgantown | Jackson | 10N | 1E | 25, 36 |
| Lake Lemon N – Monroe County | Hindustan | Benton | 10N | 1E | 26 35 |
| Trevlac | Morgantown | Jackson | 10N | 2E | 29, 31, 32 |
| Lake Lemon South Shore | Belmont | Jackson | 9N | 1E | 1 |
| Lake Lemon South Shore | Belmont | Jackson | 9N | 2E | 6 |
| Needmore | Morgantown | Jackson | 10N | 2E | 32 |

# CHAPTER 2
# CURRENT SITUATION

## EXISTING FACILITIES

### Helmsburg RSD

The Helmsburg Regional Sewer District owns and operates a Class I Wastewater Treatment plant (WWTP) with a design capacity of 0.025 MGD. The treatment plant, located at 4856 Helmsburg Road in Brown County, discharges to Bean Blossom Creek. The discharge limits are regulated through the Indiana Department of Environmental Management (IDEM), Permit No. IN0058416. The NPDES Permit is provided in Exhibit 3.

According to the 1995 construction permit, the existing plant is a .025 mgd extended aeration packaged plant with rapid sand filtration, chlorination/dechlorination, and post aeration facility. The process components comprise flow equalization, coarse bar screen, extended aeration with single stage nitrification, clarification, post aeration, disinfection, and effluent flow metering. The sand filters are no longer in use. Table 2-1 provides a description of the treatment processes and capacities.

TABLE 2-1
HELMSBURG RSD
EXISTING PLANT

| Process | Description |
|---|---|
| Flow Equalization | 1 tank holding 7,500 gallons. One blower at 20 cfm. |
| Screen | Coarse bar screen; .1 mgd capacity |
| Activated Sludge Treatment | One tank holding 31,250 gallons. Two blowers at 150 cfm each. |
| Secondary Clarifier | One rectangular tank with dual hoppers, 6,865 gallons. |
| Post Aeration | Coarse bubble diffusers |
| Disinfection | Pellet Chlorination/Dechlorination; 0.05 mgd capacity |
| Flow Meter | Effluent |
| Sludge Holding Tank | One tank with a capacity of 2,500 gallons. |

Recent maintenance work at the plant includes inspection and recoating of all of the tankage in 2014, aeration replacement in 2018, and repair of the emergency generator in 2019.

IDEM conducts annual compliance evaluation inspections at the wastewater treatment plant. At the most recent inspection, March 28, 2018, conditions evaluated were found to be satisfactory.

A summary of the Monthly Reports of Operation (MRO) for the 12 months ending April 30, 2019 is shown in Table 2-2.

TABLE 2-2
HELMSBURG RSD
CURRENT FLOW CONDITIONS

| MONTH | RAW CBOD mg/l | RAW TSS mg/l | RAW AMMONIA mg/l | TOTAL PRECIP inches | MAX DAY inches | PEAK FLOW mgd | EFFLUENT FLOW mgd | FINAL CBOD mg/l | FINAL TSS mg/l | FINAL AMMONIA mg/l |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| May 2018 | 251 | 172 | 63 | 1.9 | 0.8 | 0.01 | 0.00352 | 3.0 | 6.8 | 0.233 |
| June 2018 | 354 | 309 | 46 | 4.6 | 1.8 | 0.01 | 0.004 | 4.5 | 11.8 | 0.100 |
| July 2018 | 510 | 478 | 84 | 2.7 | 1 | 0.011 | 0.00694 | 2.0 | 5.0 | 0.125 |
| Aug 2018 | 256 | 241 | 47 | 5.3 | 1.7 | 0.016 | 0.01145 | 2.6 | 9.8 | 0.180 |
| Sept 2018 | 187 | 175 | 50 | 8 | 5 | 0.006 | 0.0023 | 2.5 | 6.8 | 0.100 |
| Oct 2018 | 424 | 595 | 36 | 3.8 | 3 | 0.011 | 0.00394 | 2.2 | 10.8 | 0.100 |
| Nov 2018 | 222 | 379 | 45 | 2.6 | 2 | 0.02 | 0.00577 | 2.5 | 12.5 | 0.100 |
| Dec 2018 | 243 | 149 | 48 | 4 | 2 | 0.008 | 0.00316 | 2.8 | 18.0 | 0.100 |
| Jan 2019 | 184 | 138 | 42 | 6.3 | 3.3 | 0.020 | 0.046 | 3.4 | 1.6 | 0.10 |
| Feb 2019 | 190 | 106 | 36 | 10 | 6 | 0.014 | 0.00654 | 6.3 | 17.5 | 0.10 |
| Mar 2019 | 249 | 286 | 70 | 8 | 1 | 0.01 | 0.00500 | 4.3 | 15.5 | 0.10 |
| Apr 2019 | 182 | 112 | 38 | 4.4 | 2 | 0.01 | 0.00443 | 2.6 | 11.6 | 0.10 |
| | | | | | | | | | | |
| Ave - 12 Months | 271 | 262 | 50 | 5.1 | 2.5 | 0.012 | 0.009 | 3.2 | 10.6 | 0.12 |
| Permit Limits | | | summer | | | | 0.025 | 15 | 18 | 1.3 |
| | | | Winter | | | | 0.025 | 25 | 30 | 1.9 |

As can be seen in Table 2-2, the average flow per customer is approximately 148 gallons per household per day. Acceptable design standards for a low-pressure collection system provides for approximately 150 to 170 gallons per household per day; therefore, the Helmsburg system is operating at a slightly lower flow than design standards. This is not unusual as design standards are generally very conservative.

Until earlier this year, the Brown County Water Utility was providing the water usage for the Helmsburg customers to the RSD for billing purposes. A comparison was completed for water usage compared to wastewater flows for the twelve months ending December 31 2017. Average water consumption for the year was 169,650 gallons per month and average wastewater flow was 97,123 gallons per month. Approximately 60% of the water used was wasted to the sewer, and this falls within the historical range of 50% to 75% for a system with low infiltration and inflow sources.

Table 2-3 provides the average waste characteristics of the Helmsburg RSD wastewater treatment plant for the 12 months ending April 30, 2019.

TABLE 2-3
HELMSBURG EXISTING WASTELOAD

| | Influent Loading (mg/l) | Influent Pounds | Effluent Loading (mg/l) | Effluent Pounds |
|---|---|---|---|---|
| CBOD5 | 271 | 10.4 | 3.22 | .12 |
| TSS | 262 | 10.1 | 10.64 | .45 |
| Ammonia | 50.4 | 1.9 | .12 | .09 |

The collection system in Helmsburg comprises approximately 8,830 lineal feet of 1.25-inch through 4-inch diameter low-pressure force main and 61 grinder pump stations. Figure 2-1 provides a map of the Helmsburg collection system. The design summary for the existing plant and wastewater collection system can be found in Exhibit 4.

BROWN COUNTY RSD

The Brown County RSD does not have any existing facilities. Wastewater service is currently provided by individual septic systems.

# CHAPTER 3
# FUTURE SITUATION

## POPULATION

Historical population growth trends of both Jackson Township and Hamblen Township in Brown County, and Benton Township in Monroe County were evaluated utilizing the data obtained in STATS Indiana. Populations for the service areas are not available, so they will be projected utilizing the County and Township trends.

A review of the period from 1970-2010 shows that the populations in both Brown and Monroe County have increased; however, the percentage increase has been declining. Population projections for 2020 through 2040, from STATS Indiana project that the population in Brown County will decline and the population in Monroe County will increase slightly. STATS Indiana does not provide population projections for townships.

The population in Jackson Township has remained relatively constant over the years at about 29% of the Brown County population. The population in Hamblen Township has remained relatively constant over the years at about 27% of the Brown County population. The population in Benton Township has remained relatively constant over the years at about 3% of the Monroe County population.

Tables 3-1 and 3-2 provide the historical and projected population for Monroe and Brown Counties and the respective townships. The projected population in the townships is calculated from the average historical percentage of township population to county population.

TABLE 3-1
MONROE COUNTY AND BENTON TOWNSHIP
POPULATION TRENDS

| | Monroe County | % Change | Benton Township | % Change | % of County |
|---|---|---|---|---|---|
| 1970 | 85,221 | | 1,976 | | 2% |
| 1980 | 98,783 | 15.9% | 2,892 | 46.4% | 3% |
| 1990 | 108,978 | 10.3% | 3,116 | 7.7% | 3% |
| 2000 | 120,563 | 10.6% | 3,213 | 3.1% | 3% |
| 2010 | 137,974 | 14.4% | 3,358 | 4.5% | 2% |
| 2020 | 150,620 | 9.2% | 3,978 | 18.5% | 3% |
| 2030 | 162,024 | 7.6% | 4,279 | 7.6% | 3% |
| 2040 | 171,175 | 5.6% | 4,521 | 5.6% | 3% |

TABLE 3-2
BROWN COUNTY AND JACKSON AND HAMBLEN TOWNSHIPS
POPULATION TRENDS

| | Brown County | % Change | Jackson Township | % Change | % of County | Hamblen Township | % Change | % of County |
|---|---|---|---|---|---|---|---|---|
| 1970 | 9,057 | | 2,658 | | 29% | 2,007 | | 22% |
| 1980 | 12,377 | 36.7% | 3,774 | 42.0% | 30% | 3,365 | 67.7% | 27% |
| 1990 | 14,080 | 13.8% | 4,151 | 10.0% | 29% | 4,032 | 19.8% | 29% |
| 2000 | 14,957 | 6.2% | 4,151 | 0.0% | 28% | 4,591 | 13.9% | 31% |
| 2010 | 15,242 | 1.9% | 4,002 | -3.6% | 26% | 4,336 | -5.6% | 28% |
| 2020 | 14,631 | -4.0% | 4,194 | 4.8% | 29% | 4,013 | -7.5% | 27% |
| 2030 | 14,171 | -3.1% | 4,062 | -3.1% | 29% | 3,886 | -3.1% | 27% |
| 2040 | 13,217 | -6.7% | 3,789 | -6.7% | 29% | 3,625 | -6.7% | 27% |

**NOTE:** Estimated population data from 1970 through 2010 was obtained from STATS Indiana
* STATS Indiana does not provide population projections for individual town/year
(a) Brown and Monroe County population projections were obtained from STATS Indiana
(b) Township population projections were obtained using percentage of County projections

## DESIGN FLOWS AND WASTELOADS

Based on the population projections, it appears that little to no growth will occur in the service areas of the two districts. However, there are vacant lots in all of the platted project areas, and these lots are being considered for future customers. In addition, several businesses have closed as a result of failing septic systems, and it is assumed that these businesses will reopen if sewers become available.

The Brown County Health Department has conducted a survey of all of the buildings in Brown County and has provided mapping of the permitted septic tanks, buildings without permitted septic tanks, and vacant lots/buildings. Figures 3-1, 3-2, and 3-3 provide this information by watershed. Approximately 45% of the dwellings in Brown County do not have septic records. The majority of the dwellings without records were constructed between 1950 and 1990.

Tables 3-3 through 3-5 provide the existing house and business count in the current and projected service areas and the projected flow rates for service areas in each of the watersheds. As previously identified in the Executive Summary, for purposes of this report, it is assumed that a low-pressure collection system will be use in all areas. The estimated flow rate used is 170 gallons per Equivalent Dwelling Unit (EDU) per day. The estimated flow rate is an acceptable design flow for small diameter collection systems, including septic tank effluent pumping and vacuum systems. Based on the contours in the County, a conventional gravity system does not appear to be a viable option for the region. A gravity system will also require a higher design flow rate of 310 gallons per EDU. A more complete analysis of the collection systems options should be completed prior to any design work in the County.

The number of customers for the Bean Blossom area was taken from the March 2018 PER prepared by Ladd Engineering Inc.

TABLE 3-3

BEAN BLOSSOM CREEK-LICK/BEAR CREEK WATERSHED CUSTOMERS AND FLOWS (HELMSBURG)

| Service Connection | Current Equivalent EDU | Current Flows | Projected Growth | Total EDU | Total Flow |
|---|---|---|---|---|---|
| Helmsburg | 61 | 10,370 | 10 | 71 | 12,070 |
| Brown County Schools | 10 | 1,700 | | 10 | 1,700 |
| Trevlac | 61 | 10,370 | | 61 | 10,370 |
| **Totals** | **132** | **22,440** | **10** | **142** | **24,140** |

TABLE 3-4

BEAN BLOSSOM CREEK – HEADWATERS CUSTOMERS AND FLOWS (BEAN BLOSSOM)

| Service Connection | Current Equivalent EDU | Current Flows | Projected Growth | Total EDU | Total Flow |
|---|---|---|---|---|---|
| Residential | 81 | 13,770 | 16 | 97 | 16,490 |
| Staley's MHP | 34 | 5,780 | 0 | 34 | 5,780 |
| Bill Monroe Facility | 30 | 5,100 | 0 | 30 | 5,100 |
| Brownies Restaurant | 2 | 340 | 0 | 2 | 340 |
| Freeman Ridge | 32 | 5,440 | 4 | 36 | 6,120 |
| Little Fox Lake | 18 | 3,060 | 4 | 22 | 3,740 |
| Woodland Lake | 79 | 13,430 | 8 | 87 | 14,790 |
| **Totals** | **276** | **46,920** | **32** | **308** | **52,360** |

TABLE 3-5

BEAN BLOSSOM CREEK - LAKE LEMON CUSTOMERS AND FLOWS (LAKE LEMON)

| Service Connection | Current Equivalent EDU | Current Flows | Projected Growth | Total EDU | Total Flow |
|---|---|---|---|---|---|
| Lake Lemon North Shore | 234 | 39,780 | 0 | 234 | 39,780 |
| Lake Lemon South Shore/Needmore | 119 | 20,230 | 0 | 119 | 20,230 |
| **Totals** | **353** | **60,010** | **0** | **353** | **60,010** |

Table 3-6 provides the projected wasteloads for each area. The waste loadings are based on the average loadings at the Helmsburg WWTP, with the exception of phosphorous, for the 12 months ending April 2019. The Biological Oxygen Demand (BOD) is based on a loading 271 mg/l; the Total Suspended Solids (TSS) is based on a loading of 262 mg/l; Ammonia (NH3) is based on a loading of 50 parts per million, and phosphorous (P) is based on a loading of 7 parts per million. The phosphorous loading is based on recommended design standards. The equivalent population is calculated by dividing the total flow by 100 gallons per person per day.

TABLE 3-6

PROJECTED WASTE LOADINGS (LBS)

| Area | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Bean Blossom | 52,360 | 524 | 118 | 114 | 22 | 3 |
| Helmsburg | 24,140 | 241 | 55 | 53 | 10 | 1 |
| Lake Lemon | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Totals | 136,510 | 1,365 | 309 | 298 | 57 | 8 |

# CHAPTER 4
# COLLECTION SYSTEMS

## INTRODUCTION

This chapter will provide the estimated costs and figures for the collection systems in Bean Blossom, Woodland Lake, Fox Lake, Freeman Ridge, Trevlac, and Lake Lemon.

As stated in the previous chapter, a low-pressure collection system has been used in all alternatives considered for regionalization. The estimated flow rate used is 170 gallons per Equivalent Dwelling Unit (EDU) per day. The estimated flow rate is an acceptable design flow for small diameter collection systems, including septic tank effluent pumping and vacuum systems. Based on the contours in the County, a conventional gravity system does not appear to be a viable option for the region. A gravity system will also require a higher design flow rate of 310 gallons per EDU. A more complete analysis of the collection systems options should be completed prior to any design work in the County.

The estimated construction cost for all of the evaluated areas include individual grinder pumps for each existing dwelling and associated piping and valves. Also included are estimated costs for traffic control during construction and restoration. Pre-construction activities include pre-construction photos, permitting that may be required, erosion control, clearing, tree removal, and similar activities. For cost estimating purposes in this report, it is assumed that all property owners will grant a right of entry and easement for the placement of the grinder pumps and collection system. The cost estimates do not include the cost for transport to a wastewater treatment site. The costs for transport and treatment will be included in the Chapter 5 treatment alternatives.

Figures 4-1athrough 4-1c and 4-2a through 4-2d in Exhibit 5 provide aerial mapping of the proposed collection system piping.

Environmental impacts will be discussed in Chapter 5 with the treatment alternatives.

## BEAN BLOSSOM CREEK HEADWATERS WATERSHED COLLECTION

Tables 4-1 through 4-4 provide the estimated construction costs for the different collection systems in the Bean Blossom Creek Headwaters Watershed. Table 4-1 provides the estimated construction cost for the collection system for Bean Blossom, Table 4-2 provides the estimated construction cost for the collection system Woodland Lake, Table 4-3 provides the estimated construction cost for the collection system for Fox Lake, and Table 4-4 provides the estimated construction cost for the collection system for Freeman Ridge.

The collection system for Bean Blossom will require a lift station at the Bill Monroe Park and a grinder pump station at Staley's MHP. It will also require a 200,000 gallon flow equalization tank for the Bill Monroe Facility to handle peak flows during facility events.

The pipe lengths have been taken from the March 2018 PER for Brown County RSD prepared by Ladd Engineering, Inc.

TABLE 4-1
BEAN BLOSSOM COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 82 | EA | $7,000 | $574,000 |
| Staley's MHP Grinder Pump Station | 1 | EA | $45,000 | $45,000 |
| Bill Monroe Park Lift Station | 1 | EA | $175,000 | $175,000 |
| 6-inch Force Main | 3,200 | LF | $56 | $179,200 |
| Bill Monroe Park Flow EQ | 1 | LS | $300,000 | $300,000 |
| Valve Assemblies | 82 | EA | $1,000 | $82,000 |
| 4-inch Pressure Sewer | 1,150 | LF | $25 | $28,750 |
| 3-inch Pressure Sewer | 3,800 | LF | $25 | $95,000 |
| 2-inch Pressure Sewer | 10,350 | LF | $20 | $207,000 |
| 1 1/4-inch Pressure Sewer | 11,000 | LF | $15 | $165,000 |
| Air Release Valves | 11 | EA | $5,000 | $55,000 |
| Line Flushing Valve Pits | 27 | EA | $2,200 | $59,400 |
| Compacted Granular Fill | 1,000 | LF | $18 | $18,000 |
| 4-inch Pressure Sewer, Bore | 500 | LF | $50 | $25,000 |
| 3-inch Pressure Sewer, Bore | 900 | LF | $45 | $40,500 |
| 2-inch Pressure Sewer, Bore | 600 | LF | $30 | $18,000 |
| 1 1/4-inch sewer, Bore | 1,000 | LF | $20 | $20,000 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $73,000 | $73,000 |
| Restoration | 1 | LS | $97,350 | $97,350 |
| Traffic Control | 1 | LS | $48,700 | $48,700 |
| Mobilization/DeMobilization | 1 | LS | $121,700 | $121,700 |
| | | | | $2,434,600 |

TABLE 4-2
WOODLAND LAKE COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 79 | EA | $7,000 | $553,000 |
| Valve Assemblies | 79 | EA | $1,000 | $79,000 |
| 4-inch Force Main | 8,500 | LF | $25 | $212,500 |
| 4-inch Pressure Sewer | 2,500 | LF | $25 | $62,500 |
| 3-inch Pressure Sewer | 3,100 | LF | $25 | $77,500 |
| 2-inch Pressure Sewer | 2,050 | LF | $20 | $41,000 |
| 1 1/4-inch Pressure Sewer | 15,400 | LF | $15 | $231,000 |
| Air Release Valves | 17 | EA | $5,000 | $85,000 |
| Line Flushing Valve Pits | 11 | EA | $2,200 | $24,200 |
| Compacted Granular Fill | 3,000 | LF | $18 | $54,000 |
| Stone Drive/Roadway Replacement | 2,500 | LF | $12 | $30,000 |
| 4-inch Pressure Sewer, Bore | 500 | LF | $50 | $25,000 |
| 3-inch Pressure Sewer, Bore | 500 | LF | $45 | $22,500 |
| 2-inch Pressure Sewer, Bore | 150 | LF | $30 | $4,500 |
| 1 1/4-inch Pressure Sewer, Bore | 200 | LF | $20 | $4,000 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $52,700 | $52,700 |
| Restoration | 1 | LS | $70,400 | $70,400 |
| Traffic Control | 1 | LS | $35,200 | $35,200 |
| Mobilization/DeMobilization | 1 | LS | $88,000 | $88,000 |
| | | | | $1,759,000 |

TABLE 4-3
FOX LAKE COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 18 | EA | $7,000 | $126,000 |
| Valve Assemblies | 18 | EA | $1,000 | $18,000 |
| 2-inch Pressure Sewer | 4,665 | LF | $19 | $93,300 |
| 1 1/4-inch Pressure Sewer | 3,550 | LF | $15 | $53,250 |
| Air Release Valves | 4 | EA | $5,000 | $20,000 |
| Line Flushing Valve Pits | 4 | EA | $2,200 | $8,800 |
| Compacted Granular Fill | 1,500 | LF | $18 | $27,000 |
| Stone Drive/Roadway Replacement | 1,000 | LF | $12 | $12,000 |
| 2-inch Pressure Sewer, Bore | 1,000 | LF | $30 | $30,000 |
| 1 1/4-inch Pressure Sewer, Bore | 200 | LF | $20 | $4,000 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $13,900 | $13,900 |
| Restoration | 1 | LS | $18,550 | $18,550 |
| Traffic Control | 1 | LS | $9,300 | $9,300 |
| Mobilization/DeMobilization | 1 | LS | $23,200 | $23,200 |
| | | | | $464,300 |

TABLE 4-4
FREEMAN RIDGE COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 32 | EA | $7,000 | $224,000 |
| Valve Assemblies | 32 | EA | $1,000 | $32,000 |
| 3-inch Pressure Sewer | 6,000 | LF | $25 | $150,000 |
| 2-inch Pressure Sewer | 6,350 | LF | $20 | $127,000 |
| 1 1/4-inch Pressure Sewer | 3,000 | LF | $15 | $45,000 |
| Air Release Valves | 5 | EA | $5,000 | $25,000 |
| Line Flushing Valve Pits | 7 | EA | $2,200 | $15,400 |
| Compacted Granular Fill | 600 | LF | $18 | $10,800 |
| 3-inch Pressure Sewer, Bore | 1,000 | LF | $45 | $45,000 |
| 2-inch Pressure Sewer, Bore | 200 | LF | $30 | $6,000 |
| 1 1/4-inch Pressure Sewer, Bore | 200 | LF | $20 | $4,000 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $24,100 | $24,100 |
| Restoration | 1 | LS | $32,100 | $32,100 |
| Traffic Control | 1 | LS | $16,000 | $16,000 |
| Mobilization/DeMobilization | 1 | LS | $40,100 | $40,100 |
| | | | | $803,500 |

BEAN BLOSSOM CREEK LICK/BEAR CREEKS WATERSHED COLLECTION

Table 4-5 provides the estimated construction cost for a collection system in the Bean Blossom Creek Lick/Bear Creeks Watershed. The existing Helmsburg system is located in this watershed. The additional flows in this watershed come from Trevlac. The cost estimate does not include the lift station and force main necessary to transport the flows for treatment.

TABLE 4-5
TREVLAC COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 61 | EA | $7,000 | $427,000 |
| Valve Assemblies | 61 | EA | $1,000 | $61,000 |
| 3-inch Pressure Sewer | 4,070 | LF | $25 | $101,750 |
| 2-inch Pressure Sewer | 8,820 | LF | $20 | $176,400 |
| 1 1/4-inch Pressure Sewer | 12,200 | LF | $15 | $183,000 |
| Air Release Valves | 9 | EA | $5,000 | $45,000 |
| Line Flushing Valve Pits | 30 | EA | $2,200 | $66,000 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $37,200 | $37,200 |
| Restoration | 1 | LS | $49,650 | $49,650 |
| Traffic Control | 1 | LS | $24,800 | $24,800 |
| Mobilization/DeMobilization | 1 | LS | $62,000 | $62,000 |
| | | | | $1,240,800 |

BEAN BLOSSOM CREEK LAKE LEMON WATERSHED COLLECTION

Tables 4-6 through 4-8 provide the estimated construction cost for collection systems in the Bean Blossom Creek Lake Lemon Watershed. This area comprises the east end of Lake Lemon, on both the north and south shores in Brown County, Needmore, and also the population center just west of Brown County near the Lake Lemon Marina in Monroe County. Table 4-6 provides the cost estimate for the North Shore of Lake Lemon, in Brown County, and the easternmost portion of Monroe County. Table 4-7 provides the cost estimate for collection in the southern shore of Lake Lemon in Brown County and Needmore. These tables do not include the cost for a lift station and force main on each shore to transport the flows to Trevlac.

Table 4-8 provides the collection system cost for Trevlac and Needmore only. This area includes two watersheds, but is necessary to include for separate treatment options in the Lake Lemon Watershed.

TABLE 4-6
LAKE LEMON NORTH SHORE COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 215 | EA | $7,000 | $1,505,000 |
| Valve Assemblies | 215 | EA | $1,000 | $215,000 |
| 3-inch Pressure Sewer | 13,070 | LF | $25 | $326,750 |
| 2-inch Pressure Sewer | 5,860 | LF | $20 | $117,200 |
| 1 1/4-inch Pressure Sewer | 21,500 | LF | $15 | $322,500 |
| Air Release Valves | 5 | EA | $5,000 | $25,000 |
| Line Flushing Valve Pits | 36 | EA | $2,200 | $79,200 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $90,600 | $90,600 |
| Restoration | 1 | LS | $120,800 | $120,800 |
| Traffic Control | 1 | LS | $60,400 | $60,400 |
| Mobilization/DeMobilization | 1 | LS | $151,050 | $151,050 |
| | | | | $3,020,500 |

TABLE 4-7
LAKE LEMON SOUTH SHORE COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| | | | | |
|---|---|---|---|---|
| Grinder Pumps, Complete | 113 | EA | $7,000 | $791,000 |
| Valve Assemblies | 113 | EA | $1,000 | $113,000 |
| 3-inch Pressure Sewer | 2,500 | LF | $25 | $62,500 |
| 2-inch Pressure Sewer | 950 | LF | $20 | $19,000 |
| 1 1/4-inch Pressure Sewer | 11,300 | LF | $15 | $169,500 |
| Air Release Valves | 2 | EA | $5,000 | $10,000 |
| Line Flushing Valve Pits | 16 | EA | $2,200 | $35,200 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $42,100 | $42,100 |
| Restoration | 1 | LS | $56,100 | $56,100 |
| Traffic Control | 1 | LS | $28,100 | $28,100 |
| Mobilization/DeMobilization | 1 | LS | $70,200 | $70,200 |
| | | | | $1,403,700 |

TABLE 4-8
TREVLAC AND NEEDMORE COLLECTION SYSTEM
ESTIMATED CONSTRUCTION COSTS

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Grinder Pumps, Complete | 93 | EA | $7,000 | $651,000 |
| Valve Assemblies | 93 | EA | $1,000 | $93,000 |
| 3-inch Pressure Sewer | 4,070 | LF | $25 | $101,750 |
| 2-inch Pressure Sewer | 13,020 | LF | $20 | $260,400 |
| 1 1/4-inch Pressure Sewer | 18,600 | LF | $15 | $279,000 |
| Air Release Valves | 9 | EA | $5,000 | $45,000 |
| Line Flushing Valve Pits | 30 | EA | $2,200 | $66,000 |
| Spare Parts | 1 | LS | $7,000 | $7,000 |
| Pre-Construction Activities | 1 | LS | $45,000 | $45,000 |
| Restoration | 1 | LS | $60,000 | $60,000 |
| Traffic Control | 1 | LS | $30,000 | $30,000 |
| Mobilization/DeMobilization | 1 | LS | $74,850 | $74,850 |
| | | | | $1,713,000 |

# CHAPTER 5
# EVALUATION OF TREATMENT ALTERNATIVES

## INTRODUCTION

This Chapter will evaluate the available wastewater treatment options. As identified in the executive summary, the following options are evaluated.

1. Bean Blossom Creek Headwaters Watershed
   a. Construct a new plant in the Bean Blossom area to treat all flows, and abandon the Helmsburg WWTP. (Option BB1)
   b. Construct a new plant in Bean Blossom to treat only the flows in the Bean Blossom Headwaters Watershed. (Option BB2)
   c. Construct a new plant in Bean Blossom to treat all flows except Helmsburg RSD territory and maintain the Helmsburg WWTP to treat flows in the Helmsburg RSD territory. (Option BB3)
2. Bean Blossom Creek Lick/Bear Creeks Watershed
   a. Construct a new plant in Helmsburg to treat all flows. (Option H1)
   b. Construct a new plant in Helmsburg to treat all flows with the exception of Bean Blossom Headwaters Watershed. (Option H2)
   c. Construct a new plant in the Trevlac Area to treat all flows with the exception of Headwaters Watershed and abandon the Helmsburg WWTP. (Option T1)
3. Bean Blossom Creek Lake Lemon Watershed
   a. Transport Lake Lemon flows to Bean Blossom and maintain the Helmsburg WWTP to treat flows in the Helmsburg RSD territory. (Option BB3)
   b. Transport Lake lemon flows to Helmsburg and expand the Helmsburg WWTP. (Option H2)
   c. Transport Lake Lemon flows to a new plant in Trevlac and maintain the Helmsburg plant. (Option T2)

As stated in the previous chapter, a low-pressure collection system has been used in all alternatives considered for regionalization. With the exception of the plant at Helmsburg, sites for the wastewater treatment plants have not been identified. In each option, it is assumed that the plant will be located 2,500 feet from the last grinder pump on the collection system. Land costs will be included in the total cost estimates presented in Chapter 6. Lift stations are included in the cost estimates as necessary. The cost for the lift stations is based on an Indiana average cost of $1150/gpm. The unit price costs include miscellaneous construction costs such as construction engineering, restoration, maintenance of traffic, etc.

Wasteload tables are presented for each option. These are summary tables from the data presented in Chapter 3. The Biological Oxygen Demand (BOD) is based on a loading .17 pounds per person per day; the Total Suspended Solids (TSS) is based on a loading of .2 pounds per person per day, Ammonia (NH3) is based on a loading of 40 parts per million, and phosphorous (P) is based on a loading of 7 parts per million. The equivalent population is calculated by dividing the total flow by 100 gallons per person per day.

## ALTERNATIVE 1 – BEAN BLOSSOM CREEK HEADWATERS WATERSHED

### OPTION BB1 – TREAT ALL FLOWS CONSIDERED IN THIS REPORT AT BEAN BLOSSOM

Table 5-1 identifies the flows and wasteloads to the proposed Bean Blossom WWTP.

TABLE 5-1
FLOWS AND WASTELOADS
BEAN BLOSSOM REGIONAL WWTP

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Headwaters (Bean Blossom) | 52,360 | 524 | 118 | 114 | 22 | 3 |
| Lick/Bear Creeks (Helmsburg) | 24,140 | 241 | 55 | 53 | 10 | 1 |
| Lake Lemon (Lake Lemon) | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Total | 136,510 | 1,365 | 308 | 298 | 57 | 8 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 140,000 gpd for the projected flows. The plant should be designed for ease of expansion.

Table 5-2 provides the estimated construction cost for a 140,000 gpd wastewater treatment plant. Included in this cost estimate are the lift station and force main piping from Lake Lemon to Trevlac, Trevlac to Helmsburg, and from Helmsburg to Bean Blossom. The cost for the wastewater treatment plant is based on an Indiana average of $22/gallon for similar sized treatment facilities. Also included is the abandonment of the Helmsburg WWTP.

TABLE 5-2
BEAN BLOSSOM REGIONAL WWTP
OPINION OF PROBABLE CONSTRUCTION COST

| | | | | |
|---|---|---|---|---|
| Lift Station 1 - North Shore Lake Lemon | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main - North Shore to Trevlac | 9,600 | LF | $60 | $576,000 |
| 8-inch Force Main - Trevlac to LS 3 | 15,574 | LF | $90 | $1,401,660 |
| Air Release Valves | 25 | EA | $5,000 | $125,000 |
| Lift Station 2 - Lake Lemon South Shore | 1 | LS | $126,500 | $126,500 |
| 4-inch Force Main South Shore to Trevlac | 8,430 | LF | $30 | $252,900 |
| Air Release Valves | 8 | EA | $5,000 | $40,000 |
| Lift Station 3 - Trevlac to Helmsburg | 1 | LS | $230,000 | $230,000 |
| 8-inch Force Main | 11,120 | LF | $90 | $1,000,800 |
| Air Release Valves | 11 | EA | $5,000 | $55,000 |
| Lift Station 4 Helmsburg to Bean Blossom | 1 | LS | $437,000 | $437,000 |
| 8-inch Force Main | 15,300 | LF | $90 | $1,377,000 |
| Air Release Valves | 15 | EA | $5,000 | $75,000 |
| WWTP Abandonment | 1 | LS | $72,000 | $72,000 |
| WWTP - Complete, 140,000 gpd | 1 | LS | $3,080,000 | $3,080,000 |
| **TOTAL** | | | | **$9,055,860** |

OPTION BB2 – TREAT FLOWS FROM THE HEADWATERS WATERSHED IN BEAN BLOSSOM

Table 5-3 identifies the flows and wasteloads to the proposed Bean Blossom WWTP under this option.

TABLE 5-3
FLOWS AND WASTELOADS
BEAN BLOSSOM LOCAL WWTP

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Headwaters (Bean Blossom) | 52,360 | 524 | 118 | 114 | 22 | 3 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 55,000 gpd for the projected flows. The plant should be designed for ease of expansion in the event future flows in the County are brought to this plant.

Table 5-4 provides the estimated construction cost for a 55,000 gpd wastewater treatment plant. The cost for the wastewater treatment plant is based on an Indiana average of $30/gallon for similar sized treatment facilities.

TABLE 5-4
BEAN BLOSSOM LOCAL WWTP
OPINION OF PROBABLE CONSTRUCTION COST

| | | | | |
|---|---|---|---|---|
| WWTP - Complete, 55,000 gpd | 1 | LS | $1,650,000 | $1,650,000 |

OPTION BB3 – TREAT ALL FLOWS CONSIDERED IN THIS REPORT WITH THE EXCEPTION OF HELMSBURG AT BEAN BLOSSOM

Table 5-5 identifies the flows and wasteloads to the proposed Bean Blossom WWTP.

TABLE 5-5
FLOWS AND WASTELOADS
BEAN BLOSSOM REGIONAL WWTP LESS HELMSBURG

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Headwaters (Bean Blossom) | 52,360 | 524 | 118 | 114 | 22 | 3 |
| Lick/Bear Creeks (Trevlac) | 10,370 | 104 | 23 | 23 | 4 | 1 |
| Lake Lemon (Lake Lemon) | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Total | 122,740 | 1,228 | 277 | 268 | 51 | 8 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 125,000 gpd for the projected flows. The plant should be designed for ease of expansion.

Table 5-6 provides the estimated construction cost for a 125,000 gpd wastewater treatment plant. Included in this cost estimate are the lift station and force main piping from Lake Lemon to Trevlac and Trevlac to Bean Blossom. The cost for the wastewater treatment plant is based on an Indiana average of $26/gallon for similar sized treatment facilities.

TABLE 5-6
BEAN BLOSSOM REGIONAL WWTP LESS HELMSBURG
OPINION OF PROBABLE CONSTRUCTION COST

| | | | | |
|---|---|---|---|---|
| Lift Station 1 - North Shore Lake Lemon | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main - North Shore to Trevlac | 9,600 | LF | $60 | $576,000 |
| 8-inch Force Main – Trevlac to Lift Station 3 | 15,574 | LF | $90 | $1,401,660 |
| Air Release Valves | 25 | EA | $5,000 | $125,000 |
| Lift Station 2 - Lake Lemon South Shore | 1 | LS | $126,500 | $126,500 |
| 4-inch Force Main South Shore to Trevlac | 8,430 | LF | $30 | $252,900 |
| Air Release Valves | 8 | EA | $5,000 | $40,000 |
| Lift Station 3 – Trevlac to Bean Blossom | 1 | LS | $253,000 | $253,000 |
| 8-inch Force Main | 27,600 | LF | $90 | $2,484,000 |
| Air Release Valves | 28 | EA | $5,000 | $140,000 |
| WWTP - Complete, 125,000 gpd | 1 | LS | $3,250,000 | $3,250,000 |
| **TOTAL** | | | | **$8,856,060** |

## ALTERNATIVE 2 – BEAN BLOSSOM CREEK LICK/BEAR CREEKS WATERSHED

### OPTION H1 – TREAT ALL FLOWS CONSIDERED IN THIS REPORT AT HELMSBURG

Table 5-7 identifies the flows and wasteloads to the proposed Helmsburg WWTP.

TABLE 5-7
FLOWS AND WASTELOADS
HELMSBURG REGIONAL WWTP

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Headwaters (Bean Blossom) | 52,360 | 524 | 118 | 114 | 22 | 3 |
| Lick/Bear Creeks (Helmsburg) | 24,140 | 241 | 55 | 53 | 10 | 1 |
| Lake Lemon (Lake Lemon) | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Total | 136,510 | 1,365 | 308 | 298 | 57 | 8 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 140,000 gpd for the projected flows. The plant should be designed for ease of expansion.

Table 5-8 provides the estimated construction cost for a 140,000 gpd wastewater treatment plant in Helmsburg. Included in this cost estimate are the lift station and force main piping from Lake Lemon to Trevlac, Trevlac to Helmsburg, and from Bean Blossom to Helmsburg. The cost for the wastewater treatment plant is based on an Indiana average of $22/gallon for similar sized treatment facilities.

TABLE 5-8
HELMSBURG REGIONAL WWTP
OPINION OF PROBABLE CONSTRUCTION COST

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Lift Station 1 - North Shore Lake Lemon | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main - North Shore to Trevlac | 9,600 | LF | $60 | $576,000 |
| 8-inch Force Main - Tevlac to LS 3 | 15,574 | LF | $90 | $1,401,660 |
| Air Release Valves | 25 | EA | 5000 | $125,000 |
| Lift Station 2 - Lake Lemon South Shore | 1 | LS | $126,500 | $126,500 |
| 4-inch Force Main South Shore to Trevlac | 8,430 | LF | $30 | $252,900 |
| Air Release Valves | 8 | EA | $5,000 | $40,000 |
| Lift Station 3 - Trevlac to Helmsburg | 1 | LS | $230,000 | $230,000 |
| 8-inch Force Main | 11,120 | LF | $90 | $1,000,800 |
| Air Release Valves | 11 | EA | $5,000 | $55,000 |
| Lift Station 4 - Bean Blossom to Helmsburg | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main | 15,300 | LF | $60 | $918,000 |
| Air Release Valves | 15 | EA | $5,000 | $75,000 |
| WWTP Abandonment | 1 | LS | $72,000 | $72,000 |
| WWTP - Complete, 140,000 gpd | 1 | LS | $3,080,000 | $3,080,000 |
| **TOTAL** | | | | **$8,366,860** |

OPTION H2 – TREAT ALL FLOWS CONSIDERED IN THIS REPORT WITH THE EXCEPTION OF BEAN BLOSSOM HEADWATERS WATERSHED AT HELMSBURG

Table 5-9 identifies the flows and wasteloads to the proposed Helmsburg WWTP.

TABLE 5-9
FLOWS AND WASTELOADS
HELMSBURG REGIONAL WWTP LESS HEADWATERS WATERSHED

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Lick/Bear Creeks (Helmsburg) | 24,140 | 241 | 55 | 53 | 10 | 1 |
| Lake Lemon (Lake Lemon) | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Total | 84,150 | 841 | 191 | 184 | 35 | 5 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 85,000 gpd for the projected flows. The plant should be designed for ease of expansion.

Table 5-10 provides the estimated construction cost for an 85,000 gpd wastewater treatment plant in Helmsburg. Included in this cost estimate are the lift station and force main piping from Lake Lemon to Trevlac and Trevlac to Helmsburg. The cost for the wastewater treatment plant is based on an Indiana average of $26/gallon for similar sized treatment facilities.

TABLE 5-10
HELMSBURG REGIONAL WWTP LESS BEAN BLOSSOM
OPINION OF PROBABLE CONSTRUCTION COST

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Lift Station 1 - North Shore Lake Lemon | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main - North Shore to Trevlac | 9,600 | LF | $60 | $576,000 |
| 8-inch Force Main - Tevlac to LS 3 | 15,574 | LF | $90 | $1,401,660 |
| Air Release Valves | 25 | EA | 5000 | $125,000 |
| Lift Station 2 - Lake Lemon South Shore | 1 | LS | $126,500 | $126,500 |
| 4-inch Force Main South Shore to Trevlac | 8,430 | LF | $30 | $252,900 |
| Air Release Valves | 8 | EA | $5,000 | $40,000 |
| Lift Station 3 - Trevlac to Helmsburg | 1 | LS | $230,000 | $230,000 |
| 8-inch Force Main | 11,120 | LF | $90 | $1,000,800 |
| Air Release Valves | 11 | EA | $5,000 | $55,000 |
| WWTP Abandonment | 1 | LS | $72,000 | $72,000 |
| WWTP - Complete, 85,000 gpd | 1 | LS | $2,210,000 | $2,210,000 |
| **TOTAL** | | | | **$6,296,860** |

OPTION T1 – TREAT ALL FLOWS CONSIDERED IN THIS REPORT WITH THE EXCEPTION OF BEAN BLOSSOM HEADWATERS WATERSHED AT TREVLAC

Table 5-11 identifies the flows and wasteloads to the proposed Trevlac WWTP.

TABLE 5-11
FLOWS AND WASTELOADS
TREVLAC REGIONAL WWTP LESS HEADWATERS WATERSHED

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Lick/Bear Creeks (Helmsburg) | 24,140 | 241 | 55 | 53 | 10 | 1 |
| Lake Lemon (Lake Lemon) | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Total | 84,150 | 841 | 191 | 184 | 35 | 5 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 85,000 gpd for the projected flows. The plant should be designed for ease of expansion.

Table 5-12 provides the estimated construction cost for an 85,000 gpd wastewater treatment plant in Trevlac. Included in this cost estimate are the lift station and force main piping from Lake Lemon to Trevlac and Helmsburg to Trevlac. The cost for the wastewater treatment plant is based on an Indiana average of $26/gallon for similar sized treatment facilities.

TABLE 5-12
TREVLAC REGIONAL WWTP LESS HEADWATERS WATERSHED
OPINION OF PROBABLE CONSTRUCTION COST

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Lift Station 1 - North Shore Lake Lemon | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main - North Shore to Trevlac | 9,600 | LF | $60 | $576,000 |
| 8-inch Force Main - Tevlac to WWTP | 2,500 | LF | $90 | $225,000 |
| Air Release Valves | 25 | EA | 5000 | $125,000 |
| Lift Station 2 - Lake Lemon South Shore | 1 | LS | $126,500 | $126,500 |
| 4-inch Force Main South Shore to Trevlac | 8,430 | LF | $30 | $252,900 |
| Air Release Valves | 8 | EA | $5,000 | $40,000 |
| Lift Station 3 - Helmsburg to Trevlac | 1 | LS | $92,000 | $92,000 |
| 4-inch Force Main | 17,000 | LF | $30 | $510,000 |
| Air Release Valves | 17 | EA | $5,000 | $85,000 |
| WWTP Abandonment | 1 | LS | $72,000 | $72,000 |
| WWTP - Complete, 85,000 gpd | 1 | LS | $2,210,000 | $2,210,000 |
| **TOTAL** | | | | **$4,521,400** |

OPTION T2 – TREAT ALL FLOWS CONSIDERED IN THIS REPORT WITH THE EXCEPTION OF BEAN BLOSSOM HEADWATERS WATERSHED AND HELMSBURG AT TREVLAC

Table 5-13 identifies the flows and wasteloads to this proposed Trevlac WWTP.

TABLE 5-13
FLOWS AND WASTELOADS
TREVLAC REGIONAL WWTP LESS HEADWATERS WATERSHED AND HELMSBURG

| Area - Watershed | Flow | Equiv. Pop. | BOD | TSS | NH3 | P |
|---|---|---|---|---|---|---|
| Lick/Bear Creeks (Trevlac) | 10,370 | 104 | 23 | 23 | 4 | 1 |
| Lake Lemon (Lake Lemon) | 60,010 | 600 | 136 | 131 | 25 | 4 |
| Total | 70,380 | 704 | 159 | 154 | 29 | 5 |

The wastewater treatment plant proposed under this alternative will need to be capable of treating 75,000 gpd for the projected flows. The plant should be designed for ease of expansion.

Table 5-14 provides the estimated construction cost for a 75,000 gpd wastewater treatment plant in Trevlac. Included in this cost estimate are the lift station and force main piping from Lake Lemon to Trevlac. The cost for the wastewater treatment plant is based on an Indiana average of $26/gallon for similar sized treatment facilities.

TABLE 5-14
TREVLAC REGIONAL WWTP LESS BEAN BLOSSOM AND HELMSBURG
OPINION OF PROBABLE CONSTRUCTION COST

| Item | Quantity | Unit | Unit Price | Total Price |
|---|---|---|---|---|
| Lift Station 1 - North Shore Lake Lemon | 1 | LS | $207,000 | $207,000 |
| 6-inch Force Main - North Shore to Trevlac | 9,600 | LF | $60 | $576,000 |
| 8-inch Force Main - Tevlac to WWTP | 2500 | LF | $90 | $225,000 |
| Air Release Valves | 25 | EA | 5000 | $125,000 |
| Lift Station 2 - Lake Lemon South Shore | 1 | LS | $126,500 | $126,500 |
| 4-inch Force Main south shore to Trevlac | 8,430 | LF | $30 | $252,900 |
| Air Release Valves | 8 | EA | $5,000 | $40,000 |
| WWTP - Complete, 75,000 gpd | 1 | LS | $1,950,000 | $1,950,000 |
| **TOTAL** | | | | **$3,502,400** |

## ALTERNATIVE 3 – BEAN BLOSSOM CREEK LAKE LEMON WATERSHED

Three options are considered for the flows from Lake Lemon; take all flows to Bean Blossom, take all flows to Helmsburg, and take all flows to Trevlac. These options are already considered in Options BB1, H1, and T1.

## ENVIRONMENTAL IMPACTS

### Disturbed and Undisturbed Land

The proposed collection systems will be installed in road right of way and also in easements. The pipe should be directionally drilled

An archaeological reconnaissance may be needed for open cut installation.

Figures 4-1a, b and c in Exhibit 5 provide aerial maps of the proposed force main piping in the Headwaters Watershed. Figures 4-2 a, b and c provide aerial maps of the proposed piping in the Lick/Bear Creeks Watershed and the Lake Lemon Watershed.

### Prime Farmland and Geology

The soils and geology will be minimally impacted as a result of the proposed work elements and operation of the facilities. The project should be designed and implemented to minimize soil erosion and mitigation measures cited in comment letters from governing agencies will need to be implemented. Erosion control measures including seeding, sodding, inlet protection, silt fence, stone construction entrance and dust control may be implemented in accordance with current soil erosion control practices at the time of construction to reduce/eliminate erosion of the soils.

Figures 5-1 a, b and c provide soils maps of the proposed piping. NRCS will have to be contacted for farmland impacts if federal funds are used.

### Wetlands

Wetlands will not be impacted as a result of the proposed construction or the operation of the facilities. A wetlands map has not been generated, since wetlands will not be impacted.

### Hydrology

Groundwater supplies, sole source aquifers, and drinking water supplies will not be negatively impacted by this project. An antidegradation demonstration will have to be prepared for IDEM's review for any new wastewater treatment plant proposed.

Flood plains will not be impacted as a result of the proposed construction or the operation of the facilities. There are several stream crossings, and the force main will be installed in flood ways in some areas. A construction permit from IDNR will be required. Figures 5-2 a and b provide a floodplain map of the proposed piping.

The project will not adversely affect waters of high quality listed in 327 IAC 2-1-2{3), exceptional use streams listed in 312 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-2, Salmonid Streams listed in 327 IAC 2-1.5-5(a)(3), or waters on the Outstanding Rivers list (Natural Resources Commission Non-rule Policy Document).

### Historic and Architectural Resources

There are several historical structures identified along the collection systems; however, this project should not impact either the structures or the yards of these identified

structures. There is one cemetery that will have to be avoided. Figures 5-3 a and b in Exhibit 5 are copies of the IDNR SHAARD Data Base for the project areas. These figures show only the notable and outstanding structures and cemeteries. Contributing structures are not shown on the figures.

Plants and Animals

If the force main is installed by open cut, there may be removal of some trees and/or shrubs. If the force main is directionally drilled, no trees or scrub will have to be removed for the construction. The construction and operation of the proposed project will not negatively impact State or Federally listed endangered species or their habitat. The project will be implemented to minimize the impact to non-endangered species and their habitat. Mitigation measures will be implemented as requested by the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service.

Air Quality

The area is in compliance with ozone and other airborne pollutants. This project will not introduce any additional pollutants into the atmosphere. Malodorous fumes and gases will not be discharged into the air as a result of the construction activities or the operation of the proposed work. The construction and operation of this work will not adversely affect ozone levels and will not increase or decrease airborne pollutants. Short-term negative impacts to air quality will include noise and dust during the construction period. There will be no long-term negative impacts to air quality. The contractor will be required to maintain all equipment in good working order to mitigate noise and air pollution caused by faulty operating equipment. If dust becomes an issue, the contractor will be required to water the construction zones to keep airborne particulate to a minimum.

Open Space and Recreational Opportunities

Open space and recreational opportunities will not be negatively affected by the construction or the operation of the proposed project. Figures 5-4 a and b provide the USGS Quadrangle maps for the areas.

Lake Michigan Coastal Program

The proposed project will not affect the Lake Michigan Coastal Zone.

National Natural Landmarks

The construction and operation of the proposed project will not affect National Natural Landmarks.

Secondary Impacts

If the project is funded with SRF funding, the Sewer Districts, through the authority of their respective Boards, will need to ensure that future development, as well as future collection system or treatment works projects connecting to SRF funded facilities will not adversely affect wetlands, wooded areas, steep slopes, archaeological/historical/structural resources, or other sensitive environmental resources. The RSD will also have to require that new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental authorities.

Mitigation Measures

The project should be designed and implemented to minimize soil erosion and mitigation measures cited in comment letters from governing agencies will be implemented. Erosion control measures including seeding, sodding, inlet protection, silt fence, stone construction entrance and dust control may be implemented in accordance with current soil erosion control practices at the time of construction to reduce/eliminate erosion of the soils.

To mitigate construction noises and the subsequent resident complaints, construction should only be allowed from 7:00 am to 5:00 pm Monday through Friday. Appropriate erosion control measures should be implemented during construction to abate dust and airborne dirt particles. The contractor should be required to maintain all equipment in good working order to mitigate noise and air pollution caused by faulty operating equipment.

# CHAPTER 6
# ALTERNATIVE COMBINATIONS

## INTRODUCTION

The previous chapters have identified the costs for collection and treatment in the areas under consideration in this report. This chapter will provide the total costs for combinations of the various alternatives.

1. Construct a new plant in the Bean Blossom area to treat all flows, and abandon the Helmsburg WWTP. (Option BB1)
2. Construct a new plant in the Bean Blossom area to treat only the flows in the Bean Blossom Headwaters Watershed. (Option BB2)
3. Construct a new plant in Bean Blossom to treat all flows except Helmsburg RSD territory and maintain the Helmsburg WWTP to treat flows in the Helmsburg RSD territory. (Option BB3)
4. Construct a new plant in Helmsburg to treat all flows. (Option H1)
5. Construct a new plant in Helmsburg to treat all flows with the exception of Bean Blossom Headwaters Watershed. (Option H2)
6. Construct a new plant in the Trevlac Area to treat all flows with the exception of Headwaters Watershed and abandon the Helmsburg WWTP. (Option T1)
7. Transport Lake Lemon flows to a new plant in Trevlac and maintain the Helmsburg plant. (Option T2)

## ALTERNATIVE COMBINATIONS

Tables 6-1 through 6-7 provide the total estimated costs, including non-construction costs, for the alternatives. These tables combine the cost for collection in the various areas and the cost for treatment in different locations. Non-construction costs include the cost for land acquisition, easements, planning and design, construction monitoring and management, and legal and financial services. The non-construction cost is estimated at about 25% of the total construction cost. The cost for grant administration is not included in the tables, since it is not known what grants are available for any of the alternatives.

Land costs are calculated using $12,000 per acre and are based on a total of 5 acres for a wastewater treatment plant and ¼ acre for each lift station. Easements are calculated based on $2.50 per running foot of force main piping. As previously stated, it is assumed in this report that all customers will provide a right of entry and easement access for individual grinder pumps.

TABLE 6-1
BEAN BLOSSOM REGIONAL (BB1)

| | |
|---|---|
| Headwaters Collection | $5,461,400 |
| Trevlac/Needmore Collection | $1,713,000 |
| Lake Lemon North Shore Collection | $3,108,900 |
| Lake Lemon South Shore Collection | $1,271,200 |
| Bean Blossom Regional WWTP | $9,055,860 |
| Sub Total | $20,610,360 |
| Contingencies (10%) | $2,061,100 |
| **Sub-Total Construction** | **$22,671,460** |
| Land (6.5 acres) | $78,000 |
| Easements | $150,060 |
| Engineering Planning and Design | $4,080,780 |
| Construction Management and Inspection | $1,700,300 |
| Legal and Financial | $793,500 |
| **Sub-Total Non-Construction** | **$6,802,640** |
| **TOTAL PROJECT** | **$29,474,100** |

TABLE 6-2
BEAN BLOSSOM LOCAL (BB2)

| | |
|---|---|
| Headwaters Collection | $5,461,400 |
| Bean Blossom Local WWTP | $1,650,000 |
| Sub Total | $7,111,400 |
| Contingencies (10%) | $711,200 |
| **Sub-Total Construction** | **$7,822,600** |
| Land (5 acres) | $60,000 |
| Engineering Planning and Design | $1,408,100 |
| Construction Management and Inspection | $586,700 |
| Legal and Financial | $273,800 |
| **Sub-Total Non-Construction** | **$2,328,600** |
| **TOTAL PROJECT** | **$10,151,200** |

TABLE 6-3
BEAN BLOSSOM REGIONAL/HELMSBURG LOCAL (BB3)

| | |
|---|---|
| Headwaters Collection | $5,461,400 |
| Trevlac/Needmore Collection | $1,713,000 |
| Lake Lemon North Shore Collection | $3,108,900 |
| Lake Lemon South Shore Collection | $1,271,200 |
| Bean Blossom Regional WWTP | $8,294,860 |
| Sub Total | $19,849,360 |
| Contingencies (10%) | $1,985,000 |
| **Sub-Total Construction** | **$21,834,360** |
| Land (6.5 acres) | $78,000 |
| Easements | $153,010 |
| Engineering Planning and Design | $3,930,160 |
| Construction Management and Inspection | $1,637,570 |
| Legal and Financial | $764,200 |
| **Sub-Total Non-Construction** | **$6,562,940** |
| **TOTAL PROJECT** | **$28,397,300** |

TABLE 6-4
HELMSBURG REGIONAL (H1)

| | |
|---|---|
| Headwaters Collection | $5,461,400 |
| Trevlac/Needmore Collection | $1,713,000 |
| Lake Lemon North Shore Collection | $3,108,900 |
| Lake Lemon South Shore Collection | $1,271,200 |
| Helmsburg Regional WWTP | $8,366,860 |
| Sub Total | $19,921,560 |
| Contingencies (10%) | $1,992,200 |
| **Sub-Total Construction** | **$21,913,560** |
| Land (5 acres) | $60,000 |
| Easements | $150,060 |
| Engineering Planning and Design | $3,944,400 |
| Construction Management and Inspection | $1,643,500 |
| Legal and Financial | $766,980 |
| **Sub-Total Non-Construction** | **$6,564,940** |
| **TOTAL PROJECT** | **$28,478,500** |

TABLE 6-5
HELMSBURG REGIONAL/BEAN BLOSSOM LOCAL (H2)

| | |
|---|---|
| Trevlac/Needmore Collection | $1,713,000 |
| Lake Lemon North Shore Collection | $3,108,900 |
| Lake Lemon South Shore Collection | $1,271,200 |
| Helmsburg Regional WWTP | $6,296,860 |
| Sub Total | $12,389,960 |
| Contingencies (10%) | $1,239,000 |
| **Sub-Total Construction** | **$13,628,960** |
| Land (4.75 acres) | $57,000 |
| Easements | $111,810 |
| Engineering Planning and Design | $2,453,200 |
| Construction Management and Inspection | $1,022,170 |
| Legal and Financial | $476,960 |
| **Sub-Total Non-Construction** | **$4,121,140** |
| **TOTAL PROJECT** | **$17,750,100** |

TABLE 6-6
TREVLAC REGIONAL/BEAN BLOSSOM LOCAL (T1)

| | |
|---|---|
| Trevlac/Needmore Collection | $1,713,000 |
| Lake Lemon North Shore Collection | $3,108,900 |
| Lake Lemon South Shore Collection | $1,271,200 |
| Trevlac Regional WWTP | $4,521,400 |
| Sub Total | $10,614,500 |
| Contingencies (10%) | $1,061,500 |
| **Sub-Total Construction** | **$11,676,000** |
| Land (5 acres) | $60,000 |
| Easements | $93,825 |
| Engineering Planning and Design | $2,101,680 |
| Construction Management and Inspection | $875,700 |
| Legal and Financial | $408,595 |
| **Sub-Total Non-Construction** | **$3,539,800** |
| **TOTAL PROJECT** | **$15,215,800** |

TABLE 6-7
TREVLAC AND LAKE LEMON (T2)

| | |
|---|---|
| Trevlac/Needmore Collection | $1,713,000 |
| Lake Lemon North Shore Collection | $3,108,900 |
| Lake Lemon South Shore Collection | $1,271,200 |
| Trevlac Regional WWTP | $3,502,400 |
| Sub Total | $9,595,500 |
| Contingencies (10%) | $959,600 |
| **Sub-Total Construction** | **$10,555,100** |
| Land (5.5 acres) | $66,000 |
| Easements | $63,825 |
| Engineering Planning and Design | $1,899,975 |
| Construction Management and Inspection | $791,600 |
| Legal and Financial | $369,400 |
| **Sub-Total Non-Construction** | **$3,190,800** |
| **TOTAL PROJECT** | **$13,745,900** |

ANNUAL OPERATION AND MAINTENANCE

Table 6-8 provides the estimated annual Operation, Maintenance, and Replacement (O, M and R) costs for the identified options. The O, M and R costs have been developed based on Indiana averages for similar sized facilities as reported in Gateway for 2018. Table 6-9 provides the O, M and R costs for the various alternatives. The O, M and R costs for Helmsburg are not included in any of the alternatives where the existing Helmsburg plant will remain in service.

TABLE 6-8
O, M AND R COSTS - OPTIONS

| Option | Plant Size (GPD) | O, M & R |
|---|---|---|
| BB1 | 140,000 | $240,000 |
| BB2 | 55,000 | $90,000 |
| BB3 | 125,000 | $180,000 |
| H1 | 140,000 | $240,000 |
| H2 | 85,000 | $145,000 |
| T1 | 85,000 | $145,000 |
| T2 | 75,000 | $130,000 |
| Helmsburg | 25,000 | $57,600 |

TABLE 6-9
O, M AND R COSTS – ALTERNATIVE COMBINATIONS

| Combination | O, M & R |
|---|---|
| BB1 | $240,000 |
| BB2 | $90,000 |
| H1 | $240,000 |
| BB3 | $180,000 |
| BB2/H2 | $235,000 |
| T1/BB2 | $235,000 |
| T2/BB2 | $220,000 |

PRESENT WORTH CALCULATIONS

Table 6-10 provides the present worth calculation for the combination of alternatives. Present worth calculations provide a means to evaluate alternatives using not only construction costs, but also operation and maintenance costs. Future annual O, M and R costs are brought to present day dollars for a fairer cost comparison of the alternatives.

**Table 6-10**
**Brown County/Helmsburg Alternative Combinations**
**Present Worth Cost Summary***

| | Construction Cost | Contingency (10%) | Non-Constr. Cost | **Total Capital Cost** | Annual Cost (O,M & R) | Present Worth of Annual Cost | **Total Present Worth** |
|---|---|---|---|---|---|---|---|
| **Treatment Alternatives** | | | | | | | |
| BB1 - Bean Blossom Regional | $20,610,360 | $2,061,100 | $6,802,640 | **$29,474,100** | $240,000 | $4,120,500 | **$33,594,600** |
| BB2 – Bean Blossom Local | $7,111,400 | $711,200 | $2,328,600 | **$10,151,200** | $90,000 | $1,545,200 | **$11,696,400** |
| BB2/H2 - Bean Blossom Local/Helmsburg Regional | $19,501,360 | $1,950,200 | $6,449,740 | **$27,901,300** | $235,000 | $4,034,600 | **$31,935,900** |
| BB3 - Bean Blossom Regional/Helmsburg As Is | $19,849,360 | $1,985,000 | $6,562,940 | **$28,397,300** | $180,000 | $3,090,400 | **$31,487,700** |
| H1 - Helmsburg Regional | $19,921,360 | $1,992,200 | $6,564,940 | **$28,478,500** | $240,000 | $4,120,500 | **$32,599,000** |
| T1/ BB2- Trevlac Regional/ Bean Blossom Local | $17,725,900 | $1,772,700 | $5,868,400 | **$25,367,000** | $235,000 | $4,034,600 | **$29,401,600** |
| T2/BB2 -Trevlac Regional/ Bean Blossom Local/ Helmsburg As Is | $16,706,900 | $1,670,800 | $5,519,400 | **$23,897,100** | $220,000 | $3,777,100 | **$27,674,200** |

*The interest rate used for determining the present worth is 1.5%, which is the "real" federal discount rate for 2019 as determined from Appendix C** of the Office of Management and Budget (OMB) Circular A-94 as recommended by RUS Bulletin 1780-3. The term used is 20 years.

**https://www.whitehouse.gov/omb/circulars_a094/a94_appx-c

## MONETARY AND NON-MONETARY CONSIDERATIONS

As can be seen in Table 6-10, the present worth cost for either of the single regional plants to serve the entire area is the most expensive option. It appears that constructing treatment plants in the Trevlac area and in the Bean Blossom area provide the most cost effective solution for the studied areas.

One of the main benefits of constructing two separate plants is the potential for future growth. With the construction of the plant in the Bean Blossom area, future expansion of the collection system to the north and east can be accomplished. A regional plant in the western part of the County can also serve additional areas around Trevlac/Helmsburg. The Helmsburg plant is nearing the end of its useful life, with approximately 10 years remaining. The Helmsburg RSD should consider a regional option when it is ready to replace its plant.

Locations for treatment plants have not been evaluated. As previously discussed, the report assumes that a plant will be constructed within 2,500 feet of the last grinder pump on the system. Locating property for a treatment plant in the Trevlac area may be difficult, while land is available at the site of the existing Helmsburg WWTP. The property owner has stated that she would be willing to sell; however, the property is held in an irrevocable trust and the terms of the trust will need to be investigated.

Operations and maintenance costs have been established based on a review of 2018 costs of similar sized facilities in Indiana. It has not been determined what type of plant these facilities utilize or the number of lift stations on the systems. Operation, Maintenance and Replacement costs will vary based on specific conditions. There may also be cost savings associated with utilizing the same operator for more than one facility in Brown County.

# CHAPTER 7
## LEGAL, FINANCIAL AND MANAGERIAL CAPABILITIES

### INTRODUCTION

The Helmsburg RSD was established in 19915 and has been operating a wastewater treatment system since that time. IDEM conducts annual compliance evaluation inspections at the wastewater treatment plant. At the most recent inspection, March 28, 2018, conditions evaluated were found to be satisfactory.

The Brown County RSD was originally formed by order of the IDEM on July 21, 2006 as the Bean Blossom RSD. The name was changed by modification of the original order on April 6, 2016 and the service area was expanded to include all of Brown County with the exception of The Gnaw Bone RSD, The Helmsburg RSD and the Town of Nashville service areas. Wastewater service is not currently provided by the Brown County RSD.

The Rural Community Assistance Partnership (RCAP) has provided a Technical/Managerial/Financial (TMF) Capacity Assessment questionnaire for wastewater utilities to evaluate the TMF capacity of each RSD. The response forms are located in Exhibits 6 and 7 of this report. In general, both of the RSDs have the TMF capacity to own, operate and maintain a wastewater utility. Because Brown County RSD does not yet have any facilities, the responses are provided for future information.

The Helmsburg RSD received a compliance report from the State Board of Accounts based on an audit conducted in 2018 for the period from January 1, 2013 to December 31, 2017. The RSD provided copies of the resolutions that address the audit findings, and a copy of the Audit findings and the resolutions can be found in Exhibit 6. The largest area of concern, based on the TMF evaluation, is that most of the procedures and job descriptions are not written down. The RSD has begun the process of preparing written procedures and descriptions.

### PERMIT REQUIREMENTS

The following permits are anticipated to be required for each project:

a) IDEM Facility Construction Permit
b) IDEM NPDES Permit
c) Brown County Legal Drain Crossing
d) IDNR Work in a Floodway
e) INDOT Highway Crossing and Right of Way Permit
f) Brown County Roadway Crossing
g) IDEM Rule 5 for Erosion Control

## FUNDING OPTIONS

The proposed improvements can be financed using local money, grants or loans. The Indiana Office of Community and Rural Affairs (IOCRA) offers grants of up to $500,000 for qualifying communities, and a minimum ten percent match is required. An income survey will be required to determine if this area qualifies for any grant funding from IOCRA.

Loans are available from the RD at a low interest rate for a period of up to 40 years. Grants may also be available from RD for qualifying communities. A separate income survey is required for RD grant funding, as the agency will not accept an income survey completed for IOCRA. The process for obtaining RD money can be very time consuming and there is an application process.

The State Revolving Loan Fund, through the Indiana Finance Authority, provides low interest loans for a period up to thirty-five years for qualifying wastewater and water facilities. Certain forms are required to be signed for SRF funding and there is an application process.

Table 7-1 provides the preliminary rate derivation using an SRF loan at 2% interest for a 20-year period. This rate derivation is preliminary in nature and a financial adviser will provide a more detailed rate report.

TABLE 7-1

PRELIMINARY RATE DERIVATIONS*

| Treatment Alternatives | Total Capital Cost | Debt Service | Debt Service Reserve | Total Debt Payment | Annual Cost (O,M&R) | Total Annual Cost | EDUs | Monthly Payment |
|---|---|---|---|---|---|---|---|---|
| BB1 - Bean Blossom Regional | $29,474,100 | $1,802,539 | $450,635 | $2,253,174 | $240,000 | $2,493,174 | 761 | $273.02 |
| BB2 – Bean Blossom Local | $10,151,200 | $620,814 | $155,204 | $776,018 | $90,000 | $866,018 | 276 | $261.48 |
| BB2/H2 - Bean Blossom Local/Helmsburg Regional | $27,901,300 | $1,706,352 | $426,588 | $2,132,940 | $235,000 | $2,367,940 | 761 | $259.30 |
| BB3 - Bean Blossom Regional/Helmsburg As Is | $28,397,300 | $1,736,686 | $434,171 | $2,170,857 | $180,000 | $2,350,857 | 690 | $283.92 |
| H1 - Helmsburg Regional | $28,478,500 | $1,741,652 | $435,413 | $2,177,064 | $240,000 | $2,417,064 | 761 | $264.68 |
| T1/ BB2- Trevlac Regional/Bean Blossom Local | $25,367,000 | $1,551,362 | $387,841 | $1,939,203 | $235,000 | $2,174,203 | 761 | $238.09 |
| T2/BB2 -Trevlac Regional/Bean Blossom Local /Helmsburg As Is | $23,897,100 | $1,461,468 | $365,367 | $1,826,835 | $220,000 | $2,046,835 | 690 | $247.20 |

*Based on a 2% interest rate for a 20-year loan term

# EXHIBIT 1
# BROWN COUNTY RSD FORMATION

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

| | |
|---|---|
| IN THE MATTER OF: | ) |
| THE FORMATION OF THE | ) |
| BEAN BLOSSOM REGIONAL | ) |
| SEWER DISTRICT | ) |

FINDINGS OF FACT AND RECOMMENDED ORDER

OF THE HEARING OFFICER

FINDINGS OF FACT

1. On or about June 24, 2004, the Brown County Council petitioned the Indiana Department of Environmental Management (IDEM) for an Order to establish a regional sewer district (RSD) in Brown County.

2. The submitted petition complies with the provisions of IC 13-26-2.

3. The proposed name of the regional sewer district is the Bean Blossom Regional Sewer District (RSD).

4. A public hearing was held on October 19th, 2005 at the Fruitdale Fire Department, 5200 North State Road 135, Morgantown, Indiana.

5. Notice of the hearing was given during the weeks of October 3-7, October 10-14, and October 17-23, 2005, by publication in the following newspapers of general circulation: 1) The Brown County Democrat and 2) The Herald Times. Notice was given by mail to each eligible entity involved.

6. The principle office of the Bean Blossom RSD shall be located at Jackson Township Trustee's office, at 5076 North State Road 135, Morgantown, Indiana 46160. The mailing address is P.O. Box 297, Morgantown, Indiana 46160. The Bean Blossom RSD Board of Trustees (Bean Blossom RSD Board), upon formation, may relocate the office upon written notice to IDEM.

7. The sanitary sewage needs of those residents now residing within such Bean Blossom RSD are currently being met with septic systems, many of which are failing.

8. The residents of the Bean Blossom RSD currently obtain their water for drinking and other purposes from public water supplies, cisterns, or individual wells. Contamination from failing septic systems may detrimentally affect the water quality and public health in the Bean Blossom RSD.

9. The current method of collection and disposal of the sanitary sewage of some of the residents of the Bean Blossom RSD detrimentally affects the water quality and public health within the proposed district.

10. Upon formation, the Bean Blossom RSD may construct and operate a system that will collect and treat the sanitary sewage of the residents of the Bean Blossom RSD. The Bean Blossom RSD may contract with a district or municipality to meet the sewage treatment needs of the residents of the Bean Blossom RSD. The RSD may implement a septic maintenance/management program as needed.

11. The purposes to be accomplished by the formation of the Bean Blossom RSD are to provide for the collection, treatment, and disposal of sewage within the district pursuant to IC 13-26-1-1.

12. The Bean Blossom RSD did not incur debt when it organized.

13. The Bean Blossom RSD shall be governed by three (3) board members.

    A. The Brown County Council shall appoint one (1) member that owns property or resides in Jackson Township, Brown County, Indiana. The term shall expire December 31st, 2009.

    B. The Brown County Council shall appoint one (1) member that owns property or resides in Jackson Township, Brown County, Indiana. The term shall expire December 31st, 2008.

    C. The Brown County Council shall appoint one (1) member that owns property or resides in Jackson Township, Brown County, Indiana. The term shall expire December 31st, 2007.

    D. All appointment terms, subsequent to expiration of the initial terms described above shall be for a period of four (4) years.

    E. In the event a vacancy occurs on the Bean Blossom RSD Board, the appointing authority for that trustee shall appoint a new board member within thirty (60) days to complete the term of the vacant board member position(s).

14. The estimated monthly sewage rate is projected to be approximately $40.00 to $65.00, provided the Bean Blossom RSD pursues and receives all public funding.

15. The Bean Blossom RSD shall apply for available public funding as needed.

16. The source of funds to provide for the operating and maintaining costs of the Bean Blossom RSD will be derived from monthly user fees.

17. The Bean Blossom 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.

18. The territory to be included in the District is;

    Includes land within the northeast quarter section of Section 36, Township 10 N., Range 2 E; the northwest quarter section of Section 31, Township 10 N., Range 3 E.; the southwest quarter section of Section 30, Township 10 N., Range 3 E., and; the southeast quarter section of Section 25 Township 10 N., Range 2 E. of Jackson Township, Brown County, Indiana.

19. The District must promote public health, safety, convenience, and welfare in its territory.

20. The Bean Blossom RSD Board shall provide sufficient bond for all officers, Trustees or employees who have any power to disburse funds of the Bean Blossom RSD.

21. On or before July 15th, 2007, the Bean Blossom RSD shall file with the Commissioner of IDEM, a detailed plan for the construction and operation of Bean Blossom RSD's facilities known as the District Plan.

22. Options for the treatment and collection of wastewater have been preliminary 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 as 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 Bean Blossom RSD until it is in receipt of revenue from its operation or proceeds from the sale of bonds may include a 40 year loan from U.S.D.A. Rural Utility Services or the Indiana State Revolving Fund (SRF) and private contributions.

25. There are no eligible entities providing sewers in the current territory of the Bean Blossom RSD.

26. Upon formation, the District may construct or contract for treatment, pumping, transmission, and storage and distribution systems for the municipal and rural supply needs.

## RECOMMENDED ORDER

The Hearing Officer recommends the following:

1. That a Regional Sewer District, to be known as the Bean Blossom Regional Sewer District (Bean Blossom 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 Bean Blossom 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 to be included in the District is;
   Includes land within the northeast quarter section of Section 36, Township 10 N., Range 2 E; the northwest quarter section of Section 31, Township 10 N., Range 3 E.; the southwest quarter section of Section 30, Township 10 N., Range 3 E., and; the southeast quarter section of Section 25 Township 10 N., Range 2 E. of Jackson Township, Brown County, Indiana.

4. The Bean Blossom RSD shall be governed by three (3) board members.

   A. The Brown County Council shall appoint one (1) member that owns property or resides in Jackson Township, Brown County, Indiana. The term shall expire December 31st, 2009.

   B. The Brown County Council shall appoint one (1) member that owns property or resides in Jackson Township, Brown County, Indiana. The term shall expire December 31st, 2008.

   C. The Brown County Council shall appoint one (1) member that owns property or resides in Jackson Township, Brown County, Indiana. The term shall expire December 31st, 2007.

   D. All appointment terms, subsequent to expiration of the initial terms described above shall be for a period of four (4) years.

   E. In the event a vacancy occurs on the Bean Blossom RSD Board, the appointing authority for that trustee shall appoint a new board member within thirty (60) days to complete the term of the vacant board member position(s).

5. The Bean Blossom RSD Board shall provide sufficient bond for all officers, trustees or employees who have any power to disburse funds of the Bean Blossom RSD.

6. On or before July 15th, 2007, the Bean Blossom RSD shall file with the Commissioner of IDEM, a detailed plan for the construction and operation of Bean Blossom RSD's facilities known as the District Plan.

7. The Bean Blossom 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 as the District plans to collect, dispose and treat sewage that is currently being provided by individual septic tanks or other on-site systems.

9. The District must promote public health, safety, convenience, and welfare in its territory.

10. 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 14, 2006 Hearing Officer Lynne L. Newlon

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

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|---|---|
| IN THE MATTER OF: | ) |
| THE FORMATION OF THE | ) |
| BEAN BLOSSOM REGIONAL | ) |
| SEWER DISTRICT | ) |

ORDER ADOPTING THE FINDINGS OF FACT
AND RECOMMENDED ORDER OF THE HEARING OFFICER
FOR THE ORGANIZATION OF THE
BEAN BLOSSOM 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 Bean Blossom Regional Sewer District (RSD). Said FINDINGS and RECOMMENDED ORDER is attached to this ORDER, and consists of five (5) 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 Bean Blossom 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, as though set out in full.

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 (33rd) 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 21st day of July, 2006.

Thomas W. Easterly, Commissioner
Indiana Department of
Environmental Management

Indiana Department of Environmental Management
*We Protect Hoosiers and Our Environment.*
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
*Governor*

Carol S. Comer
*Commissioner*

**March 31, 2016**

Brown County Regional Sewer District
P.O. Box 1881
Nashville, IN 47448

Dear Board:

Re: Approval of Order Modification

This letter is to advise you that the Order to change the name of the District from Beanblossom Regional Sewer District to Brown County Regional Sewer District and extend the deadline of the District Plan is complete. The signed Order is attached.

If you have any questions, please contact me (317) 233-1190.

Sincerely,

Edward Judson
Regional District Coordinator
Office of Water Quality

Enclosure

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

| | |
|---|---|
| IN THE MATTER OF: | ) |
| | ) |
| ORDER TO CHANGE NAME OF | ) |
| BEANBLOSSOM REGIONAL | ) |
| SEWER DISTRICT TO BROWN | ) |
| COUNTY REGIONAL SEWER | ) |
| DISTRICT | ) |

**ORDER TO CHANGE THE NAME OF BEANBLOSSOM REGIONAL SEWER DISTRICT TO THE BROWN COUNTY REGIONAL SEWER DISTRICT**

The Beanblossom Regional Sewer District (District) Petitioner, was previously established by Order from the Indiana Department of Environmental Management, dated July 21, 2006. The Order is for the purpose of collection, treatment and disposal of sewage within the District.

Whereas, on December 23, 2013, IDEM signed the First Order Modifying the Order Forming the Beanblossom Regional Sewer District (First Modification) which approved the District's request to extend time to submit its District Plan to October 21, 2014 and the increase the District's Board membership from three to five.

Whereas, on January 5, 2016, a quorum of the District Trustees unanimously voted in favor of changing the name of the District to the Brown County Regional Sewer District. This vote was confirmed unanimously by a quorum of the newly seated Board at a public meeting held on February 2, 2016.

Whereas, on February 7, 2016, the District petitioned to amend its Order, pursuant to Indiana Code (IC) §13-26-1, by requesting to change the name of the District from Beanblossom Regional Sewer District to Brown County Regional Sewer District and requesting an extension of an additional year to submit its District Plan.

## ORDER

The Commissioner of IDEM now orders that the Order dated July 21, 2006, and the First Modification dated December 23, 2013, be amended. The name of the District shall now be the Brown County Regional Sewer District. The District plan will be due one year from the effective date of this Order.

In all other respects, the Order dated July 21, 2006 and the First Modification dated December 23, 2013, shall remain the same.

Pursuant to IC §4-21.5-3-5(f) and IC §4-21.5-3-2(e), this Order to amend the Order dated July 21, 2006 forming the Beanblossom Regional Sewer District, becomes effective eighteen (18) days after its mailing. If you wish to challenge this decision, IC §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, IGCN, Indianapolis, Indiana 46204, within eighteen (18) days from the mailing of this notice. This petition must be filed in accordance with IC §4-21.5-3-7, and must include facts demonstrating that the petitioner is the petitioner, a person aggrieved by this decision, or a person entitled to review by law.

DATED in Indianapolis, Indiana, on this 6th day of April, 2016.

Carol S. Comer,
Commissioner
Indiana Department of Environmental Management

# EXHIBIT 2
# HELMSBURG RSD FORMATION

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Governor
*Kathy Prosser*
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
Telephone 317-232-8603
Environmental Helpline 1-800-451-6027


STATE OF INDIANA )
) SS:
COUNTY OF MARION )

BEFORE THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

IN THE MATTER OF:
)
THE FORMATION OF THE )
HELMSBURG REGIONAL )
SEWAGE DISTRICT )

## FINDINGS OF FACT AND RECOMMENDED ORDER OF THE HEARING OFFICER

## FINDINGS OF FACT

1. On April 3, 1995, the Brown County Commissioners petitioned the Indiana Department of Environmental Management for an Order establishing a Regional Sewer District to be known as the Helmsburg Regional Sewage District in Brown County.

2. Said Petition complies with the provisions of IC 13-3-2-3.

3. A public hearing was held on September 12, 1995, at the Helmsburg Elementary School, 5378 North Oak Ridge Road, Helmsburg, Indiana.

4. Notice of said hearing was given by publication in a newspaper of general circulation in Brown County for two (2) consecutive weeks prior to said hearing, and by mailing to each eligible entity involved.

5. The proposed name of the District is the Helmsburg Regional Sewage District.

6. The initial principal office of the proposed District would be The Board of Trustees, Helmsburg Regional Sewage District, Indiana, P.O. Box 134, 2347 West State Road 45,

Helmsburg, Indiana 47435. The Trustees of the District may relocate said principal office upon notice to the Indiana Department of Environmental Management.

7. The sanitary sewage needs of those residents now residing within such proposed District are currently being met with individual septic systems and privies, which are inadequate.

8. Upon formation of such District, it would construct and operate a sanitary sewage system that would collect, treat, and dispose of the sanitary sewage of the residents of such District.

9. Such District is needed to permit the construction of a system to collect, treat, and dispose of the sanitary sewage of the residents. The current method of sewage collection and disposal through individual septic systems and privies is deteriorating and is creating current and future health problems for the residents of such proposed District.

10. The current method of collection and disposal of the sanitary sewage of the residents of such proposed District is detrimentally affecting the water quality and public health of the area of the proposed District.

11. The proposed District would include a part of Brown County, Indiana described as follows:

    A part of the Southwest quarter of section 26, the Southeast quarter of section 27, the Northeast quarter of section 34 and the Northwest quarter of section 35, Township 10 North, Range 2 East, as located in Jackson Township, containing approximately 149 acres and including the community of Helmsburg, as legally described in Exhibit " B " of the petition.

12. There is no outstanding indebtedness currently in the proposed District for the purpose of the construction of a sanitary sewer and treatment system.

13. It is proposed that the Board of Trustees of the District shall consist of three (3) members to be appointed by the Brown County Commissioners, initially for staggered terms of one (1), two (2) and three (3) years with subsequent appointments or reappointments being for terms of four (4) years.

14. The estimated cost of construction in the District is $614,686.00. The estimated annual operation and maintenance costs are $13,200.00. The estimated, per household, monthly fee is $20.00, and the estimated connection fee is $550.00.

15. The sources of funding for the initial costs of construction are a grant, not to exceed $500,000.00, from the Indiana Department of Commerce, together with funds provided from Brown County, Indiana, in the approximate amount of $114,686.00.

16. The anticipated sources of funds to provide for the operating and maintenance costs of the District would be from the monthly fees charged to the users of the sewage works.

17. The District would be eligible to apply for Federal and State financial assistance for

construction..

18. The District appears capable of accomplishing the purposes for which it would be formed in an economically feasible manner.

## RECOMMENDED ORDER

The Hearing Officer recommends the following:

1. That a Regional Sewer District, to be known as the Helmsburg Regional Sewage District, be organized as an independent political entity of the State of Indiana as a body corporate and political.

2. That the purpose to be accomplished by said District is the collection, treatment, and disposal of sewage from within said District.

3. That the District shall include a part of Brown County, Indiana-described as follows:

   A part of the Southwest quarter of section 26, the Southeast quarter of section 27, the Northeast quarter of section 34 and the Northwest quarter of section 35, Township 10 North, Range 2 East, as located in Jackson Township, containing approximately 149 acres and including the community of Helmsburg, as legally described in Exhibit " B " of the petition.

4. That the Board of Trustees of the District shall consist of three (3) members to be appointed by the Brown County Commissioners, initially for staggered terms of one (1), two (2) and three (3) years with subsequent appointments or reappointments being for terms of four (4) years.

5. That the Board of Trustees provide sufficient bond for all officers, trustees or employees who have any power to disburse funds of the District.

6. That within nine (9) months from the date of this order, the District shall file, with the Commissioner of the Indiana Department of Environmental Management, a detailed plan for the construction and operation of the District's facilities.

Dated: November 3, 1995 Hearing Officer: R J Henley

HELMSBURG REGIONAL SEWER DISTRICT

NPDES

APPLICATION FOR PERMIT TO DISCHARGE

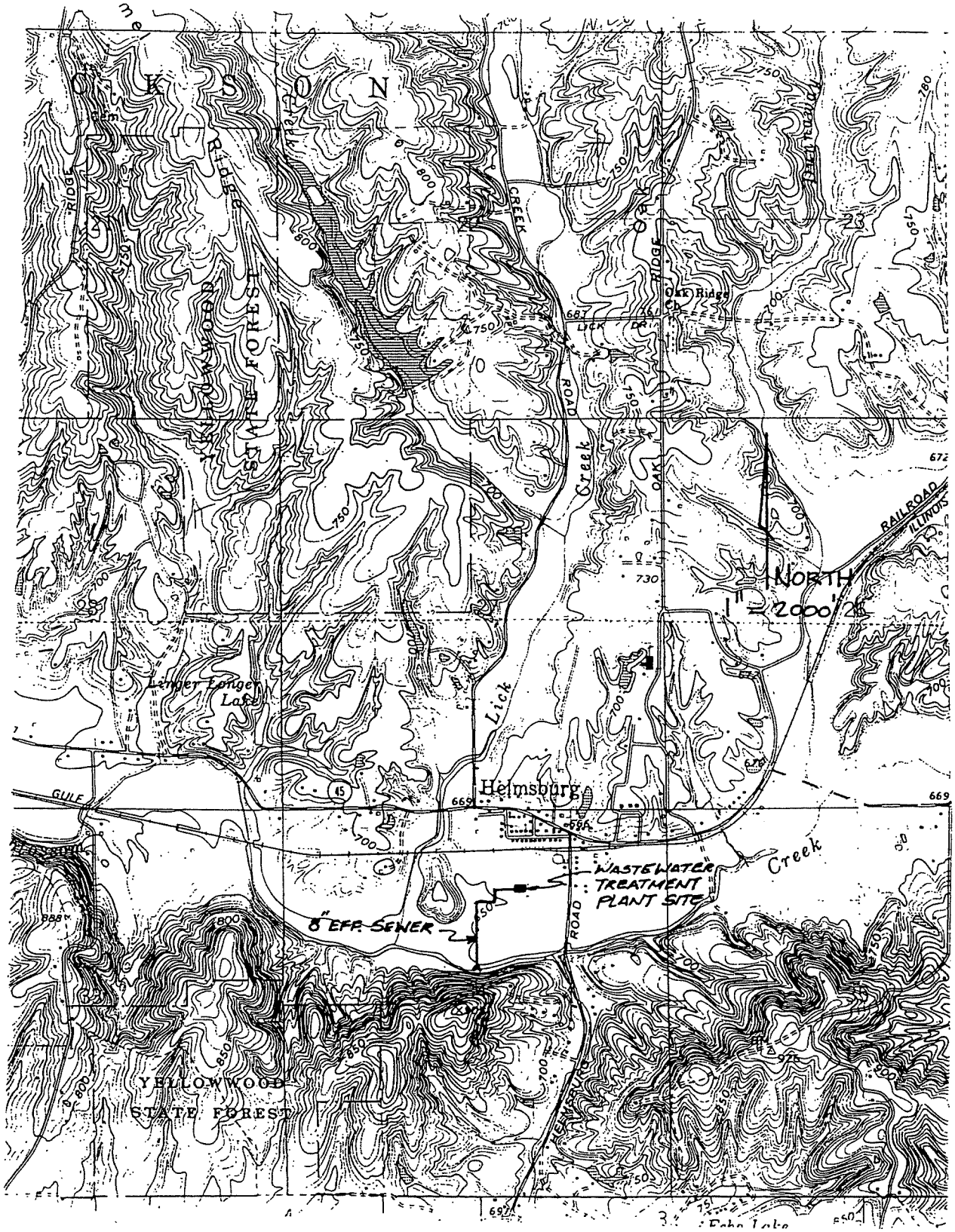
SHORT FORM "A"

## NARRATIVE DESCRIPTION FOR WASTEWATER TREATMENT FACILITY

The wastewater treatment plant proposed for the Regional Sewer District is an extended aeration activated sludge treatment process with fixed film media. The treatment plant will consist of a pre-manufactured extended aeration process tank with a hopper bottom clarifier sized to handle a peak hourly flow rate of 120,000 gpd. Air is provided by duplex positive displacement blowers

The treatment plant will also have an aerobic digester for sludge accumulation and treatment and a surge control tank to handle peak flows. Disinfection of the treated effluent will be provided by chlorination in a chorine contact chamber and dechlorination will be provided as well. Effluent flow metering will be provided to record daily flows and display instantaneous flow rates. Chlorination and dechlorination will be provided by tablet feed of hypochlorite and bi-sulfites.

The treated effluent will discharge to Beanblossom Creek via a gravity sewer from the treatment plant. The treatment plant is new and will be constructed with new site access roads, site grading and fencing being provided. the treatment plant is located on a 1.49 acre tract of land purchased for the project.




LOCATION MAP

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Telephone 317-232-8603
Environmental Helpline 1-800-451-6027

STATE OF INDIANA )
) SS:
COUNTY OF MARION )

BEFORE THE INDIANA DEPARTMENT
OF ENVIRONMENTAL MANAGEMENT

IN THE MATTER OF: )
)
THE FORMATION OF THE )
HELMSBURG REGIONAL )
SEWAGE DISTRICT )

## ORDER ADOPTING THE FINDINGS OF FACT AND RECOMMENDED ORDER OF THE HEARING OFFICER FOR THE ORGANIZATION OF THE HELMSBURG REGIONAL SEWAGE 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 Helmsburg Regional Sewage District. Said Findings and Recommended Order are attached to this ORDER, and consist of 3 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 District complies with the conditions of IC 13-3-2, and that the proposed District appears capable of accomplishing its purpose in an economically feasible manner.

IT IS NOW ORDERED BY THE COMMISSIONER that the Helmsburg Regional Sewage 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, as though set out in full.

Pursuant to IC 13-3-2-5(e), 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 (33rd) 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 17th day of NOVEMBER, 1995.

For: Commissioner
Indiana Department of
Environmental Management

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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| STATE OF INDIANA ) | | BEFORE THE INDIANA DEPARTMENT |
| ) | SS: | OF ENVIRONMENTAL MANAGEMENT |
| COUNTY OF MARION ) | | |
| IN THE MATTER OF: ) | | |
| ) | | |
| THE FORMATION OF THE ) | | |
| HELMSBURG REGIONAL ) | | |
| SEWAGE DISTRICT ) | | |

## FINDINGS OF FACT AND RECOMMENDED ORDER OF THE HEARING OFFICER

## FINDINGS OF FACT

1. On April 3, 1995, the Brown County Commissioners petitioned the Indiana Department of Environmental Management for an Order establishing a Regional Sewer District to be known as the Helmsburg Regional Sewage District in Brown County.

2. Said Petition complies with the provisions of IC 13-3-2-3.

3. A public hearing was held on September 12, 1995, at the Helmsburg Elementary School, 5378 North Oak Ridge Road, Helmsburg, Indiana.

4. Notice of said hearing was given by publication in a newspaper of general circulation in Brown County for two (2) consecutive weeks prior to said hearing, and by mailing to each eligible entity involved.

5. The proposed name of the District is the Helmsburg Regional Sewage District.

6. The initial principal office of the proposed District would be The Board of Trustees, Helmsburg Regional Sewage District, Indiana, P.O. Box 134, 2347 West State Road 45,

Helmsburg, Indiana 47435. The Trustees of the District may relocate said principal office upon notice to the Indiana Department of Environmental Management.

7. The sanitary sewage needs of those residents now residing within such proposed District are currently being met with individual septic systems and privies, which are inadequate.

8. Upon formation of such District, it would construct and operate a sanitary sewage system that would collect, treat, and dispose of the sanitary sewage of the residents of such District.

9. Such District is needed to permit the construction of a system to collect, treat, and dispose of the sanitary sewage of the residents. The current method of sewage collection and disposal through individual septic systems and privies is deteriorating and is creating current and future health problems for the residents of such proposed District.

10. The current method of collection and disposal of the sanitary sewage of the residents of such proposed District is detrimentally affecting the water quality and public health of the area of the proposed District.

11. The proposed District would include a part of Brown County, Indiana described as follows:

    A part of the Southwest quarter of section 26, the Southeast quarter of section 27, the Northeast quarter of section 34 and the Northwest quarter of section 35, Township 10 North, Range 2 East, as located in Jackson Township, containing approximately 149 acres and including the community of Helmsburg, as legally described in Exhibit " B " of the petition.

12. There is no outstanding indebtedness currently in the proposed District for the purpose of the construction of a sanitary sewer and treatment system.

13. It is proposed that the Board of Trustees of the District shall consist of three (3) members to be appointed by the Brown County Commissioners, initially for staggered terms of one (1), two (2) and three (3) years with subsequent appointments or reappointments being for terms of four (4) years.

14. The estimated cost of construction in the District is $614,686.00. The estimated annual operation and maintenance costs are $13,200.00. The estimated, per household, monthly fee is $20.00, and the estimated connection fee is $550.00.

15. The sources of funding for the initial costs of construction are a grant, not to exceed $500,000.00, from the Indiana Department of Commerce, together with funds provided from Brown County, Indiana, in the approximate amount of $114,686.00.

16. The anticipated sources of funds to provide for the operating and maintenance costs of the District would be from the monthly fees charged to the users of the sewage works.

17. The District would be eligible to apply for Federal and State financial assistance for

construction..

18. The District appears capable of accomplishing the purposes for which it would be formed in an economically feasible manner.

## RECOMMENDED ORDER

The Hearing Officer recommends the following:

1. That a Regional Sewer District, to be known as the Helmsburg Regional Sewage District, be organized as an independent political entity of the State of Indiana as a body corporate and political.

2. That the purpose to be accomplished by said District is the collection, treatment, and disposal of sewage from within said District.

3. That the District shall include a part of Brown County, Indiana-described as follows:

   A part of the Southwest quarter of section 26, the Southeast quarter of section 27, the Northeast quarter of section 34 and the Northwest quarter of section 35, Township 10 North, Range 2 East, as located in Jackson Township, containing approximately 149 acres and including the community of Helmsburg, as legally described in Exhibit " B " of the petition.

4. That the Board of Trustees of the District shall consist of three (3) members to be appointed by the Brown County Commissioners, initially for staggered terms of one (1), two (2) and three (3) years with subsequent appointments or reappointments being for terms of four (4) years.

5. That the Board of Trustees provide sufficient bond for all officers, trustees or employees who have any power to disburse funds of the District.

6. That within nine (9) months from the date of this order, the District shall file, with the Commissioner of the Indiana Department of Environmental Management, a detailed plan for the construction and operation of the District's facilities.

Dated: November 3, 1995 Hearing Officer: R. J. Henley

# EXHIBIT "B"

## LEGAL DESCRIPTION

## HELMSBURG REGIONAL SEWER DISTRICT

A part of the Southwest quarter of section 26, the Southeast quarter of section 27, the Northeast quarter of section 34 and the Northwest quarter of section 35, Township 10 North, Range 2 East, as located in Brown County, Indiana and as more particularly described below:

Commencing at a point which is the Northeast corner of Section 34; thence South on and along the East line of Section 34, 1,000 feet to the Point of Beginning; thence West running parallel with the North line of Section 34, 1,000 feet to a point; thence South running parallel with the East line of Section 34, 1,100 feet to a point; thence West running parallel to the North line of Section 34, 640 feet to a point; thence North running parallel to the East line of Section 34, 1,100 feet to a point; thence West running parallel with the North line of Section 34, 1,000 feet to a point; thence North running parallel to the East line of Section 34, 1,400 feet to a point; said point being approximately 400 feet North of the Northwest corner of the Northeast quarter of Section 34; thence East running parallel to the North line of Section 34 to a point of intersection with the East line of section 27 a distance of approximately 2,640 feet; thence continuing East on a line parallel to the North line of section 35 a distance of 1,500 feet to a point; thence South running parallel to the East line of Section 34, 1,400 feet to a point; thence West running parallel to the North line of Section 35 to the point of beginning a distance of approximately 1,500 feet, constituting an area containing 149.22 acres, more or less.

# EXHIBIT 3
# NPDES PERMIT – HELMSBURG RSD

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**Michael R. Pence**
*Governor*

**Thomas W. Easterly**
*Commissioner*

VIA ELECTRONIC MAIL August 26, 2015

Mr. Jeff Keener, President
Helmsburg Regional Sewer District
2954 South Conservation Club Road
Morgantown, Indiana 46160

Dear Mr. Keener:

Re: Final NPDES Permit No. IN0058416
Helmsburg Regional Sewer District
Wastewater Treatment Plant
Brown County

Your application for a National Pollutant Discharge Elimination System (NPDES) permit has been processed in accordance with Sections 402 and 405 of the Federal Water Pollution Control Act as amended, (33 U.S.C. 1251, et seq.), and IDEM's permitting authority under IC 13-15. The enclosed NPDES permit covers your discharges to Bean Blossom Creek. All discharges from this facility shall be consistent with the terms and conditions of this permit.

One condition of your permit requires monthly reporting of several effluent parameters. Reporting is to be done on the Monthly Report of Operation (MRO) form. This form is available on the internet at the following web site:

http://www.in.gov/idem/5104.htm

You should duplicate this form as needed for future reporting.

Another condition which needs to be clearly understood concerns violation of the effluent limitations in the permit. Exceeding the limitations constitutes a violation of the permit and may bring criminal or civil penalties upon the permittee. (See Part II.A.1 and II.A.11 of this permit). It is very important that your office and treatment operator understand this part of the permit.

Please note that this permit issuance can be appealed. An appeal must be filed under procedures outlined in IC 13-15-6, IC 4-21.5, and the enclosed public notice. The appeal must be initiated by you within 18 days from the date this letter is postmarked, by filing a request for an adjudicatory hearing with the Office of Environmental Adjudication (OEA), at the following address:

Office of Environmental Adjudication
Indiana Government Center North
100 North Senate Avenue, Room 501
Indianapolis, IN 46204

Please send a copy of any such appeal to me at IDEM, Office of Water Quality-Mail Code 65-42, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251.

The permit should be read and studied. It requires certain action at specific times by you, the discharger, or your authorized representative. One copy of this permit is also being sent to your operator to be kept at the treatment facility. You may wish to call this permit to the attention of your consulting engineer and/or attorney.

If you have any questions concerning your NPDES permit, please contact John Donnellan at 317/234-0865. Questions concerning appeal procedures should be directed to the Office of Environmental Adjudication, at 317/232-8591.

Sincerely,

Paul Higginbotham, Chief
Permits Branch
Office of Water Quality

Enclosures
cc: Robin Willey, Certified Operator

STATE OF INDIANA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), Title 13 of the Indiana Code, and regulations adopted by the Water Pollution Control Board, the Indiana Department of Environmental Management (IDEM) is issuing this permit to the

**HELMSBURG REGIONAL SEWER DISTRICT**

hereinafter referred to as "the permittee." The permittee owns and/or operates the **Helmsburg Regional Sewer District Wastewater Treatment Plant**, a minor municipal wastewater treatment plant located at 4856 Helmsburg Road, Nashville, Indiana Brown County. The permittee is hereby authorized to discharge from the outfalls identified in Part I of this permit to receiving waters named Bean Blossom Creek in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in the permit. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: November 1, 2015.

Expiration Date: October 31, 2020.

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and application forms as are required by the Indiana Department of Environmental Management. The application shall be submitted to IDEM at least 180 days prior to the expiration date of this permit, unless a later date is allowed by the Commissioner in accordance with 327 IAC 5-3-2 and Part II.A.4 of this permit.

Issued August 26, 2015, for the Indiana Department of Environmental Management.

Paul Higginbotham, Chief
Permits Branch
Office of Water Quality

## TREATMENT FACILITY DESCRIPTION

The permittee currently operates a Class I, 0.025 MGD extended aeration treatment facility consisting of a surge tank, a bar screen, an aeration tank, a final clarifier, sand filters, chlorination and dechlorination facilities, a sludge holding tank and an effluent flow meter. Final solids are hauled off site by a licensed contractor.

The collection system is comprised of 100% separate sanitary sewers by design with no overflow or bypass points.

## PART I

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee shall take samples and measurements at a location representative of each discharge to determine whether the effluent limitations have been met. Refer to Part I.B of this permit for additional monitoring and reporting requirements.

1. Beginning on the effective date of this permit, the permittee is authorized to discharge from Outfall 001, which is located at Latitude: 39° 15' 37" N, Longitude: 86° 17' 51" W. The discharge is subject to the following requirements:

TABLE 1

| | **Quantity or Loading** | | | **Quality or Concentration** | | | **Monitoring Requirements** | |
|---|---|---|---|---|---|---|---|---|
| Parameter | Monthly Average | Weekly Average | Units | Monthly Average | Weekly Average | Units | Measurement Frequency | Sample Type |
| Flow [1] | Report | ---- | MGD | ---- | ---- | ---- | 5 X Weekly | 24-Hr. Total |
| $CBOD_5$ | | | | | | | | |
| Summer [2] | 3.1 | 4.8 | lbs/day | 15 [4] | 23 | mg/l | 1 X Weekly | Grab |
| Winter [3] | 5.2 | 8.3 | lbs/day | 25 [4] | 40 | mg/l | 1 X Weekly | Grab |
| TSS | | | | | | | | |
| Summer [2] | 3.8 | 5.6 | lbs/day | 18 [4] | 27 | mg/l | 1 X Weekly | Grab |
| Winter [3] | 6.3 | 9.4 | lbs/day | 30 [4] | 45 | mg/l | 1 X Weekly | Grab |
| Ammonia-nitrogen | | | | | | | | |
| Summer [2] | 0.27 | 0.40 | lbs/day | 1.3 | 1.9 | mg/l | 1 X Weekly | Grab |
| Winter [3] | 0.40 | 0.61 | lbs/day | 1.9 | 2.9 | mg/l | 1 X Weekly | Grab |

TABLE 2

| | Quality or Concentration | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|
| Parameter | Daily Minimum | Monthly Average | Daily Maximum | Units | Measurement Frequency | Sample Type |
| pH [5] | 6.0 | ---- | 9.0 | s.u. | 2 X Weekly | Grab |
| Dissolved Oxygen [6] | | | | | | |
| Summer [2] | 6.0 | ---- | ---- | mg/l | 2 X Weekly | 2 Grabs/24-Hrs. |
| Winter [3] | 5.0 | ---- | ---- | mg/l | 2 X Weekly | 2 Grabs/24-Hrs. |
| Total Residual Chlorine [7] | | | | | | |
| Contact Tank [8] | 0.5 | ---- | Report | mg/l | 2 X Weekly | Grab |
| Final Effluent [9] | ---- | 0.01 | 0.02 | mg/l | 2 X Weekly | Grab |
| *E. coli* [10] | ---- | 125 | 235 | cfu/100 ml | 1 X Weekly | Grab |

[1] Effluent flow measurement is required per 327 IAC 5-2-13. The flow meter(s) shall be calibrated at least once every twelve months.

[2] Summer limitations apply from May 1 through November 30 of each year.

[3] Winter limitations apply from December 1 through April 30 of each year.

[4] The monthly average percent removal shall not be less than 85%. The percent removal shall be calculated from a comparison of raw influent to final effluent sampling results.

[5] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Report of Operation forms.

[6] The daily minimum concentration of dissolved oxygen in the effluent shall be reported as the arithmetic mean determined by summation of the two (2) daily grab sample results divided by the number of daily grab samples. These samples are to be collected over equal time intervals.

[7] The effluent shall be disinfected on a continuous basis such that violations of the applicable bacteriological limitations (fecal coliform or *E. coli*) do not occur from April 1 through October 31, annually. If the permittee uses chlorine for any reason, at any time including the period from November 1 through March 31, then the limits and monitoring requirements in Table 2 for Total Residual Chlorine (TRC) shall be in effect whenever chlorine is used.

[8] The chlorine residual shall be maintained at a concentration not less than 0.5 mg/l as measured at the effluent end of the chlorine contact tank for the term of the permit. The daily maximum chlorine residual value at the chlorine contact tank shall also be reported.

[9] In accordance with 327 IAC 5-2-11.1(f), compliance with this permit will be demonstrated if the measured effluent concentrations are less than the limit of quantitation (0.06 mg/l). If the measured effluent concentrations are above the water quality-based permit limitations and above the Limit of Detection (LOD) specified by the permit in any of three (3) consecutive analyses or any five (5) out of nine (9) analyses, the permittee is required to reevaluate its chlorination/dechlorination practices to make any necessary changes to assure compliance with the permit limitation for TRC. These records must be retained in accordance with the record retention requirements of Part I.B.8 of this permit.

Effluent concentrations greater than or equal to the LOD but less than the Limit of Quantitation (LOQ), shall be reported on the discharge monitoring report forms as the measured value. A note must be included with the DMR indicating that the value is not quantifiable. Effluent concentrations less than the limit of detection shall be reported on the discharge monitoring report forms as less than the value of the limit of detection. For example, if a substance is not detected at a concentration of 0.01 mg/l, report the value as < 0.01 mg/l. At present, two methods are considered to be acceptable to IDEM, amperometric and DPD colorimetric methods, for chlorine concentrations at the level of 0.06 mg/l.

| Parameter | LOD | LOQ |
|---|---|---|
| Chlorine | 0.02 mg/l | 0.06 mg/l |

Case-Specific MDL

The permittee may determine a case-specific Method Detection Level (MDL) using one of the analytical methods specified above, or any other test method which is approved by IDEM prior to use. The MDL shall be derived by the procedure specified for MDLs contained in 40 CFR Part 136, Appendix B, and the limit of quantitation shall be set equal to 3.18 times the MDL. Other methods may be used if first approved by the U.S. EPA and IDEM.

[10] The *E. coli* limitations and monitoring requirements apply from April 1 through October 31 annually. The monthly average *E. coli* value shall be calculated as a geometric mean. IDEM has specified the following methods as allowable for the detection and enumeration of *Escherichia coli (E. coli)*:

1. Coliscan MF® Method
2. EPA Method 1603 Modified m-TEC agar
3. mColi Blue-24®
4. Colilert® MPN Method or Colilert-18® MPN Method

2. Minimum Narrative Limitations

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

a. including the mixing zone, to contain substances, materials, floating debris, oil, scum or other pollutants:

(1) that will settle to form putrescent or otherwise objectionable deposits;

(2) that are in amounts sufficient to be unsightly or deleterious;

(3) that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;

(4) which are in amounts sufficient to be acutely toxic to, or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;

(5) 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.

b. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

B. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge flow and shall be taken at times which reflect the full range and concentration of effluent parameters normally expected to be present. Samples shall not be taken at times to avoid showing elevated levels of any parameters.

2. Data on Plant Operation

The raw influent and the wastewater from intermediate unit treatment processes, as well as the final effluent shall be sampled and analyzed for the pollutants and operational parameters specified by the applicable Monthly Report of Operation Form, as appropriate, in accordance with 327 IAC 5-2-13. Except where the permit specifically states otherwise, the sample frequency for the raw influent and intermediate unit treatment process shall be at a minimum the same frequency as that for the final effluent. The measurement frequencies specified in each of the tables in Part I.A. are the minimum frequencies required by this permit.

3. Monthly Reporting

The permittee shall submit accurate monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous monitoring period and shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the monitoring period in which the permit becomes effective. These reports shall include, but not necessarily be limited to, the Discharge Monitoring Report (DMR) and the Monthly Report of Operation (MRO). All reports shall be mailed to IDEM, Office of Water Quality – Mail Code 65-42, Compliance Data Section, 100 North Senate Ave., Indianapolis, Indiana 46204-2251. In lieu of mailing paper reports the permittee may submit its reports to IDEM electronically by using the NetDMR application, upon registration and approval receipt. Electronically submitted reports (using NetDMR) have the same deadline as mailed reports. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

A calendar week will begin on Sunday and end on Saturday. Partial weeks consisting of four or more days at the end of any month will include the remaining days of the week, which occur in the following month in order to calculate a consecutive seven-day average. This value will be reported as a weekly average or seven-day average on the MRO for the month containing the partial week of four or more days. Partial calendar weeks consisting of less than four days at the end of any month will be carried forward to the succeeding month and reported as a weekly average or a seven-day average for the calendar week that ends with the first Saturday of that month.

4. Definitions

a. Calculation of Averages

Pursuant to 327 IAC 5-2-11(a)(5), the calculation of the average of discharge data shall be determined as follows: For all parameters except fecal coliform and *E. coli*, calculations that require averaging of sample analyses or measurements of daily discharges shall use an arithmetic mean unless otherwise specified in this permit. For fecal coliform, the monthly average discharge and weekly average discharge, as concentrations, shall be calculated as a geometric mean. For *E. coli*, the monthly average discharge, as a concentration, shall be calculated as a geometric mean.

b. Terms

(1) "Monthly Average" -The monthly average discharge means the total mass or flow-weighted concentration of all daily discharges during a calendar month on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar month. The monthly average discharge limitation is the highest allowable average monthly discharge for any calendar month.

(2) "Weekly Average" - The weekly average discharge means the total mass or flow weighted concentration of all daily discharges during any calendar week for which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar week. The average weekly discharge limitation is the maximum allowable average weekly discharge for any calendar week.

(3) "Daily Maximum" - The daily maximum discharge limitation is the maximum allowable daily discharge for any calendar day. The "daily discharge" means the total mass of a pollutant discharged during the calendar day or, in the case of a pollutant limited in terms other than mass pursuant to 327 IAC 5-2-11(e), the average concentration or other measurement of the pollutant specified over the calendar day or any twenty-four hour period that represents the calendar day for purposes of sampling.

(4) "24-hour Composite" - The 24-hour Composite Sample consists of a minimum of two (2) grab samples, one collected at a time representing the daily peak flow, and the other sample collected at a time representing the average daily flow. The grab samples for the composites shall be proportioned to flow. A flow proportioned composite sample is obtained by:

(a) recording the discharge flow rate at the time each individual sample is taken,

(b) adding together the discharge flow rates recorded from each individual sampling time to formulate the "total flow value,"

(c) dividing the discharge flow rate of each individual sampling time by the total flow value to determine its percentage of the total flow value, and

(d) multiplying the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.

Alternatively, a 24-hour composite sample may be obtained by an automatic sampler on an equal time interval basis over a twenty-four hour period provided that a minimum of 24 samples are taken and combined prior to analysis. The samples do not need to be flow-proportioned if the permittee collects samples in this manner.

(5) $CBOD_5$: Five-day Carbonaceous Biochemical Oxygen Demand

(6) TSS: Total Suspended Solids

(7) *E. coli*: Escherichia coli bacteria

(8) The "Regional Administrator" is defined as the Region V Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.

(9) The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204-2251.

(10) Limit of Detection or LOD is defined as a measurement of the concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the Method Detection Level or MDL.

(11) Limit of Quantitation or LOQ is defined as a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration about the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also called the limit of quantification or quantification level.

(12) Method Detection Level or MDL is defined as the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by the procedure set forth in 40 CFR Part 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

5. Test Procedures

The analytical and sampling methods used shall conform to the current version of 40 CFR, Part 136, unless otherwise specified within this permit. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the State agency and the U.S. Environmental Protection Agency.

a. Standard Methods for the Examination of Water and Wastewater
$18^{th}$, $19^{th}$, or $20^{th}$ Editions, 1992, 1995 or 1998 American Public Health Association, Washington, D.C. 20005.

b. A.S.T.M. Standards, Part 23, Water; Atmospheric Analysis
1972 American Society for Testing and Materials, Philadelphia, PA 19103.

c. Methods for Chemical Analysis of Water and Wastes
June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

6. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record and maintain records of all monitoring information on activities under this permit, including the following information:

a. The exact place, date, and time of sampling or measurements;

b. The person(s) who performed the sampling or measurements;

c. The dates and times the analyses were performed;

d. The person(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of all required analyses and measurements.

7. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monthly Discharge Monitoring Report and on the Monthly Report of Operation form. Such increased frequency shall also be indicated on these forms. Any such additional monitoring data which indicates a violation of a permit limitation shall be followed up by the permittee, whenever feasible, with a monitoring sample obtained and analyzed pursuant to approved analytical methods. The results of the follow-up sample shall be reported to the Commissioner in the Monthly Discharge Monitoring Report.

8. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three-year period shall be extended:

a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or

b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

C. REOPENING CLAUSES

In addition to the reopening clause provisions cited at 327 IAC 5-2-16, the following reopening clauses are incorporated into this permit:

1. This permit may be modified or, alternately, revoked and reissued after public notice and opportunity for hearing to incorporate effluent limitations reflecting the results of a wasteload allocation if the Department of Environmental Management determines that such effluent limitations are needed to assure that State Water Quality Standards are met in the receiving stream.

2. This permit may be modified due to a change in sludge disposal standards pursuant to Section 405(d) of the Clean Water Act, if the standards when promulgated contain different conditions, are otherwise more stringent, or control pollutants not addressed by this permit.

3. This permit may be modified, or, alternately, revoked and reissued, to comply with any applicable effluent limitation or standard issued or approved under section 301(b)(2)(C), (D) and (E), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

   a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. controls any pollutant not limited in the permit.

4. This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing, to include a case-specific Method Detection Level (MDL). The permittee must demonstrate that such action is warranted in accordance with the procedure specified under Appendix B, 40 CFR Part 136, or approved by the Indiana Department of Environmental Management.

# PART II

## STANDARD CONDITIONS FOR NPDES PERMITS

### A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Provide Information

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the facility that:

a. could significantly change the nature of, or increase the quantity of, pollutants discharged; or

b. the Commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit a renewal of this permit in accordance with 327 IAC 5-3-2(a)(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or

operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. The application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

a. permission is requested in writing before such deadline;

b. IDEM grants permission to submit the application after the deadline; and

c. the application is received no later than the permit expiration date.

As required under 327 IAC 5-2-3(g)(1) and (2), POTWs with design influent flows equal to or greater than one million (1,000,000) gallons per day and POTWs with an approved pretreatment program or that are required to develop a pretreatment program, will be required to provide the results of whole effluent toxicity testing as part of their NPDES renewal application.

5. Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date.

b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner.

c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility.

d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

6. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge controlled by the permittee (e.g., plant closure, termination of the discharge by connecting to a POTW, a change in state law or information indicating the discharge poses a substantial threat to human health or welfare).

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

1. could significantly change the nature of, or increase the quantity of, pollutants discharged; or

2. the commissioner may request to evaluate whether such cause exists.

7. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or an invasion of rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not

preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

8. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

9. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

10. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

11. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Water Pollution Control Board is liable for a civil penalty not to exceed twenty-five thousand dollars ($25,000) per day of any violation. Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation commits a class C infraction.

Pursuant to IC 13-30-10, a person who intentionally, knowingly, or recklessly violates any provision of this permit, the water pollution control laws or a rule or standard adopted by the Water Pollution Control Board commits a class D felony punishable by the term of imprisonment established under IC 35-50-2-7(a) (up to one year), and/or by a fine of not less than five thousand dollars ($5,000) and not more than fifty thousand dollars ($50,000) per day of violation. A person convicted for a violation committed after a first conviction of such person under this provision is subject to a fine of not more than one hundred thousand dollars ($100,000) per day of violation, or by imprisonment for not more than two (2) years, or both.

12. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(9), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10, provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under a permit shall, upon conviction, be punished by a fine of not more than ten thousand dollars ($10,000) per violation, or by imprisonment for not more than one hundred eighty (180) days per violation, or by both.

13. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

14. Operator Certification

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7. The permittee shall designate one (1) person as the certified operator with complete responsibility for the proper operations of the wastewater facility.

327 IAC 5-22-10.5(a) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(11), "responsible charge" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(4), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

15. Construction Permit

Except in accordance with 327 IAC 3, the permittee shall not construct, install, or modify any water pollution treatment/control facility as defined in 327 IAC 3-1-2(24). Upon completion of any construction, the permittee must notify the Compliance Data Section of the Office of Water Quality in writing.

16. Inspection and Entry

In accordance with 327 IAC 5-2-8(7), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;

c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and

d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

17. New or Increased Discharge of Pollutants

This permit prohibits the permittee from undertaking any action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a regulated pollutant that is not a BCC unless one of the following is completed prior to the commencement of the action:

a. Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a significant lowering of water quality as defined under 327 IAC 2-1.3-2(50). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a significant lowering of water quality and require the submittal of an antidegradation demonstration.

b. An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 2-1.3-5 and 327 IAC 2-1.3-6.

B. MANAGEMENT REQUIREMENTS

1. Facility Operation, Maintenance and Quality Control

a. In accordance with 327 IAC 5-2-8(8), the permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for collection and treatment that are:

(1) installed or used by the permittee; and

(2) necessary for achieving compliance with the terms and conditions of the permit.

Neither 327 IAC 5-2-8(8), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit. Taking redundant treatment units off line does not violate the bypass provisions of the permit, provided that the permittee is at all times: maintaining in good working order and efficiently operating all facilities and systems; providing best quality effluent; and achieving compliance with the terms and conditions of the permit.

b. The permittee shall operate the permitted facility in a manner which will minimize upsets and discharges of excessive pollutants. The permittee shall properly remove and dispose of excessive solids and sludges.

c. The permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit.

d. Maintenance of all waste collection, control, treatment, and disposal facilities shall be conducted in a manner that complies with the bypass provisions set forth below.

e. Any extensions to the sewer system must continue to be constructed on a separated basis. Plans and specifications, when required, for extension of the sanitary system must be submitted to the Facility Construction and Engineering Support Section, Office of Water Quality in accordance with 327 IAC 3-2-1. There shall also be an ongoing preventative maintenance program for the sanitary sewer system.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(11):

a. Terms as defined in 327 IAC 5-2-8(11)(A):

(1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses, as defined above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II.B.2.d; or

(4) The condition under Part II.B.2.f below is met.

c. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the "Spill Response and Reporting Requirements" in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery. However, under 327 IAC 2-6.1-3(1), when the constituents of the bypass are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

d. The permittee must provide the Commissioner with the following notice:

(1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.

(2) The permittee shall orally report or fax a report of an unanticipated bypass within 24 hours of becoming aware of the bypass event. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance (i.e. the bypass) and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event. If a complete fax or email submittal is sent within 24 hours of the time that the

permittee became aware of the unanticipated bypass event, then that report will satisfy both the oral and written reporting requirement.

e. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.b. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

f. The permittee may allow any bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.b.,d and e of this permit.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(12):

a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this subsection, are met.

c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

(1) An upset occurred and the permittee has identified the specific cause(s) of the upset;

(2) The permitted facility was at the time being operated in compliance with proper operation and maintenance procedures;

(3) The permittee complied with any remedial measures required under "Duty to Mitigate", Part II.A.2; and

(4) The permittee submitted notice of the upset as required in the "Incident Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

d. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof pursuant to 40 CFR 122.41(n)(4).

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal.

a. Collected screenings, slurries, sludges, and other such pollutants shall be disposed of in accordance with provisions set forth in 329 IAC 10, 327 IAC 6.1, or another method approved by the Commissioner.

b. The permittee shall comply with existing federal regulations governing solids disposal, and with applicable provisions of 40 CFR Part 503, the federal sludge disposal regulation standards.

c. The permittee shall notify the Commissioner prior to any changes in sludge use or disposal practices.

d. The permittee shall maintain records to demonstrate its compliance with the above disposal requirements.

5. Power Failures

In accordance with 327 IAC 5-2-10 and 327 IAC 5-2-8(13) in order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

a. provide an alternative power source sufficient to operate facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit, or

b. shall halt, reduce or otherwise control all discharge in order to maintain compliance with the effluent limitations and conditions of this permit upon the reduction, loss, or failure of one or more of the primary sources of power to facilities utilized by the permittee to maintain compliance with the effluent limitations and conditions of this permit.

6. Unauthorized Discharge

Any overflow or release of sanitary wastewater from the wastewater treatment facilities or collection system that results in a discharge to waters of the state and is not specifically authorized by this permit is expressly prohibited. These discharges are subject to the reporting requirements in Part II.C.3 of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(10)(F) and 5-2-16(d), the permittee shall give notice to the Commissioner as soon as possible of any planned alterations or additions to the facility (which includes any point source) that could significantly change the nature of, or increase the quantity of, pollutants discharged. Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited. Material and substantial alterations or additions to the permittee's operation that were not covered in the permit (e.g., production changes, relocation or combination of discharge points, changes in the nature or mix of products produced) are also cause for modification of the permit. However those alterations which constitute total replacement of the process or the production equipment causing the discharge converts it into a new source, which requires the submittal of a new NPDES application.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(9), 327 IAC 5-2-13, and 327 IAC 5-2-15, monitoring results shall be reported at the intervals and in the form specified in "Data On Plant Operation", Part I.B.2.

3. Incident Reporting Requirements

Pursuant to 327 IAC 5-2-8(10) and 327 IAC 5-1-3, the permittee shall orally report to the Commissioner information on the following incidents within 24 hours from the time permittee becomes aware of such occurrence. If the incident meets the emergency criteria of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made as soon as possible, but within two (2) hours of discovery. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit;

b. Any emergency incident which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the incident by calling 317/233-7745 (888/233-7745 toll free in Indiana). This number should only be called when reporting these emergency events;

c. Any upset (as defined in Part II.B.3 above) that exceeds any technology-based effluent limitations in the permit;

d. Any release, including basement backups, from the sanitary sewer system (including satellite sewer systems operated or maintained by the permittee) not specifically authorized by this permit. Reporting of known releases from private laterals not caused by a problem in the sewer system owned or operated by the permittee is not

required under Part II.C.3, however, documentation of such events must be maintained by the permittee and available for review by IDEM staff; or

e. Any discharge from any outfall from which discharge is explicitly prohibited by this permit as well as any discharge from any other outfall or point not listed in this permit.

The permittee can make the oral reports by calling 317/232-8670 during regular business hours. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. For incidents involving effluent limit violations or discharges, the written submission shall contain: a description of the event and its cause; the period of occurrence, including exact dates and times, and, if the event has not concluded, the anticipated time it is expected to continue; and steps taken or planned to reduce, mitigate and eliminate the event and steps taken or planned to prevent its recurrence. For sewer releases which do not meet the definition of a discharge, the written submission shall contain: a description of the event and its believed cause; the period of occurrence; and any steps taken or planned to mitigate the event and steps taken or planned to prevent its recurrence. The permittee may submit a "Bypass Overflow/Incident Report" or a "Noncompliance Notification Report", whichever is applicable, to IDEM at 317/232-8637 or 317/232-8406 or to wwreports@idem.IN.gov. If a complete fax or email submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then that report will satisfy both the oral and written reporting requirements.

4. Other Noncompliance

Pursuant to 327 IAC 5-2-8(10)(D), the permittee shall report any instance of noncompliance not reported under the "Incident Reporting Requirements" in Part II.C.3 at the time the pertinent Discharge Monitoring Report is submitted. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent the noncompliance.

5. Other Information

Pursuant to 327 IAC 5-2-8(10)(E), where the permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or in any report to the Commissioner, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(14):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

(1) For a corporation: by a principal executive defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making functions for the corporation or the manager of one or more manufacturing, production, or operating facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five million dollars ($25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a federal, state, or local governmental body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

b. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The authorization is submitted to the Commissioner.

c. Certification. Any person signing a document identified under paragraphs a and b of this section, shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are

significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(14) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Progress Reports

In accordance with 327 IAC 5-2-8(10)(A), reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

10. Advance Notice for Planned Changes

In accordance with 327 IAC 5-2-8(10)(B), the permittee shall give advance notice to IDEM of any planned changes in the permitted facility, any activity, or other circumstances that the permittee has reason to believe may result in noncompliance with permit requirements.

11. Additional Requirements for POTWs and/or Treatment Works Treating Domestic Sewage

a. All POTWs shall identify, in terms of character and volume of pollutants, any significant indirect discharges into the POTW which are subject to pretreatment standards under section 307(b) and 307 (c) of the CWA.

b. All POTWs must provide adequate notice to the Commissioner of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants.

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by any source where such change would render the source subject to pretreatment standards under section 307(b) or 307(c) of the CWA or would result in a modified application of such standards.

As used in this clause, "adequate notice" includes information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of the effluent to be discharged from the POTW.

c. This permit incorporates any conditions imposed in grants made by the U.S. EPA and/or IDEM to a POTW pursuant to Sections 201 and 204 of the Clean Water Act, that are reasonably necessary for the achievement of effluent limitations required by Section 301 of the Clean Water Act.

d. This permit incorporates any requirements of Section 405 of the Clean Water Act governing the disposal of sewage sludge from POTWs or any other treatment works treating domestic sewage for any use for which rules have been established in accordance with any applicable rules.

e. POTWs must develop and submit to the Commissioner a POTW pretreatment program when required by 40 CFR 403 and 327 IAC 5-19-1, in order to assure compliance by industrial users of the POTW with applicable pretreatment standards established under Sections 307(b) and 307(c) of the Clean Water Act. The pretreatment program shall meet the criteria of 327 IAC 5-19-3 and, once approved, shall be incorporated into the POTW's NPDES permit.

D. ADDRESSES

1. Municipal NPDES Permits Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Municipal NPDES Permits Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Municipal NPDES Permits Section:

a. NPDES permit applications (new, renewal or modifications) with fee

b. Preliminary Effluent Limits request letters

c. Comment letters pertaining to draft NPDES permits

d. NPDES permit transfer of ownership requests

e. NPDES permit termination requests

f. Notifications of substantial changes to a treatment facility, including new industrial sources

g. Combined Sewer Overflow (CSO) Operational Plans

h. CSO Long Term Control Plans (LTCP)

i. Stream Reach Characterization and Evaluation Reports (SRCER)

2. Facility Construction and Engineering Support Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Facility Construction and Engineering Support Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Facility Construction and Engineering Support Section:

a. Construction permit applications with fee

3. Compliance Data Section

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Compliance Data Section
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Compliance Data Section:

a. Discharge Monitoring Reports (DMRs)

b. Monthly Reports of Operation (MROs)

c. Monthly Monitoring Reports (MMRs)

d. CSO MROs

e. Gauging station and flow meter calibration documentation

f. Compliance schedule progress reports

g. Completion of Construction notifications

h. Whole Effluent Toxicity Testing reports

i. Toxicity Reduction Evaluation (TRE) plans and progress reports

j. Bypass/Overflow Reports

k. Anticipated Bypass/Overflow Reports

l. Streamlined Mercury Variance Annual Reports

4. Pretreatment Group

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Compliance Data Section – Pretreatment Group
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

The following correspondence shall be sent to the Pretreatment Group:

a. Organic Pollutant Monitoring Reports

b. Significant Industrial User (SIU) Quarterly Noncompliance Reports

c. Pretreatment Program Annual Reports

d. Sewer Use Ordinances

e. Enforcement Response Plans (ERP)

f. Sludge analytical results

**Briefing Memo**
May 4, 2015

Helmsburg Regional Sewer District Wastewater Treatment Plant
located at 4856 Helmsburg Road, Nashville, Indiana Brown County

| | | |
|---|---|---|
| Outfall Location | Latitude: | 39° 15' 37" N |
| | Longitude: | 86° 17' 51" W |
| Treatment Plant Location | Latitude: | 39° 15' 47" N |
| | Longitude: | 86° 17' 38" W |

NPDES Permit No. IN0058416

## Background

This is the proposed renewal of the NPDES permit for the Helmsburg Regional Sewer District Wastewater Treatment Plant which was issued on October 25, 2010 and has an expiration date of October 31, 2015. The permittee submitted an application for renewal which was received on April 24, 2015. The permittee currently operates a Class I, 0.025 MGD extended aeration treatment facility consisting of a surge tank, a bar screen, an aeration tank, a final clarifier, sand filters, chlorination and dechlorination facilities, a sludge holding tank and an effluent flow meter. Final solids are hauled off site by a licensed contractor.

## Collection System

The collection system is comprised of 100% separate sanitary sewers by design with no overflow or bypass points.

## Spill Reporting Requirements

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.c. and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedences that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedence to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

## Solids Disposal

The permittee is required to dispose of its sludge in accordance with 329 IAC 10, 327 IAC 6.1, or 40 CFR Part 503.

## Receiving Stream

The facility discharges to Bean Blossom Creek via Outfall 001. The receiving water has a seven day, ten year low flow ($Q_{7,10}$) of 0 cubic feet per second at the outfall location. The receiving stream is designated for full body contact recreational use and shall be capable of supporting a well-balanced warm water aquatic community in accordance with 327 IAC 2-1.

## Industrial Contributions

There is no industrial flow to the wastewater treatment plant. This NPDES permit does not authorize the facility to accept industrial contributions until the permittee has provided the Indiana Department of Environmental Management with a characterization of the waste, including volume amounts, and this Office has determined whether effluent limitations are needed to ensure the State water quality standards are met in the receiving stream.

## Antidegradation

327 IAC 2-1.3 outlines the state's Antidegradation Standards and Implementation Procedures. The Tier 1 antidegradation standard found in 327 IAC 2-1.3-3(a) applies to all surface waters of the state regardless of their existing water quality. Based on this standard, for all surface waters of the state, existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. IDEM implements the Tier 1 antidegradation standard by requiring NPDES permits to contain effluent limits and best management practices for regulated pollutants that ensure the narrative and numeric water quality criteria applicable to the designated use are achieved in the water and any designated use of the downstream water is maintained and protected.

The Tier 2 antidegradation standard found in 327 IAC 2-1.3-3(b) applies to surface waters of the state where the existing quality for a parameter is better than the water quality criterion for that parameter established in 327 IAC 2-1-6. These surface waters are considered high quality for the parameter and this high quality shall be maintained and protected unless the commissioner finds that allowing a significant lowering of water quality is necessary and accommodates important social or economic development in the area in which the waters are located. IDEM implements the Tier 2 antidegradation standard for regulated pollutants with numeric water quality criteria quality adopted in or developed pursuant to 327 IAC 2-1 and utilizes the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6.

According to 327 IAC 2-1.3-1(b), the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6 apply to a proposed new or increased loading of a regulated pollutant to surface waters of the state from a deliberate activity subject to the Clean Water Act, including a change in process or operation that will result in a significant lowering of water quality. The NPDES permit does not propose to establish a new or increased loading of a regulated pollutant; therefore, the

Antidegradation Implementation Procedures in 327 IAC 2-1.3-5 and 2-1.3-6 do not apply to the permitted discharge.

**Effluent Limitations and Rationale**

The effluent limitations proposed herein are based on Indiana Water Quality Standards, NPDES regulations, the Small Sanitary Discharger Rule in 327 IAC 5-10-5, and a Wasteload Allocation (WLA) analysis performed by this Office's Permits Branch staff on January 18, 1995. These limits are in accordance with antibacksliding regulations specified in 327 IAC 5-2-10(11)(A). Monitoring frequencies are based upon facility size and type. The final effluent limitations to be limited and/or monitored include: Flow, Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), Total Suspended Solids (TSS), Ammonia-nitrogen ($NH_3$-N), pH, Dissolved Oxygen (DO), Total Residual Chlorine (TRC), and *Escherichia coli* (*E. coli*).

**Final Effluent Limitations**

The summer monitoring period runs from May 1 through November 30 of each year and the winter monitoring period runs from December 1 through April 30 of each year. The disinfection season runs from April 1 through October 31 of each year. The mass limits for $CBOD_5$, TSS, and ammonia-nitrogen are calculated by multiplying the average design flow (in MGD) by the corresponding concentration value and by 8.345.

Influent Monitoring

The raw influent and the wastewater from intermediate unit treatment processes, as well as the final effluent shall be sampled and analyzed for the pollutants and operational parameters specified by the applicable Monthly Report of Operation Form, as appropriate, in accordance with 327 IAC 5-2-13 and Part I.B.2 of the permit. Except where the permit specifically states otherwise, the sample frequency for the raw influent and intermediate unit treatment process shall be at a minimum the same frequency as that for the final effluent. The measurement frequencies specified in each of the tables in Part I.A. are the minimum frequencies required by the permit.

Flow

Flow is to be measured five (5) times weekly as a 24-hour total. Reporting of flow is required by 327 IAC 5-2-13.

$CBOD_5$

$CBOD_5$ is limited to 15 mg/l (3.1 lbs/day) as a monthly average and 23 mg/l (4.8 lbs/day) as a weekly average during the summer monitoring period. During the winter monitoring period, $CBOD_5$ is limited to 25 mg/l (5.2 lbs/day) as a monthly average and 40 mg/l (8.3 lbs/day) as a weekly average. The permit requires a monthly average percent removal of not less than 85%. The percent removal is to be calculated from a comparison of raw influent to final effluent sampling results and is to be reported as a monthly average. Monitoring is to be conducted weekly by grab

sampling. The $CBOD_5$ concentration limitations included in this permit are set in accordance with the Small Sanitary Discharger Rule in 327 IAC 5-10-5 and are the same as the concentration limitations found in the facility's previous permit. The 85% removal requirement is included in accordance with 40 CFR 133.102 and is a new requirement for this facility.

TSS

TSS is limited to 18 mg/l (3.8 lbs/day) as a monthly average and 27 mg/l (5.6 lbs/day) as a weekly average during the summer monitoring period. During the winter monitoring period, TSS is limited to 30 mg/l (6.3 lbs/day) as a monthly average and 45 mg/l (9.4 lbs/day) as a weekly average. The permit requires a monthly average percent removal of not less than 85%. The percent removal is to be calculated from a comparison of raw influent to final effluent sampling results and is to be reported as a monthly average. Monitoring is to be conducted weekly by grab sampling. The TSS concentration limitations included in this permit are set in accordance with the Small Sanitary Discharger Rule in 327 IAC 5-10-5 and are the same as the concentration limitations found in the facility's previous permit. The 85% removal requirement is included in accordance with 40 CFR 133.102 and is a new requirement for this facility.

Ammonia-nitrogen

Ammonia-nitrogen is limited to 1.3 mg/l (0.27 lbs/day) as a monthly average and 1.9 mg/l (0.40 lbs/day) as a weekly average during the summer monitoring period. During the winter monitoring period, ammonia-nitrogen is limited to 1.9 mg/l (0.40 lbs/day) as a monthly average and 2.9 mg/l (0.61 lbs/day) as a weekly average. Monitoring is to be conducted weekly by grab sampling. The ammonia-nitrogen concentration limitations included in this permit are set in accordance with the Wasteload Allocation (WLA) analysis performed by this Office's Permits Branch staff on January 18, 1995 and with antibacksliding regulations specified in 327 IAC 5-2-10(11)(A). These limitations are the same as the concentration limitations found in the facility's previous permit.

pH

The pH limitations have been based on 40 CFR 133.102 which is cross-referenced in 327 IAC 5-5-3. To ensure conditions necessary for the maintenance of a well-balanced aquatic community, the pH of the final effluent must be between 6.0 and 9.0 standard units in accordance with provisions in 327 IAC 2-1-6(b)(2). pH must be measured two (2) times weekly by grab sampling. These pH limitations are the same as the limitations found in the facility's previous permit

Dissolved Oxygen

Dissolved oxygen shall not fall below 6.0 mg/l as a daily minimum average during the summer monitoring period. During the winter monitoring period, dissolved oxygen shall not fall below 5.0 mg/l as a daily minimum average. These dissolved oxygen limitations are based on the Small Sanitary Discharger Rule in 327 IAC 5-10-5 and are the same as the concentration limitations found

in the facility's previous permit. Dissolved oxygen measurements must be based on the average of two (2) grab samples taken within a 24-hr. period. This monitoring is to be conducted two (2) times weekly.

Total Residual Chlorine

Disinfection of the effluent is required from April 1 through October 31, annually. The chlorine residual shall be maintained at a concentration not less than 0.5 mg/l as measured at the effluent end of the chlorine contact tank for the term of the permit. The daily maximum chlorine residual value at the chlorine contact tank shall also be reported. Effluent dechlorination will be required in order to protect aquatic life. In accordance with Indiana Water Quality Standards, the final effluent limits (end-of-pipe) for TRC are 0.01 mg/l monthly average and 0.02 mg/l daily maximum. Compliance will be demonstrated if the observed effluent concentrations are less than the limit of quantitation (0.06 mg/l). Disinfection requirements are established in 327 IAC 5-10-6. This monitoring is to be conducted two (2) times weekly by grab sampling.

*E. coli*

The *E. coli* limitations and monitoring requirements apply from April 1 through October 31, annually. *E. coli* is limited to 125 count/100 ml as a monthly average, and 235 count/100 ml as a daily maximum. The monthly average *E. coli* value shall be calculated as a geometric mean. This monitoring is to be conducted weekly by grab sampling. These *E. coli* limitations are set in accordance with regulations specified in 327 IAC 5-10-6.

**Backsliding**

None of the concentration limits included in this permit conflict with antibacksliding regulations found in 327 IAC 5-2-10(11)(A), therefore, backsliding is not an issue.

**Reopening Clauses**

Four reopening clauses were incorporated into the permit in Part I.C. One clause is to incorporate effluent limits from any further wasteload allocations performed; a second clause is to allow for changes in the sludge disposal standards; a third clause is to incorporate any applicable effluent limitation or standard issued or approved under section 301(b)(2)(C), (D) and (E), 304(b)(2), and 307(a)(2) of the Clean Water Act; and a fourth clause is to include a case-specific Method Detection Level (MDL).

**Compliance Status**

The permittee has no enforcement actions at the time of this permit preparation.

**Expiration Date**

A five-year NPDES permit is proposed.

Drafted by: John Donnellan
May 5, 2015

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PUBLIC NOTICE NO: 2015 – 8E – F
DATE OF NOTICE: AUGUST 26, 2015

**The Office of Water Quality issues the following NPDES FINAL PERMIT.**

**MINOR - RENEWAL**

**HELMSBURG (town) WWTP,** Permit No. IN0058416, BROWN COUNTY, 4856 Helmsburg Rd, Nashville, IN. This municipal facility discharges 0.025 million gallons daily of sanitary wastewater into Bean Blossom Creek. Contact Permit Manager: John Donnellan, 317/234-0865, jdonnell@idem.in.gov.

## APPEAL PROCEDURES FOR FINAL PERMITS

The Final Permit is available for review & copies at IDEM, Indiana Government Center, North Bldg, 100 N Senate Ave, Indianapolis, IN, Rm 1203, Office of Water Quality/NPDES Permit Section, from 9 – 4, M - F (copies 10¢ per page) and the local County Health Department. See tthese sites for your rights & responsibilities: Public Participation: http://www.in.gov/idem/5474.htm; Citizen Guide: http://www.in.gov/idem/5903.htm. **Please tell others you think would be interested in this matter**

**Appeal Procedure:** Any person affected by the issuance of the Final Permit may appeal by filing a Petition for Administrative Review with the Office of Environmental Adjudication **within** eighteen (18) days of the date of this Public Notice. Any appeal request must be filed in accordance with IC 4-21.5-3-7 and must include facts demonstrating that the party requesting appeal is the applicant; a person aggrieved or adversely affected or is otherwise entitled to review by law.
**Timely filing:** The Petition for Administrative Review must be received by the Office of Environmental Adjudication (OEA) **within** 18 days of the date of this Public Notice; either by U.S. Mail postmark or by private carrier with dated receipt. This Petition for Administrative Review represents a request for an Adjudicatory Hearing, therefore must:

- state the name and address of the person making the request;
- identify the interest of the person making the request;
- identify any persons represented by the person making the request;
- state specifically the reasons for the request;
- state specifically the issues proposed for consideration at the hearing;
- identify the Final Permit Rule terms and conditions which, in the judgment of the person making the request, would be appropriate to satisfy the requirements of the law governing this NPDES Permit rule.

If the person filing the Petition for Administrative Review desires any part of the NPDES Final Permit Rule to be stayed pending the outcome of the appeal, a Petition for Stay must be included in the appeal request, identifying those parts to be stayed. Both Petitions shall be mailed or delivered to the address here: **Phone: 317/232-8591.**

Environmental Law Judge
Office of Environmental Adjudication
IGC – North Building- Rm 501
100 N. Senate Avenue
Indianapolis IN 46204

**Stay Time frame:** If the Petition (s) is filed **within** eighteen (18) days of the mailing of this Public Notice, the effective date of any part of the permit, within the scope of the Petition for Stay is suspended for fifteen (15) days. The Permit will become effective again upon expiration of the fifteen (15) days, unless or until an Environmental Law Judge stays the permit action in whole or in part.

**Hearing Notification:** Pursuant to Indiana Code, when a written request is submitted, the OEA will provide the petitioner or any person wanting notification, with the Notice of pre-hearing conferences, preliminary hearings, hearing stays or orders disposing of the Petition for Administrative Review. Petition for Administrative Review must be filed in compliance with the procedures and time frames outlined above. Procedural or scheduling questions should be directed to the OEA at the phone listed above.

I. **NAME OF FACILITY** Helmsburg Regional Sewer Dist.

II. **CURRENT NPDES PERMIT NUMBER** IN00 58416 (New applicants will be assigned a number later.)

III. **MAILING ADDRESS**

Address: P O Box 147

City: Helmsburg State: In ZIP: 47435

IV. **OWNER OR LEGALLY RESPONSIBLE PARTY (TOWN BOARD/COUNCIL PRESIDENT, MAYOR, SUPERINTENDENT)**

Name: JEFF KLENER Title: CHAIRMAN

Address: 2954 S. CONSERVATION CLUB RD

City: MORGANTOWN State: IN ZIP: 46160

E-mail address: Telephone number: (317) 407-6064

V. **WASTEWATER TREATMENT PLANT CERTIFIED OPERATOR**

Name: Robin Willey Certification number: WW016158

Classification: Class II

Address: 5394 S Gravel Creek Ln.

City: Nashville State: In ZIP: 47448

E-mail address: rwilley82@yahoo.com Work telephone number: (812) 322-2954

VI. **RESIDENT MANAGER OR PERSON IN CHARGE ON SITE**

Name: Robin Willey

Address: 5394 S Gravel Creek Ln

City: Nashville State: In ZIP: 47448

E-mail address: Telephone number: (812) 322-2954

VII. **CONSULTANT / ENGINEER:** ***(IF APPLICABLE)***

Name: Company:

Address:

City: State: ZIP:

E-mail address: Telephone number: ( ) -

**NPDES SEMI PUBLIC AND MINOR MUNICIPAL PERMIT APPLICATION**

NAME OF FACILITY: Helmsburg Regional Sewer Dist NPDES PERMIT NUMBER: IN00 58416

1. Facility Type:
   ☐ Semi-Public ☑ Minor Municipal ☐ State Owned ☐ Federally Owned

2. Type of Permit Action Requested:
   ☐ New ☑ Renewal ☐ Modification

3. If Facility has an Existing Permit:
   Date of Issuance (*month/day/year*): 08/17/2010 Date of Expiration (*month/day/year*): 08/17/2015

4. **Facility Location:** List the actual physical location of the plant so that a person who has never been there can pinpoint it on a map. The description should include street names and addresses, county road numbers, and/or U.S. Geological Survey quadrangle name, section, township and range when applicable.

   Address: 4856 Helmsburg Rd.

   City: Nashville State: IN ZIP: 47448 County: Brown

   IN ST Rd 45 W To Helmsburg, Turn LEFT on To Helmsburg Rd Cross Railroad Tracks First Drive To The Right

5. **Facility Capacity:** Please answer the following questions in million gallons per day (MGD):
   Average Design Flow .025 mgd Average Flow .003 mgd Maximum Flow .013 mgd

6. **Collection System:** (*check one of the following*)
   ☑ 100 % Sanitary Sewers ☐ Combined Storm and Sanitary Sewers
   If combined, what percentage of collection system is combined? ____%

7. Does the treatment system contain any bypass points? ☐Yes ☑ No

   If Yes, provide the bypass ID number(s) and corresponding location(s). (*Attach additional sheets, if necessary.*)

   ID number:_____ Location:_____
   Receiving Stream:_____
   ID number:_____ Location:_____
   Receiving Stream:_____
   ID number:_____ Location:_____
   Receiving Stream:_____

NPDES PERMIT NUMBER: IN00 584/6

8. Does the treatment system contain any overflow points? ☐ Yes ☑ No

If Yes, provide the bypass ID number(s) and corresponding location(s). (*Attach additional sheets, if necessary.*)

ID number:_____ Location:_____
Latitude/Longitude:_____
Receiving Stream:_____
ID number:_____ Location:_____
Latitude/Longitude:_____
Receiving Stream:_____

9. **Facility Outfalls:**
Number of separate plant outfalls (other than bypass or overflow points): 1

List all separate plant outfalls below: (*Attach additional sheets, if necessary.*)

ID number: 001 Location: at Location
Latitude/Longitude: Latitude 39° 15' 37" N, Longitude 86° 17' 51" W
Receiving Stream: Bean Blossom Creek
ID number:_____ Location:_____
Latitude/Longitude:_____
Receiving Stream:_____

10. Does the facility discharge within two (2) miles upstream of a lake, reservoir, or sinkhole?
☐ Yes ☑ No If Yes, name of lake, reservoir, or sinkhole_____

11. Does the facility discharge within forty (40) miles upstream of a lake or reservoir?
☑ Yes ☐ No If Yes, name of lake, reservoir, or sinkhole Lake Lemon

12. What is the distance from this facility to the nearest publicly-owned treatment works? 7 Miles
What is the name of this facility? Town of Nashville

13. **Receiving Stream:**
Name of receiving stream: (*If the immediate receiving stream is an unnamed ditch, swale, or field tile, so specify, but also give the name of the stream to which it is tributary.*) Bean Blossom Creek

14. **Waste Contributors:**
Both Municipal and Non-Municipal:
List any industrial process water contributors:_____
Percentage of flow due to industry:____%
Does the discharge contain or have the potential to contain the following? (*Check all that apply.*)
☐ Al ☐ Cd ☐ Cr ☐ Cu ☐ Pb ☐ Hg ☐ Zn ☐ CN ☐ Ni ☐ Phenols
Others:_____

15. **Municipal:**
Population Served: 618 Population Equivalent:_____

NPDES PERMIT NUMBER: IN00 58416

16. **Semi-Public:** (*Enter the number of customers currently served by the facility.*)
Number of students: K thru 6 225 Higher grades:_____
Number of mobile home units: 0 Number of campground lots, or motel units: 0
Beds: (*If facility serves as a nursing home, hospital, etc.*) 0
Commercial Establishments:_____

17. **Treatment Description:**
Type of Treatment:
☐ Primary ☑ Secondary ☐ Advanced

18. Is your facility designed to operate as a controlled discharger? ☐ Yes ☑ No

19. **Treatment Processes:** (*Check all that apply.*)

| | | |
|---|---|---|
| ☐ Regular Activated Sludge | ☐ Rotating Biological Contactors | ☐ Anaerobic Digestion |
| ☐ Two Day Lagoon | ☑ Extended Aeration | ☑ Aerobic Digestion |
| ☐ Phosphorus Removal | ☐ Oxidation Ditch | ☐ Nitrification |
| ☑ Rapid Sand Filter | ☐ Sequential Batch Reactor | ☐ Aerated Lagoons |
| ☐ Microstrainer | ☐ Post Aeration | ☐ Trickling Filter |
| ☐ Waste Stabilization Lagoon | ☐ Flow Equalization | ☑ Flow Meter |
| ☐ Septic Tank | ☐ Constructed Wetland | |

☐ If other processes are used, please check and explain as part of the facility description in item 24.

20. **Disinfection:**
☑ Chlorination Type/Method: EIC Tablet Feeder
☑ Dechlorination Type/Method: EIC Tablet Feeder
☐ Ultra-violet Light If ultra-violet light is used, is a UV light intensity meter installed? ☐ Yes ☐ No
☐ Other Method: (*Please explain.*)_____

21. **Sludge Handling/Disposal:**
**Handling:** (*Check all that apply.*)
☐ Sludge Thickener ☐ Sludge Drying Beds ☐ Belt Dryer ☐ Sludge Lagoons ☐ Composting
Other types of Dewatering: (*Please explain.*)_____

22. **Disposal:** (*Check all that apply.*)
☐ Land Application Liquid Permit Number_____ ☐ Land Application Dried Permit Number_____
☐ Landfill ☐ Incineration ☐ Stockpile ☑ Hauling (*hauler name*) Reed Septic
Other:_____

NPDES PERMIT NUMBER: IN00 584/6

**23. Facility Construction/Modification:**

Is the facility proposing any new construction or facility modification at this time?

☐ Yes ☑ No

*If Yes, describe in detail the nature of the construction including proposed time tables, IDEM Construction Permit Approval Number, and date of construction approval:*

**24. Facility Description:**

Provide a narrative description of the wastewater treatment facility detailing equipment and plant layout. Providing a separate, detailed flow diagram or design summary is also recommended.

WASTEWATER ENTERS SURGE TANKS, THEN 2 PUMPS SEND WASTEWATER THROUGH A STAINLESS STEEL DIVIDER BOX INTO AN AERATION TANK FROM THERE MIXED LIQUOR FLOWS INTO CLARIFIER EQUIPED WITH 2 SLUDGE RETURN AIR PUMPS AND 1 AIR PUMP SKIMMER. CLEAR WATER LEAVES CLARIFIER (TO CHLORINATION) THROUGH 2 SAND FILTER TANKS. AFTER CHLORINATION FINAL WATER PASSES THROUGH AERATION THEN EXITS THROUGH DECHLORINATION

**Signature Block:**

This application **must** be signed by a person in responsible charge (such as the owner, partner, a corporate officer, school board president, school superintendent, etc.) to be valid. This signature, attests to the following:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information to be true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|---|---|
| JEFF KRAMER | CHAIRMAN |
| (Printed Name of Person Signing) | (Title) |
| 4-20-15 | |
| (Date of Application) (*month/day/year*) | (Signature of Applicant) |

**Return Completed Application, Fee and Associated Materials to:**

Indiana Department of Environmental Management
Office of Water Quality – Mail Code 65-42
Municipal NPDES Permits Section
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

## IDENTIFICATION OF POTENTIALLY AFFECTED PERSONS

Please list here any and all persons whom you have reason to believe have a substantial or proprietary interest in this matter, or could otherwise be considered to be potentially affected under the law. Failure to notify any person who is later determined to be potentially affected could result in voiding our decision on procedural grounds. To ensure conformance with Administrative Orders and Procedures Act (AOPA) and to avoid reversal of a decision, please list all such parties. The letter attached to this form will further explain the requirements under the AOPA. Attach additional names and addresses on a separate sheet of paper, as needed. Please indicate below the type of action you are requesting.

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

Name _____
Street _____
City, State, and ZIP _____

---

Please complete this form by signing the following statement:
I certify that to the best of my knowledge I have listed all potentially affected parties, as defined by IC 4-21.5.

Signature Robin Willey Date (*month/day/year*) 05/19/2015

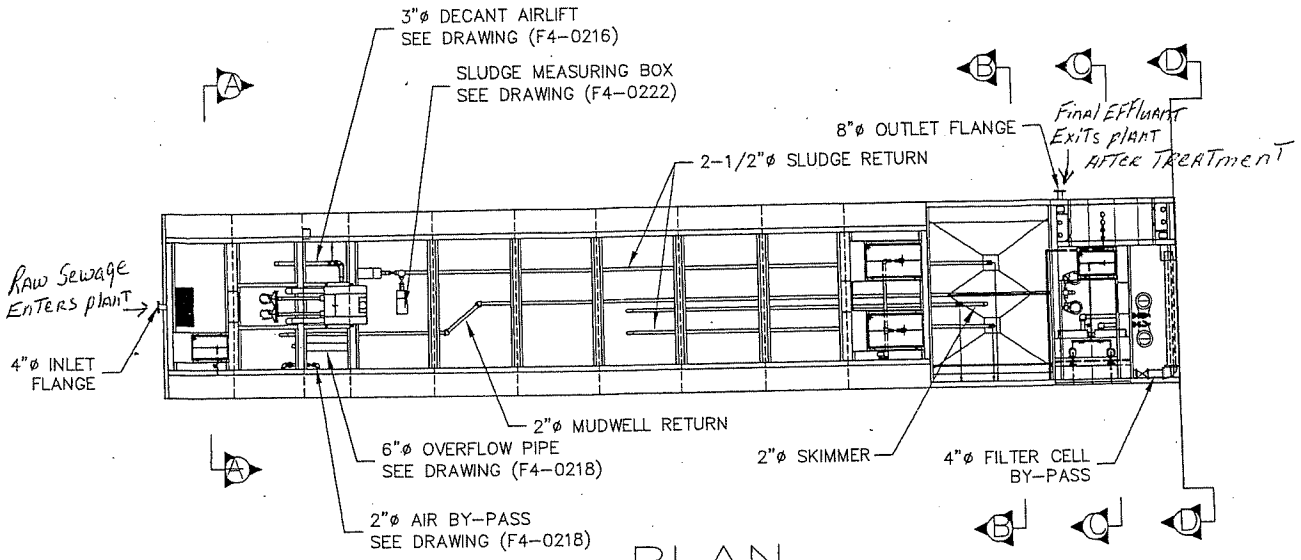
Printed Name Robin willey

Facility Name Helmsburg Sewer Dist.
Address 4856 Helmsburg rd
Nashville IN 47448

**Type of Action**: (check one)
☑ NPDES Permit-327 IAC 5
☐ Land Application Permit-327 IAC 6.1
☐ Confined Feeding Approval-IC 13-18-10
☐ Sewer Ban Waiver Request-327 IAC 4
☐ Operator Certification-327 IAC 5-22
☐ Pretreatment Permit -327 IAC 5
☐ Construction Permit-327 IAC 3

**If Fee Is Required, Return To: (include NPDES permit number on check)**
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Cashiers Office – Mail Code 50-10C
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

**If No Fee Is Required, Return To:**
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Water Quality – Mail Code 65-42
Municipal Permit Section
100 North Senate Avenue
Indianapolis, Indiana 46204-2251




PLAN



| REV | NAME | DATE | DESCRIPTION | APPR. |
|---|---|---|---|---|
| A | BWJ | 3-10-96 | LOCATION OF PA DIFFUSER | |

DESCRIPTION: MAIN PIPING LAYOUT

MAT'L:

APPROVED BY:

DATE: 2-12-96

SCALE: 3/32"=1'-0"

DRAWN BY: B. JEANDREVIN

PROJECT #: 95-36

PROJECT: HELMSBURG W.W.T.P
BROWN COUNTY, INDIANA

HYDRO-AEROBICS
PACKAGE WASTEWATER TREATMENT SYSTEMS
Hydro-Aerobics, Inc.
1615 State Route 131
Milford, Ohio 45150 U.S.A.
Telephone (513) 575-2800
Facsimile (513) 575-2806

SHEET: 1 OF 1

DRAWING #: F4-0109

# EXHIBIT 4
# HELMSBURG
# DESIGN SUMMARY

11-28-95
#9206
Helmsburg
DSP

Checklist for Construction Project
Design Summary

1. Applicant: Helmsburg Regional Sewer District

2. Project Name and Location: Div. A - Low Pressure Collection System
Div. B - Wastewater Treatment Plant
Helmsburg

3. Project Number: P-7695

4. Engineer (Consultant): SANCO Engineering and Associates, Inc.

5. NPDES Permit Number; WLA letter dated February 10, 1995

6. Remarks: IN0058416

   A. Description of Present Situation: Failing septic systems

   B. Description of Proposed Facilities: It is proposed to install a 0.025 MGD extended aeration package plant with rapid sand filtration, chlorination/dechlorination and post aeration facility. Also, it is proposed to install a low pressure force main and 59 individual grinder pumps each with a capacity of 11 GPM at 92 feet TDH.

7. Estimated Project Cost: $614,000

## II. DESIGN DATA

1. Current Population: 176

2. Design Year and Population: 2015 and 200

3. Design P.E.: 208

4. Design Flow:

   A. Domestic: 24,500 gpd

   B. Industrial/Commercial: 500 gpd

   C. Infiltration/Inflow: 0 Pressure System

5. Average Design Peak Flow: 110,880 gpd (hourly rate)

6. Maximum Plant Flow Capacity: 86,400 gpd

7. Design Waste Strength:

   A. CBOD: 200 mg/l
   B. TSS; 200 mg/l
   C. $NH_3$-N: 25 mg/l

8. NPDES Permit Limitation on Effluent Quality:

| | | Summer | Winter |
|---|---|---|---|
| A. | CBOD: | 15 mg/l | 25 mg/l |
| B. | SS: | 18 mg/l | 30 mg/l |
| C. | $NH_3$-N: | 1.3 mg/l | 1.9 mg/l |
| D. | Chlorine Residual | < .05 mg/l | |
| E. | pH: | 6.0 to 9.0 | |
| F. | D.O. | 6.0 mg/l | 5.0 mg/l |

9. Receiving Stream:

   A. Name: Bean Blossom Creek

   B. Tributary to: Lake Lemon

   C. Stream Uses: Recreational, partial body contact

   D. 7-day, 1-in-10 year low flow: 0.0 cfs

## III. TREATMENT UNITS

Flow Equalization

1. Number and size of units: 1 unit 11 t. - 11.91 Ft x 9.25 Ft x 9.5 Ft SWD 7,500 gallons

2. Method of flow diversion to unit: In-line

3. Air and mixing provided: Yes 1 - 1 horsepower blower rated at 20 cfm at 5 PSI

4. Method and control of flow return: 2 - Submersible pumps rated at 30 GPM at 15 feet TDH each

5. Method of sludge removal: Drain piping

Flow Meters:

1. Type: 1-inch Parshall Flume with Ultra Sonic Meter
2. Location: Effluent metering manhole
3. Indicating, Recording and Totalizing: Yes

Screens

1. Type: Coarse bar
2. Number and Capacity: 1 and 100,000 gpd
3. Bar Spacing and Slope: 1-inch and 45°
4. Method of Cleaning: Manual
5. Disposal of Screenings: Dumpster

Activated Sludge

1. Type of Activated Sludge Process: Extended aeration with single stage nitrification.
2. Number and Size of Units: 1 unit 37.75' x 11.91' x 9.5' SWD
   31,250 gallons or 4,178 C.F.
3. Detention Time (Hours): 30 hours
4. Organic Loading (lb BOD/1,000 cf): 9.78 lb BOD/1,000 cf
5. Type of Aeration Equipment: Coarse bubble
6. Type and Size of Blowers: 2 blowers 5 horsepower each and rated at 150 cfm at 5 PSI each
7. Air Required (Itemize, CFM):

| | |
|---|---|
| BOD | 34.0 cfm |
| $NH_3$-N | 13.2 cfm |
| Airlifts | 10.0 cfm |
| Post Air | 10.0 cfm |

| | |
|---|---|
| Sludge Holding | 10.2 cfm |
| TOTAL | 77.4 cfm |

8. Provision for Speed Adjustment: Belt and sheeve

9. Air Provided: 150 cfm with largest blower out of service

10. Number and Capacity of return Sludge Pump: 2 - 2 1/2 inch airlifts, 0 to 26 gpm capacity each

11. Method of Return Sludge Rate Control: Air valves

12. Return Sludge Rate as % of Design Flow: 0% to 150%

13. Provisions for Return Rate Metering: Sludge metering box

14. Location of Return Sludge Discharge: Aeration tank

Secondary Clarifiers:

1. Type of Clarifiers: Dual Hopper Clarifier

2. Number and Size of Units: 1 unit - 11.91' W x 8' L x 7.75' SWD
5,320 gallon clear water zone
1,545 gallon sludge blanket capacity

3. Surface Settling Rate (GPD/SF):

| | | |
|---|---|---|
| A. | at the design flow: | 262 gpd/sf |
| B. | at the equalized flow: | 452 gpd/sf |
| C. | at the peak influent pumping rate | 904 gpd/sf |

4. Detention Time (Hours): 5.1 hours

5. Type of Sludge Removal Mechanism: 2 - 2 1/2 inch airlifts

6. Weir Overflow Rate: 3,125 gpd/lf

7. Disposal of scum: Aeration tank

Rapid Sand Filtration

1. Number and Size of Filters: 2 filter cells 5 ft. x 3.5 ft. x 6 ft. depth each
8.68 sf filter area each

2. Filtration Rate:

   A. at the peak flow rate: 3.4 gpm/sf
   B. at average flow rate: 1.0 gpm/sf

3. Type, Depth, and Grain Size of Filter Media: Sand, 8", 0.80 to 1.20 MM
   Anthracite, 12", 1.08 MM

4. Backwash Rate: 10.25 gpm/sf

5. Air Scour: Provided 20 cfm at 4 PSI

6. Capability to Chlorinate Ahead of the Filter: No

7. Backwash Pumps (Number and Capacity): 2 pump, 1 horsepower each
   89 gpm at 17 ft. TDH each

8. Source and Capacity of Backwash Water: Source: Sand filter filtrate
   Size of Clearwell: 8.92 ft. x 3 ft. x 6.5 depth, 1,303 gallons

9. Holding Capacity of Dirty Water Tank: 1,368 gallons

10. Facilities for Unit Isolation: Yes

Post-Aeration

1. Type of Aeration: Coarse bubble diffuser

2. Number of Units: 1 unit

3. Size of Units: 3 ft. x 1 ft. x 5 ft. 4" SWD, 120 gallons

4. Aeration Provided: 10 cfm

5. Expected Effluent D.O.: 6 mg/l

Disinfection

1. Type of Disinfection Used: Chlorine tablets

2. Size of Contact Tank: 521 gallons
   3 ft. x 3.8 ft. x 6 ft. depth

4. Contact Time: 30 min. at average flow rate

18 min. at equalized flow rate

5. Capacity of the Feeders: 50,000 gpd

6. Disinfectant Dosage: 8 mg/l

7. Drain for Tank: Yes

Dechlorination

1. Chemical used: Sodium bisulfite

2. Type of Feeders: Tablet

3. Capacity of Feeders: 50,000 gpd

4. Dosage: 1.46 mg/l per 1 mg/l chlorine residual

5. Diffuser Location: Effluent end of chlorine contact tank

6. Equipment Location: In-line mounted

Sludge Holding Tank:

1. Number and Size of Units: 1 unit - 11.91' x 3 ft. x 9.5 ft. SWD
340 cf or 2,500 gallons

2. Detention Time: 19 day SRT

3. Organic Loading: 61.18 lbs. VSS/1,000 cf

4. Air Supply: 10.2 cfm

5. Decanting Method: Overflow pipe

Sludge Disposal

1. Ultimate Disposal Method of Sludge: Nashville, Indiana WWTP

2. Expected Solids Content of Sludge (by the Principal Method of Disposal): 3%

3. Availability of Sludge Transport Equipment: Local septic hauler

## IV. SEWER COLLECTION SYSTEM

Sewer

1. Type of Sewer Material: PVC SDR 21 low pressure force main

2. Diameter and Length of Sewer (Indicate Length for Each Size):

| Size | Length |
|---|---|
| 1.25" | 1,428 L.F. |
| 1.50" | 1,189 L.F. |
| 2.00" | 2,189 L.F. |
| 2.50" | 1,119 L.F. |
| 3.00" | 1,792 L.F. |
| 4.00" | 1,110 L.F. |
| 8.00" (Outfall) | 1,792 L.F. |

3. Stream, Highway, and Railroad Crossing: 1 - Highway Crossing
   1 - Railroad Crossing

4. Separation of Combined Sewer or New Sewer: New sewers

5. Number of manholes: 5 manholes, 1 metering manhole

6. Water main protection: 10 feet horizontal separation, 18-inch vertical separation

Individual Grinder Pumps

1. Location: As shown on the plans

2. Number of Pumps: 59

3. Capacity of Pumps: 11 GPM at 92 feet TDH

4. RPM and TDH: 1,725 RPM

5. Volume of the Wet Well: 23.5 gallons

6. A Gate Valve and a Check Valve in the Discharge Line: Yes

7. Ventilation: Yes

8. Alarm: Visual

## V. MISCELLANEOUS

A. Laboratory Equipment: (Contracted)

B. Safety Equipment: Yes

C. Plant Site Fence: Yes

D. Handrail for the Tanks: Yes

E. Units, Unit Operation and Plant Bypasses: Unit bypass only

F. Flood Elevation (10, 25, or 100 year flood): 657 MSL (100 year)

G. Consistency with EPA Reliability Technical Bulletin: Yes

H. Standby Power Equipment: Yes

I. Site Inspection: Sanco Engineering & Associates, Inc.

J. Statement in the Specifications as to the Protection Against any Adverse Environmental Effect (e.g., Dust, Noise, Soil Erosion) During Construction: Yes

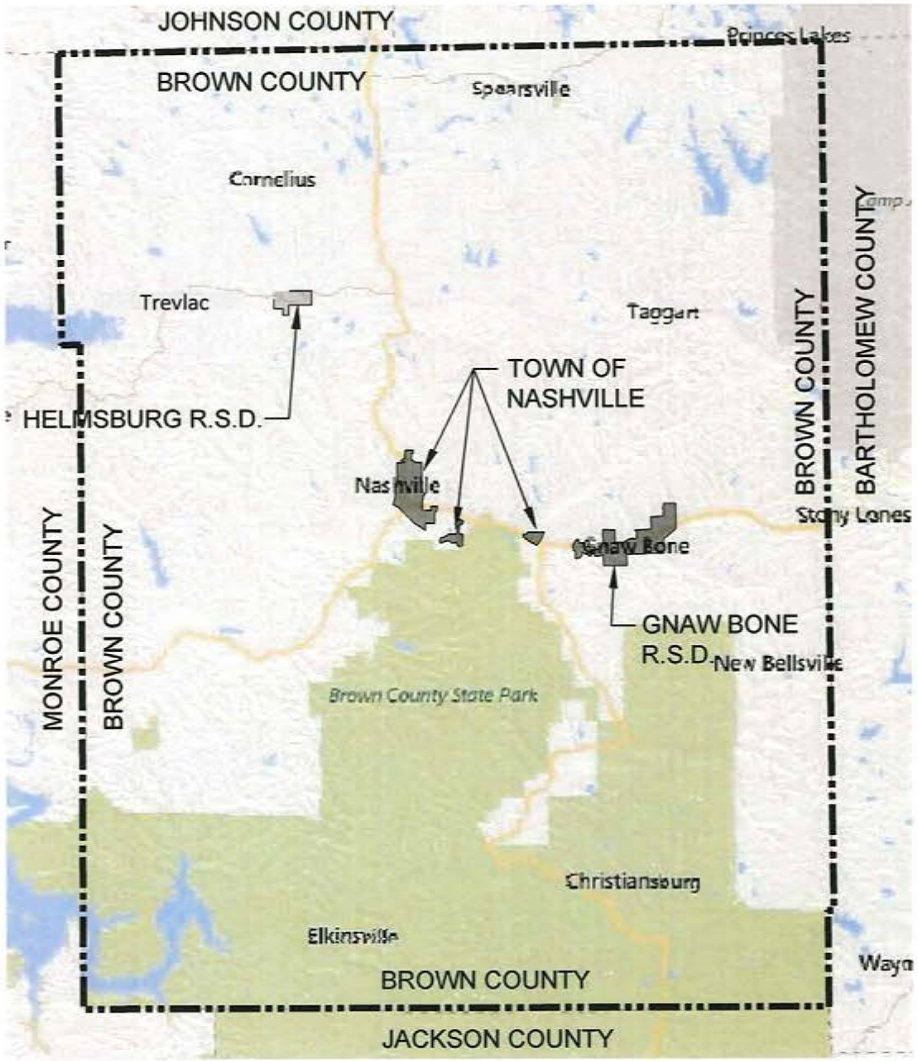
K. Hoists for Removing Heavy Equipment: No

L. Adequate Sampling Facilities: Yes

M. Hydraulic Gradient: Provided

9206S

# EXHIBIT 5
# FIGURES




BROWN COUNTY R.S.D. DESCRIPTION:

ALL OF BROWN COUNTY EXCEPT GNAW BONE R.S.D., HELMSBURG R.S.D., AND TOWN OF NASHVILLE.

0 4 MI. 8 MI.

SCALE: 1" = 4 MILES

# BROWN COUNTY R.S.D. BOUNDARY MAP

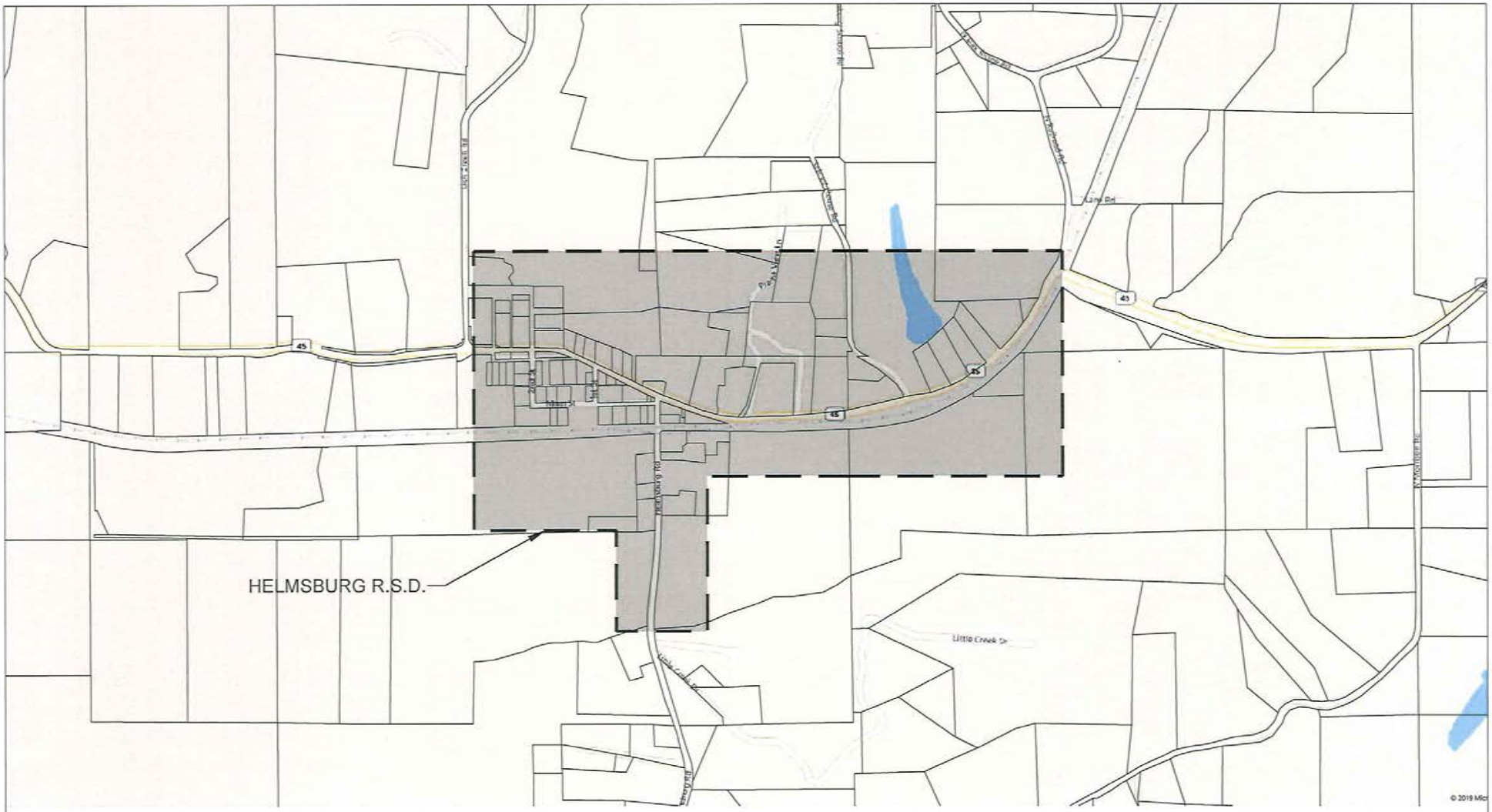
REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

engineering | architecture | geospatial
www.grwinc.com



| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 4 MILES |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 1-1 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures.dwg




0 1000' 2000'

SCALE: 1" = 1000'

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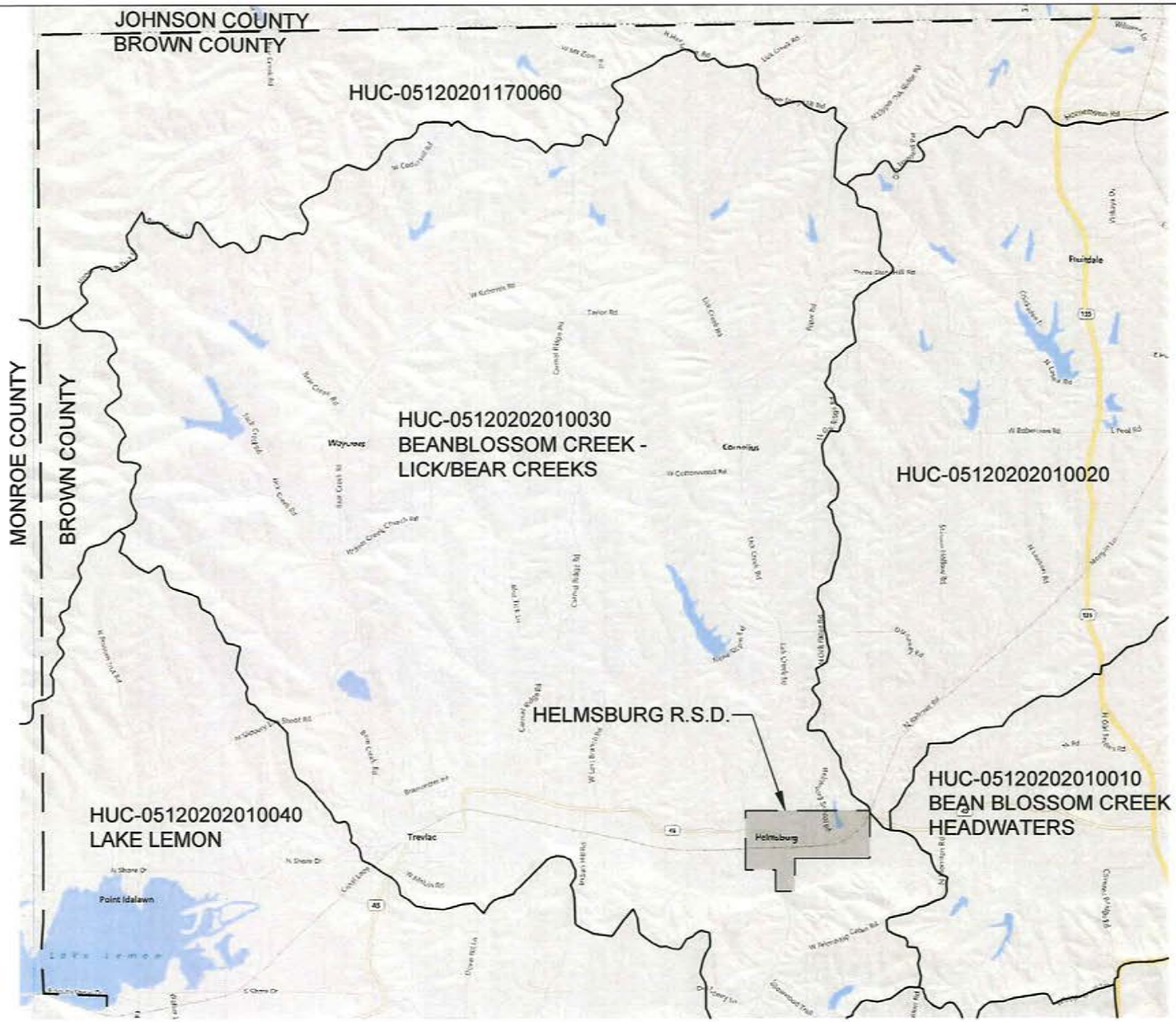
# HELMSBURG R.S.D. BOUNDARY MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: NOV. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: ELM | FIGURE NO. 1-2 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: ELM | |

FILE NAME: G:\4826\Helmsburg FM\Reports and Manuals\4826 PER Figures.dwg




0 1 MI. 2 MI.

SCALE: 1" = ONE MILE

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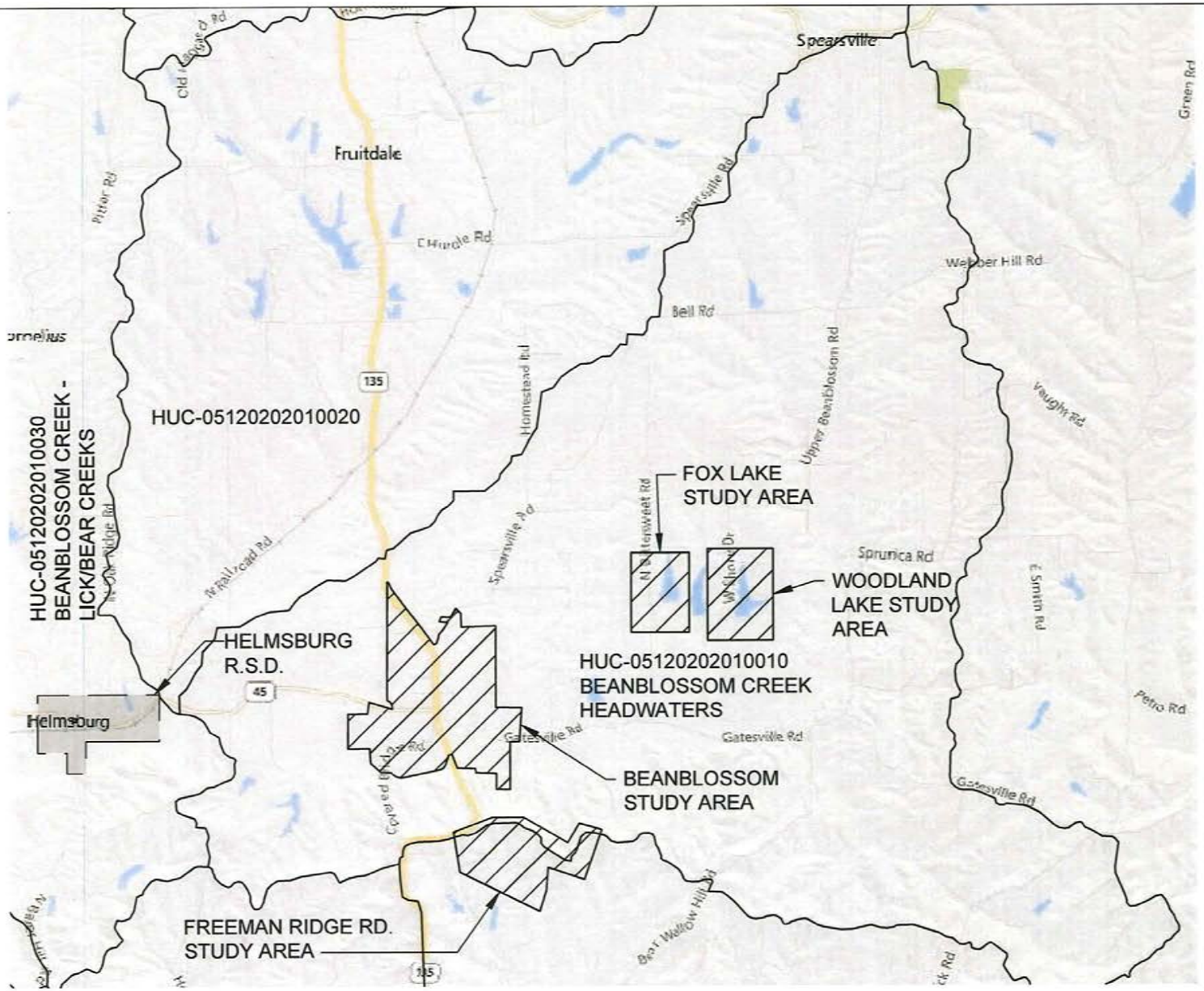
# BEANBLOSSOM CREEK - LICK/BEAR CREEKS WATERSHED

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = ONE MILE |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 1-3 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures.dwg




0 1 MI. 2 MI.

SCALE: 1" = ONE MILE

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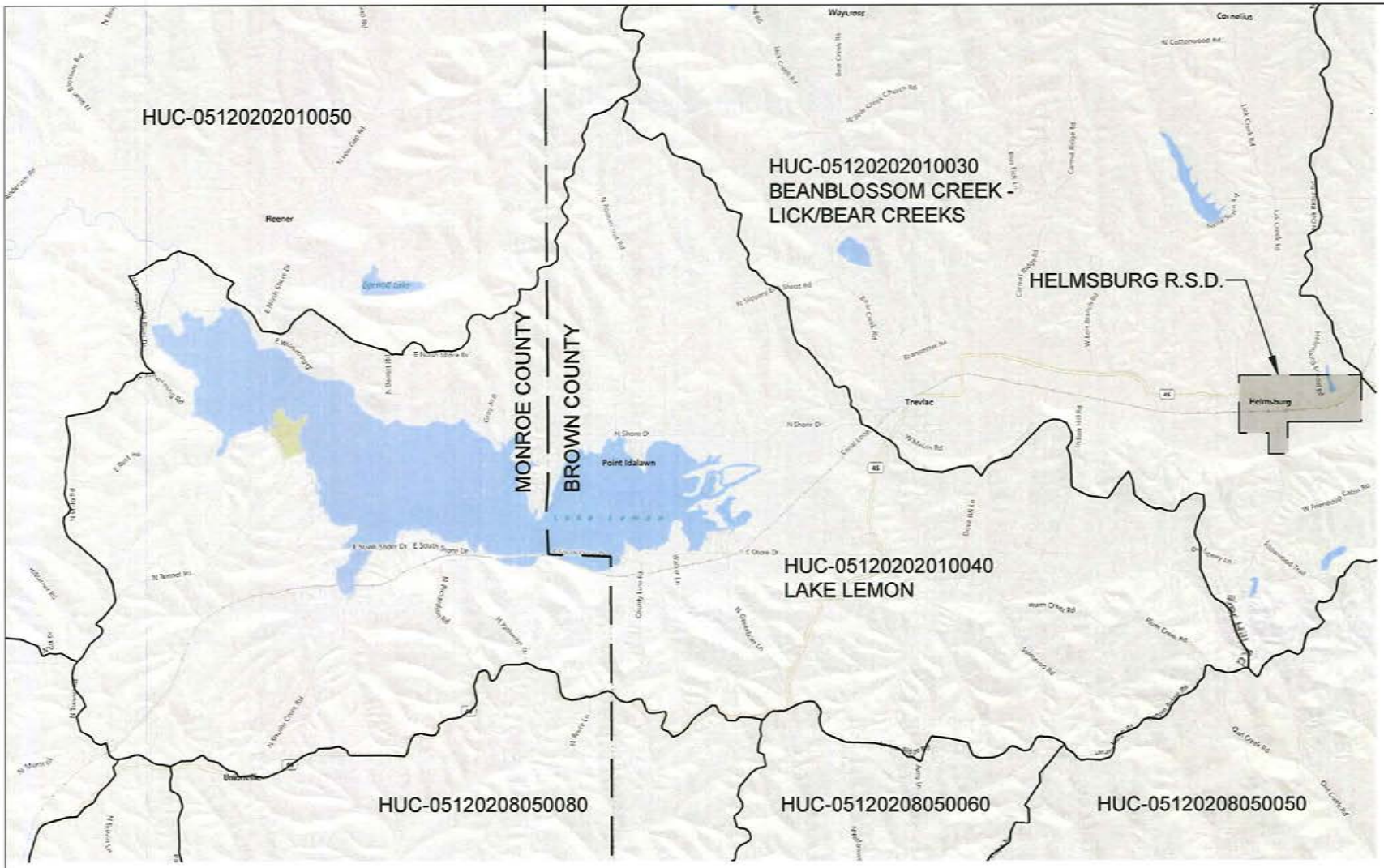
# BEANBLOSSOM CREEK HEADWATERS WATERSHED

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = ONE MILE |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 1-4 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures.dwg




0 1 MI. 2 MI.

SCALE: 1" = ONE MILE

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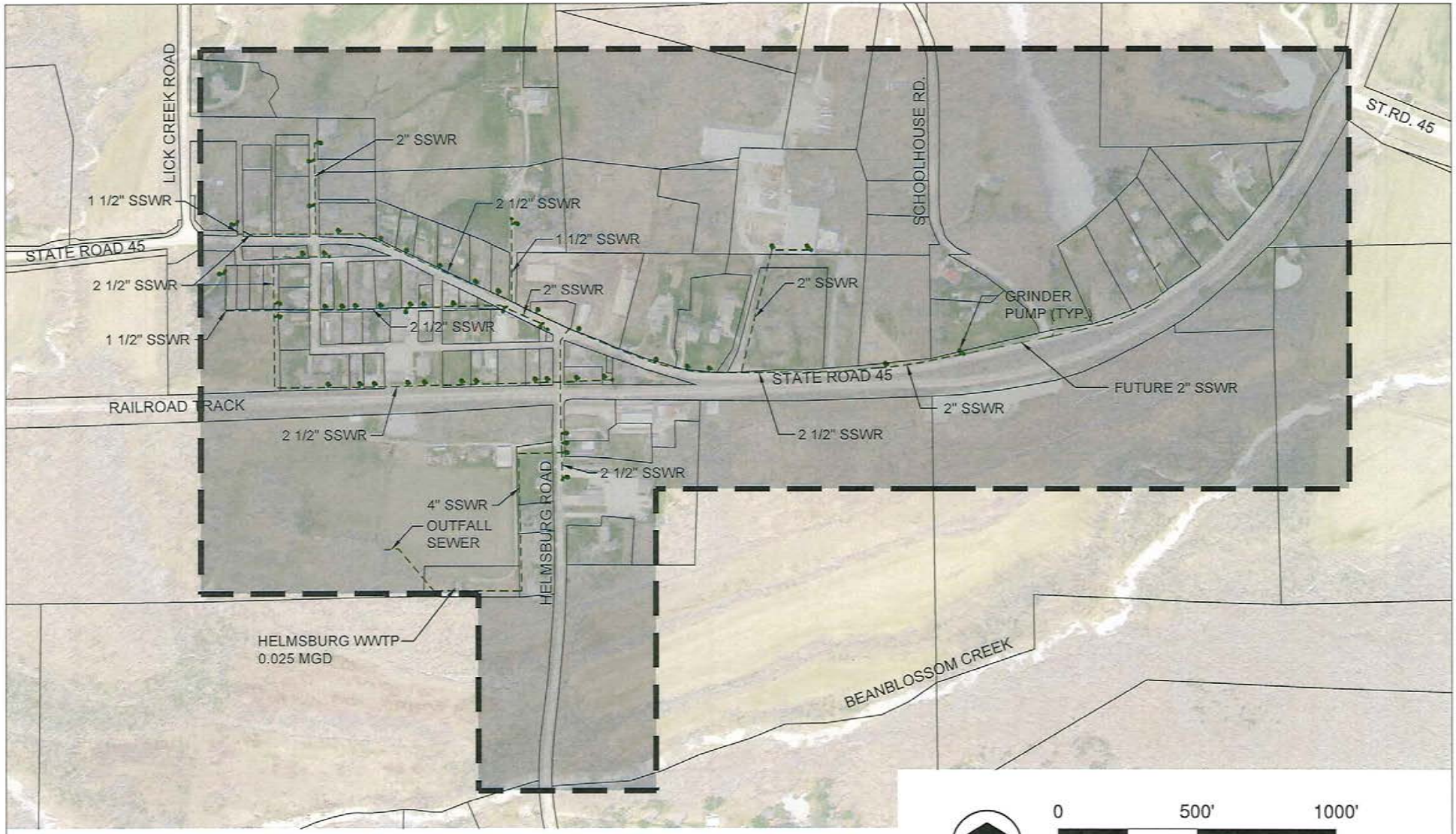
# BEANBLOSSOM CREEK
# LAKE LEMON WATERSHED

## REGIONAL ASSISTANCE PLAN
## BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = ONE MILE |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 1-5 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures.dwg




SCALE: 1" = 500'

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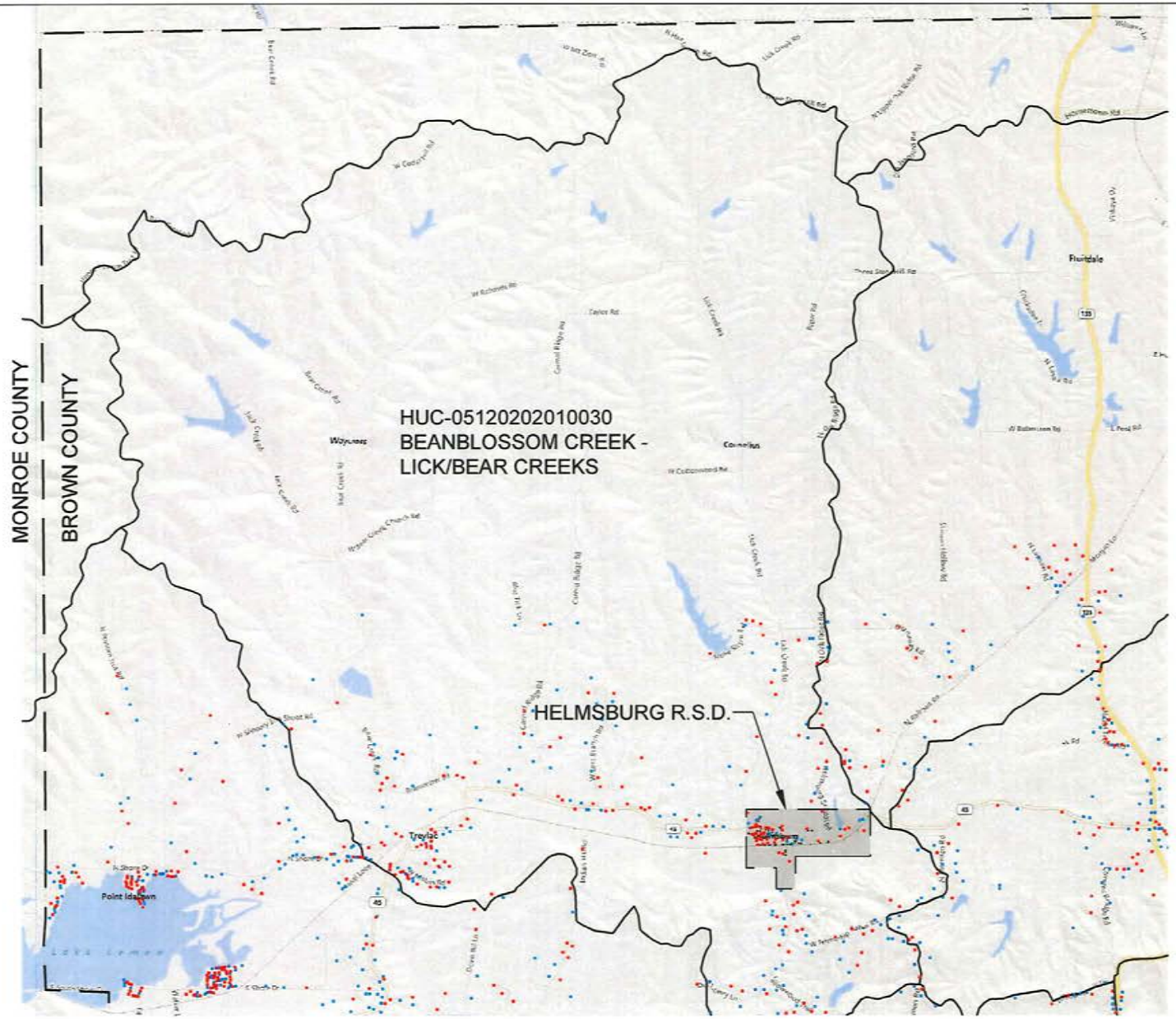
# HELMSBURG COLLECTION SYSTEM
# WASTEWATER COLLECTION - HELMSBURG, INDIANA

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: NOV. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 500' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 2-1 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FMR\Reports and Manuals\4826 PER Figures.dwg

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# BEANBLOSSOM CREEK - LICK/BEAR CREEKS WATERSHED - SEPTIC SYSTEM MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = ONE MILE |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 3-1 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

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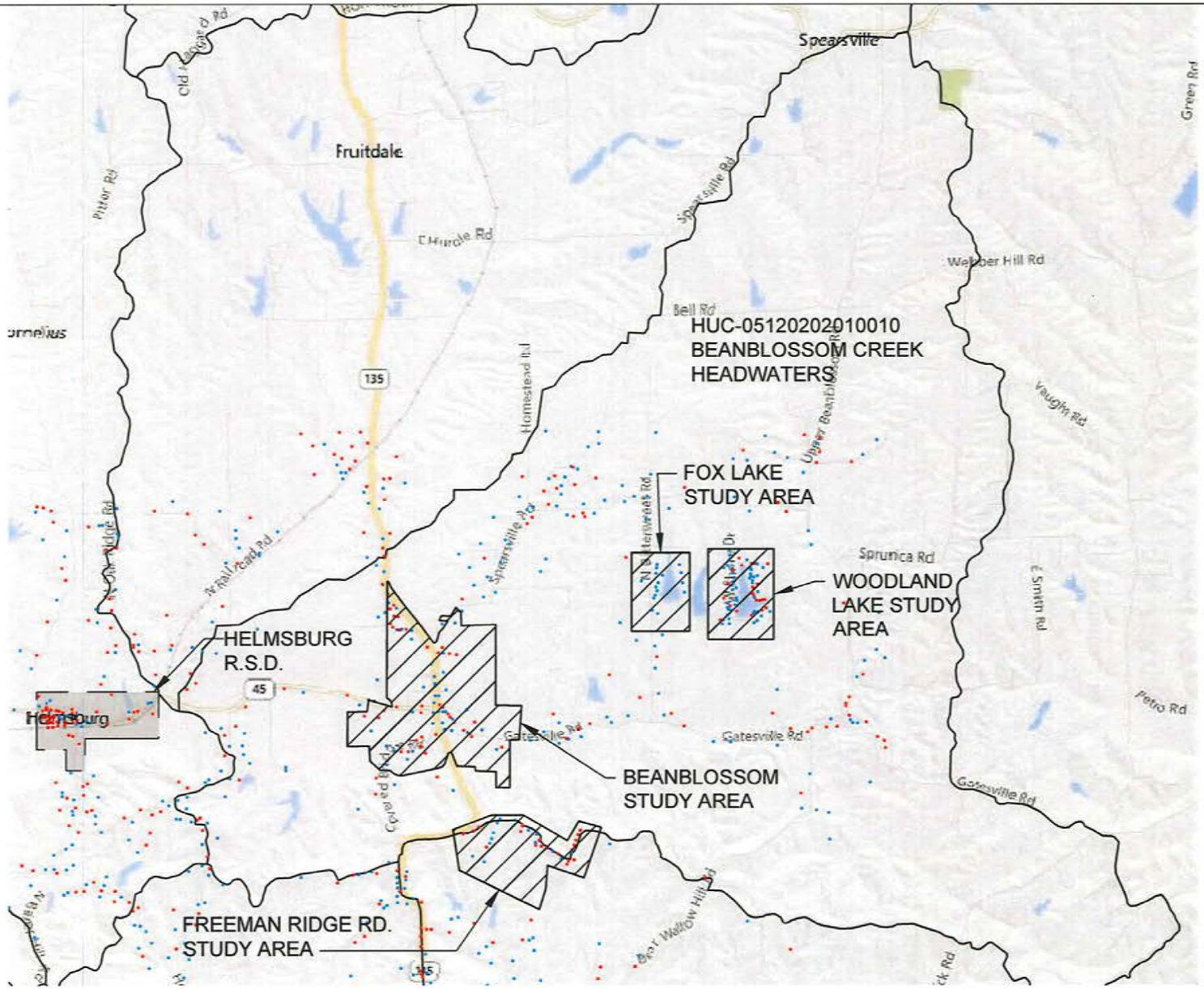


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# BEANBLOSSOM CREEK HEADWATERS WATERSHED - SEPTIC SYSTEM MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = ONE MILE |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 3-2 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

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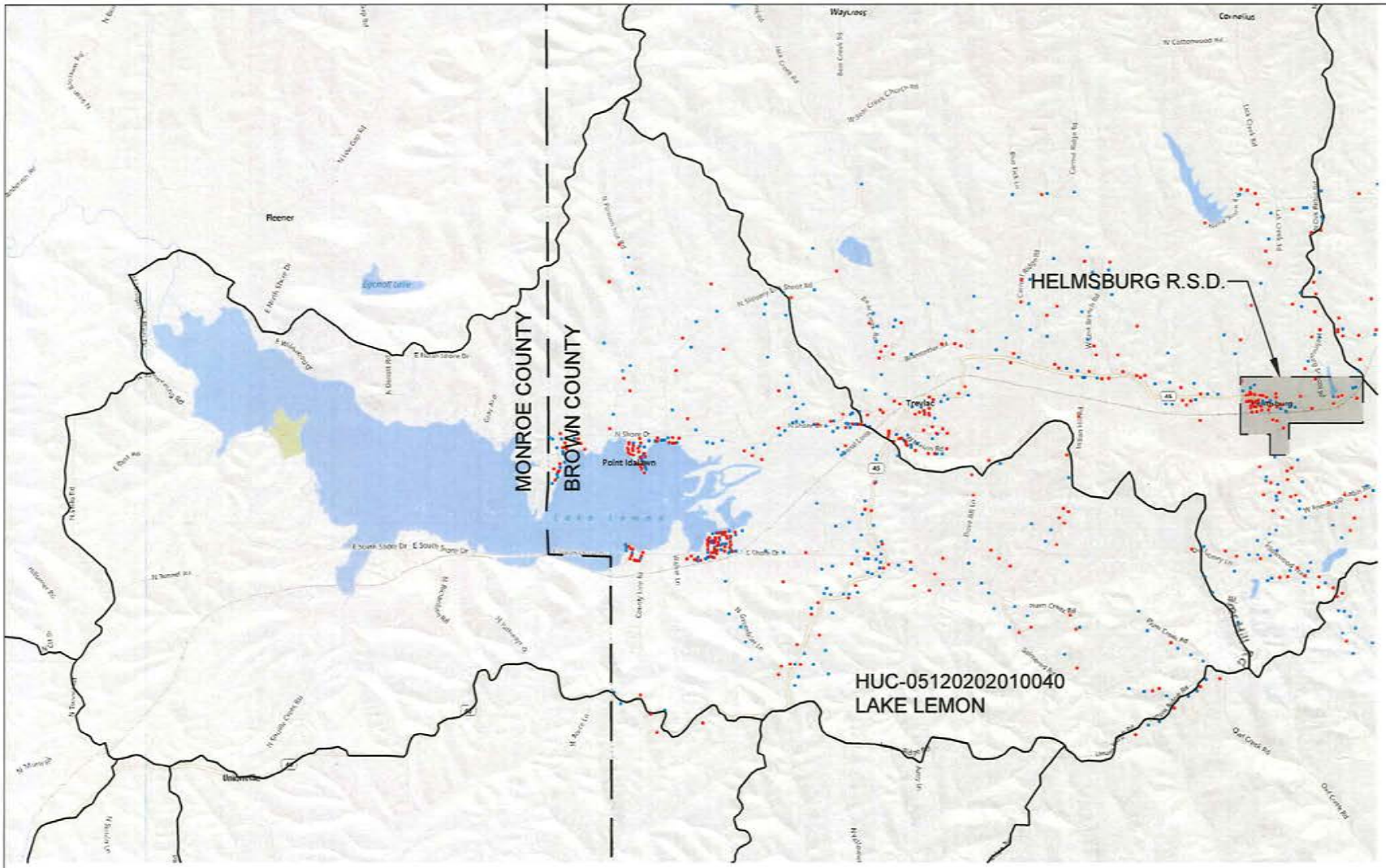


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# BEANBLOSSOM CREEK
# LAKE LEMON WATERSHED - SEPTIC SYSTEM MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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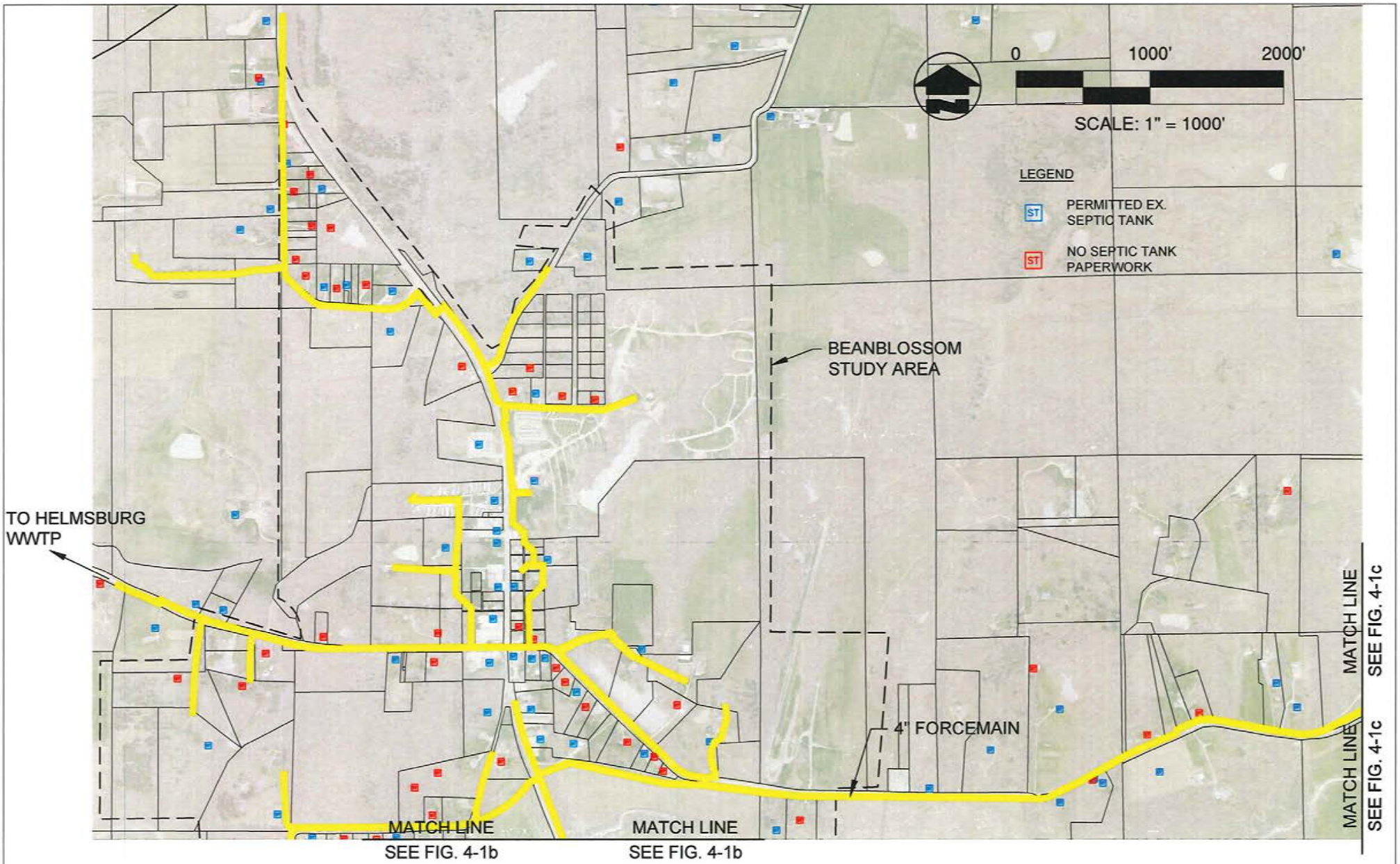
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = ONE MILE |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 3-3 |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures.dwg

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# WASTEWATER COLLECTION SYSTEM
# GREATER BEANBLOSSOM, INDIANA

## REGIONAL ASSISTANCE PLAN
## BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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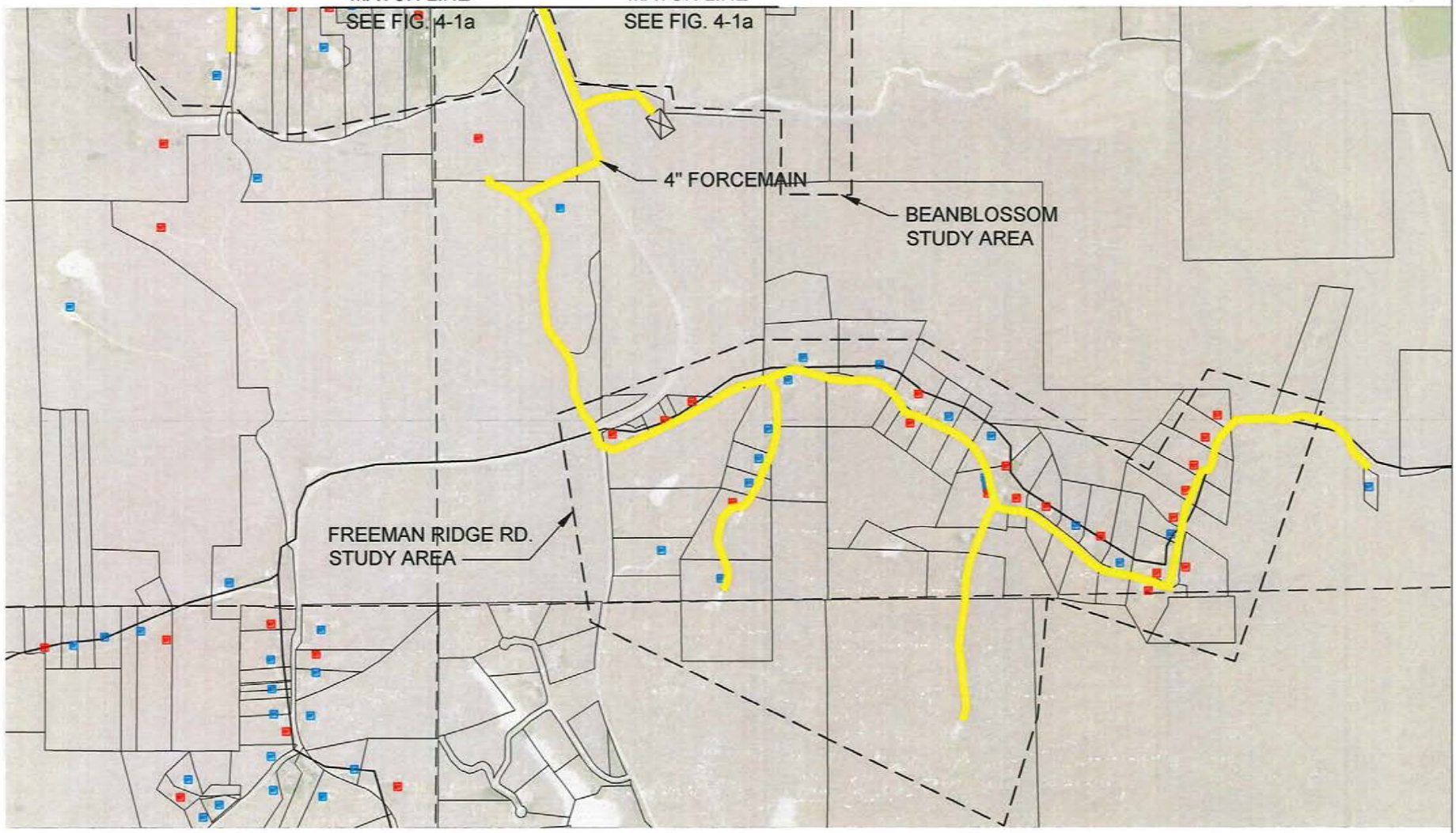
|---|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 | |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' | |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-1a | |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures.dwg




LEGEND

ST PERMITTED EX. SEPTIC TANK

ST NO SEPTIC TANK PAPERWORK

0 1000' 2000'

SCALE: 1" = 1000'

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# WASTEWATER COLLECTION SYSTEM
# GREATER BEANBLOSSOM, INDIANA

## REGIONAL ASSISTANCE PLAN
## BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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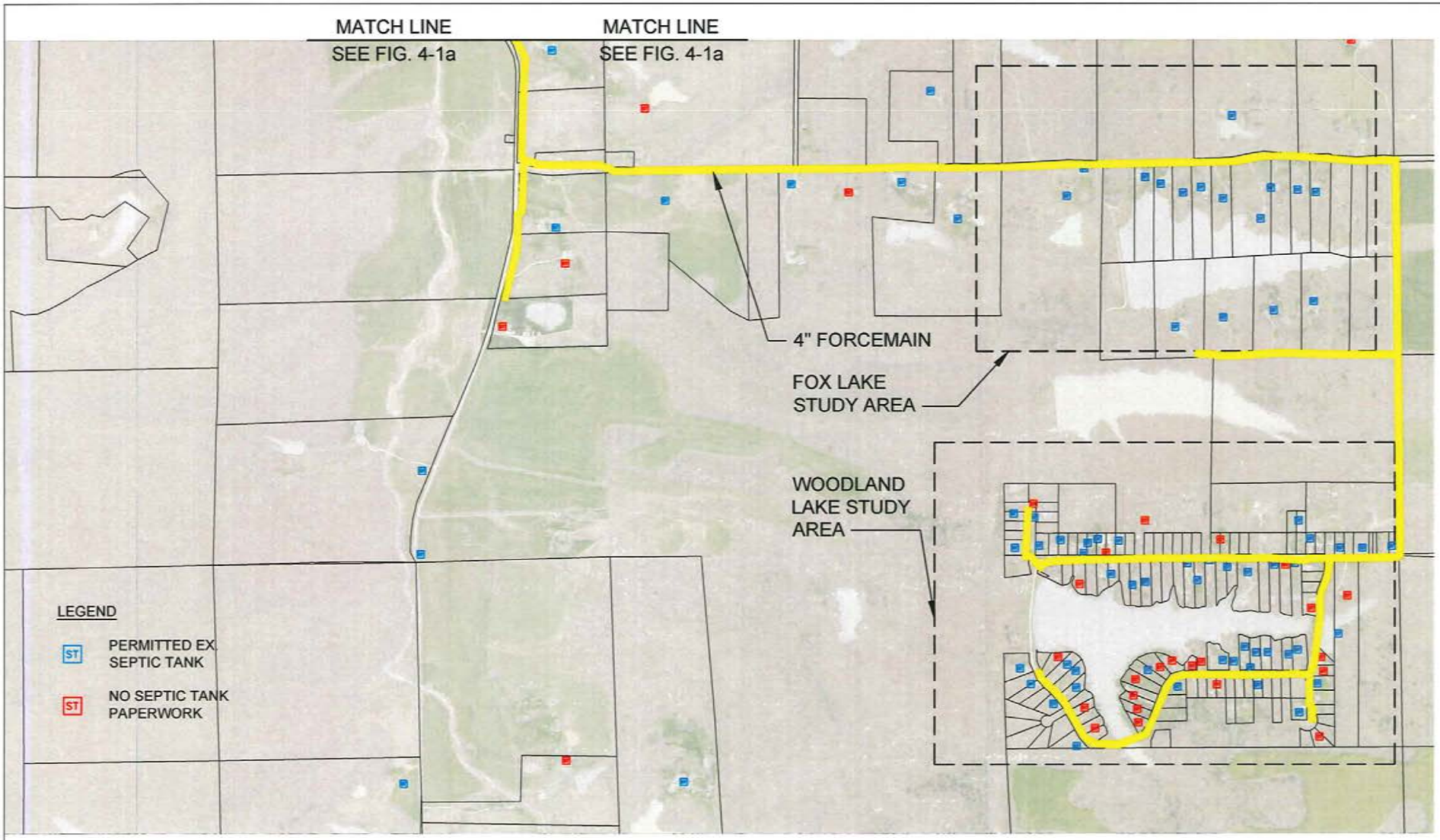
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-1b |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FMReports and Manuals\4826 PER Figures.dwg

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# WASTEWATER COLLECTION SYSTEM
# GREATER BEANBLOSSOM, INDIANA

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-1c |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

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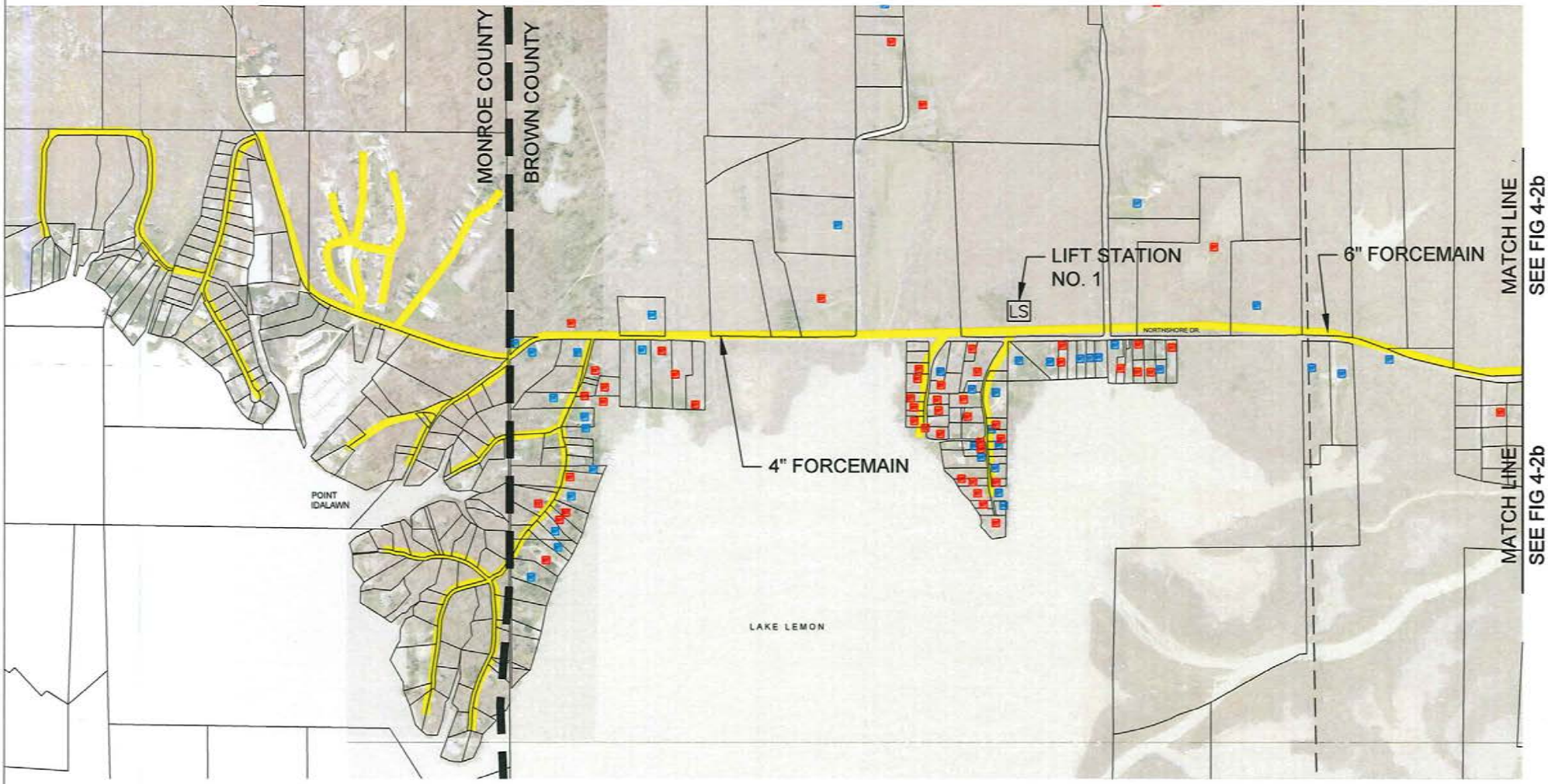


LEGEND

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0 1000' 2000'

SCALE: 1" = 1000'

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# WASTEWATER COLLECTION SYSTEM
# LAKE LEMON, INDIANA

## REGIONAL ASSISTANCE PLAN
## BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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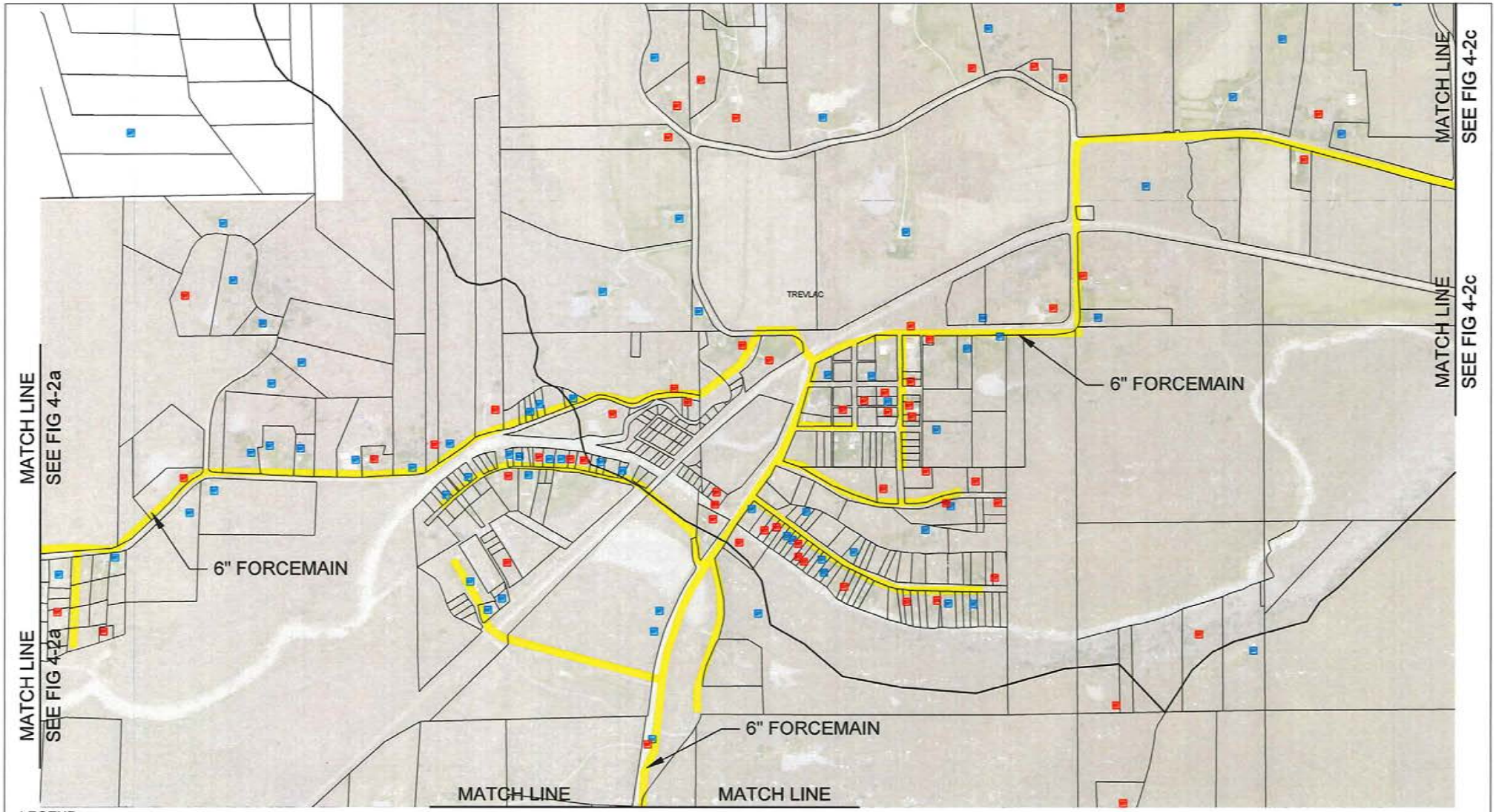
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-2a |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FMI\Reports and Manuals\4826 PER Figures.dwg




LEGEND

ST PERMITTED EX. SEPTIC TANK

ST NO SEPTIC TANK PAPERWORK

0 1000' 2000'

SCALE: 1" = 1000'

# WASTEWATER COLLECTION SYSTEM
# LAKE LEMON, INDIANA

## REGIONAL ASSISTANCE PLAN
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| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-2b |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

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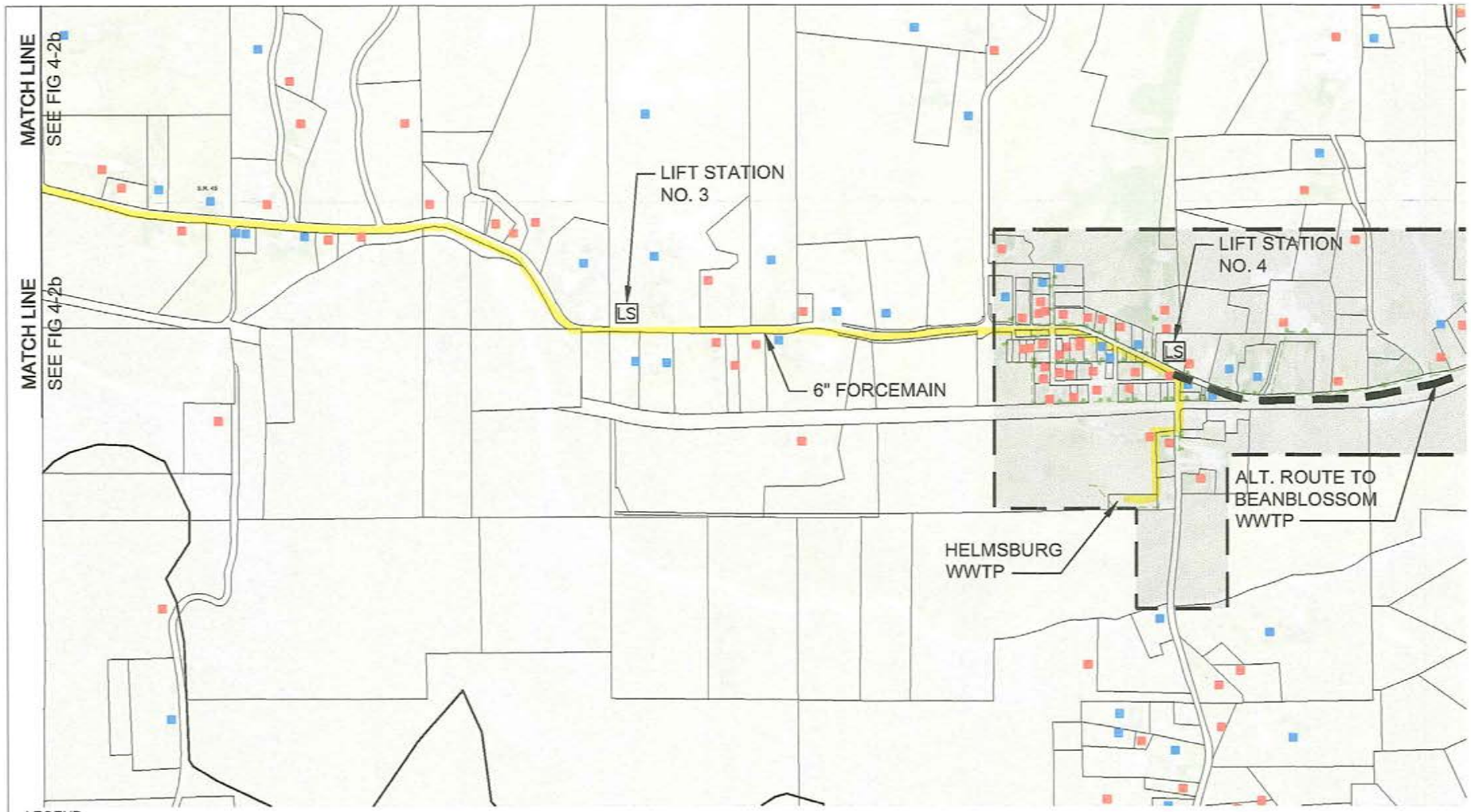


LEGEND

ST PERMITTED EX. SEPTIC TANK

ST NO SEPTIC TANK PAPERWORK

0 1000' 2000'

SCALE: 1" = 1000'

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# WASTEWATER COLLECTION SYSTEM
# LAKE LEMON, INDIANA

## REGIONAL ASSISTANCE PLAN
## BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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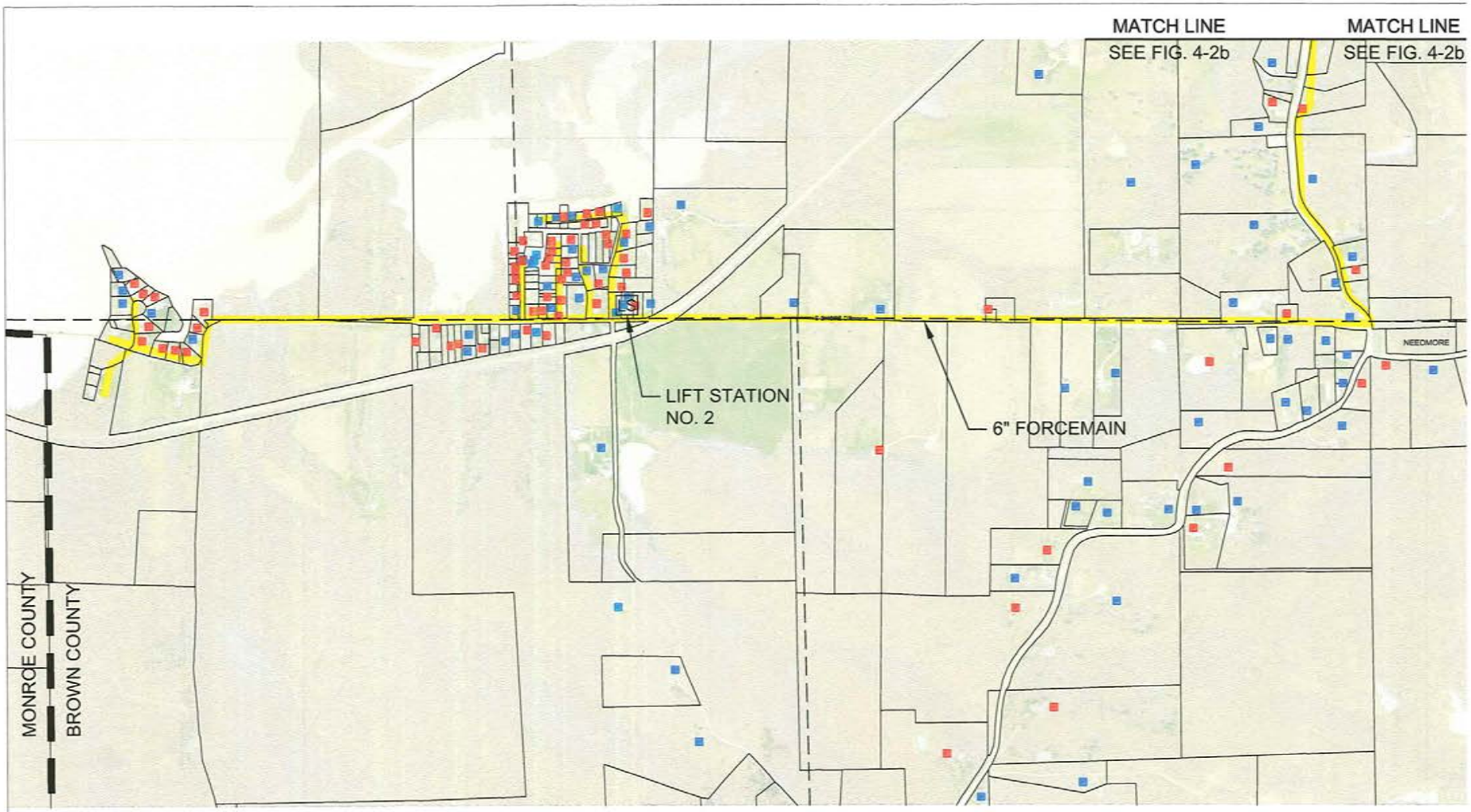
|---|---|---|
| GRW PROJECT NO. 4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-2c |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: I:\14826-Helmsburg FMR\Reports and Manuals\4826 PER Figures.dwg




LEGEND

ST PERMITTED EX. SEPTIC TANK

ST NO SEPTIC TANK PAPERWORK

0 1000' 2000'

SCALE: 1" = 1000'

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# WASTEWATER COLLECTION SYSTEM
# LAKE LEMON, INDIANA

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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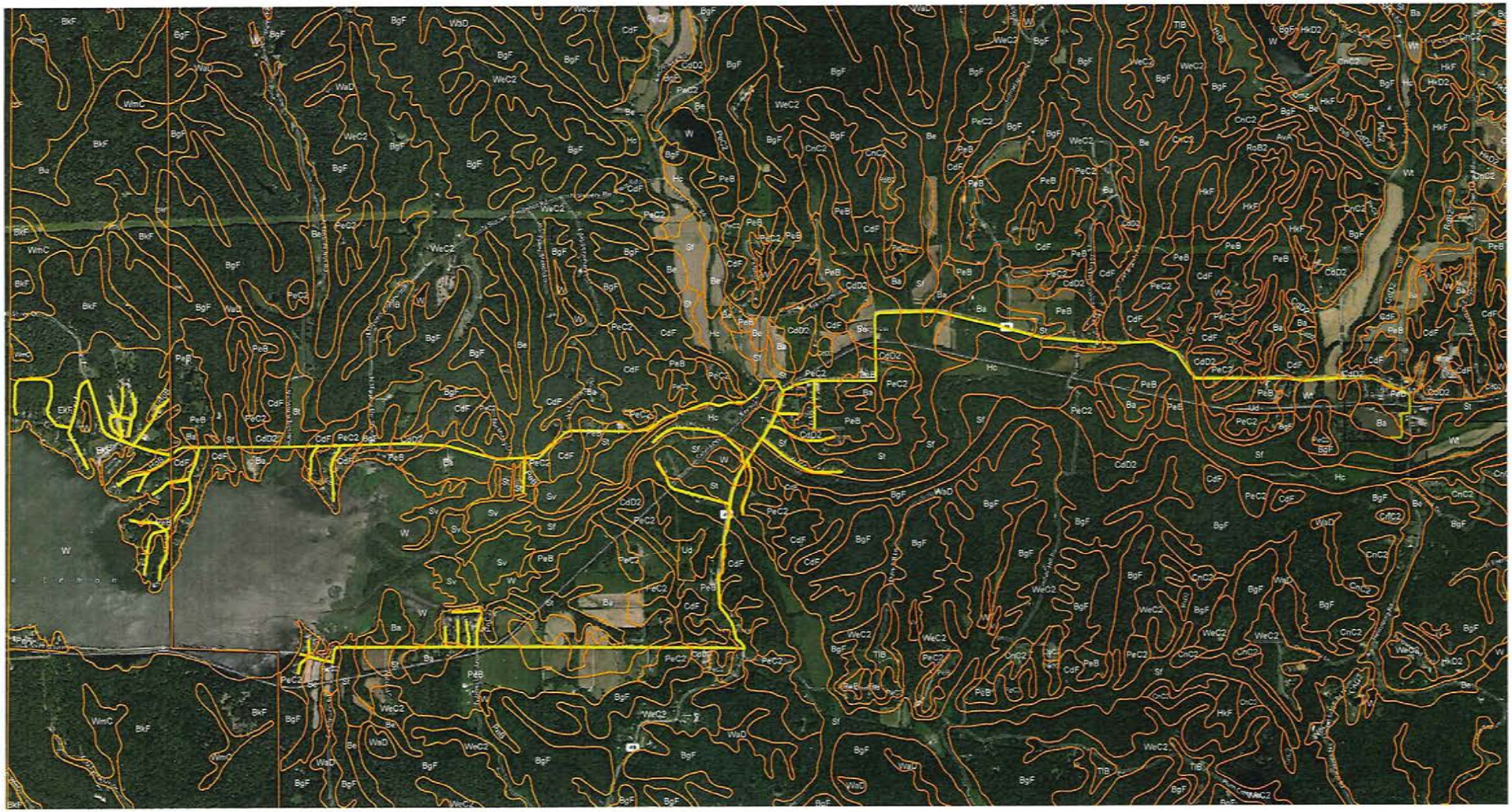
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 1000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 4-2d |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: 0:\4826-Helmsberg FMR\reports and Manuals\4826 PER Figures.dwg



0 3000' 6000'

SCALE: 1" = 3000'

# SOILS MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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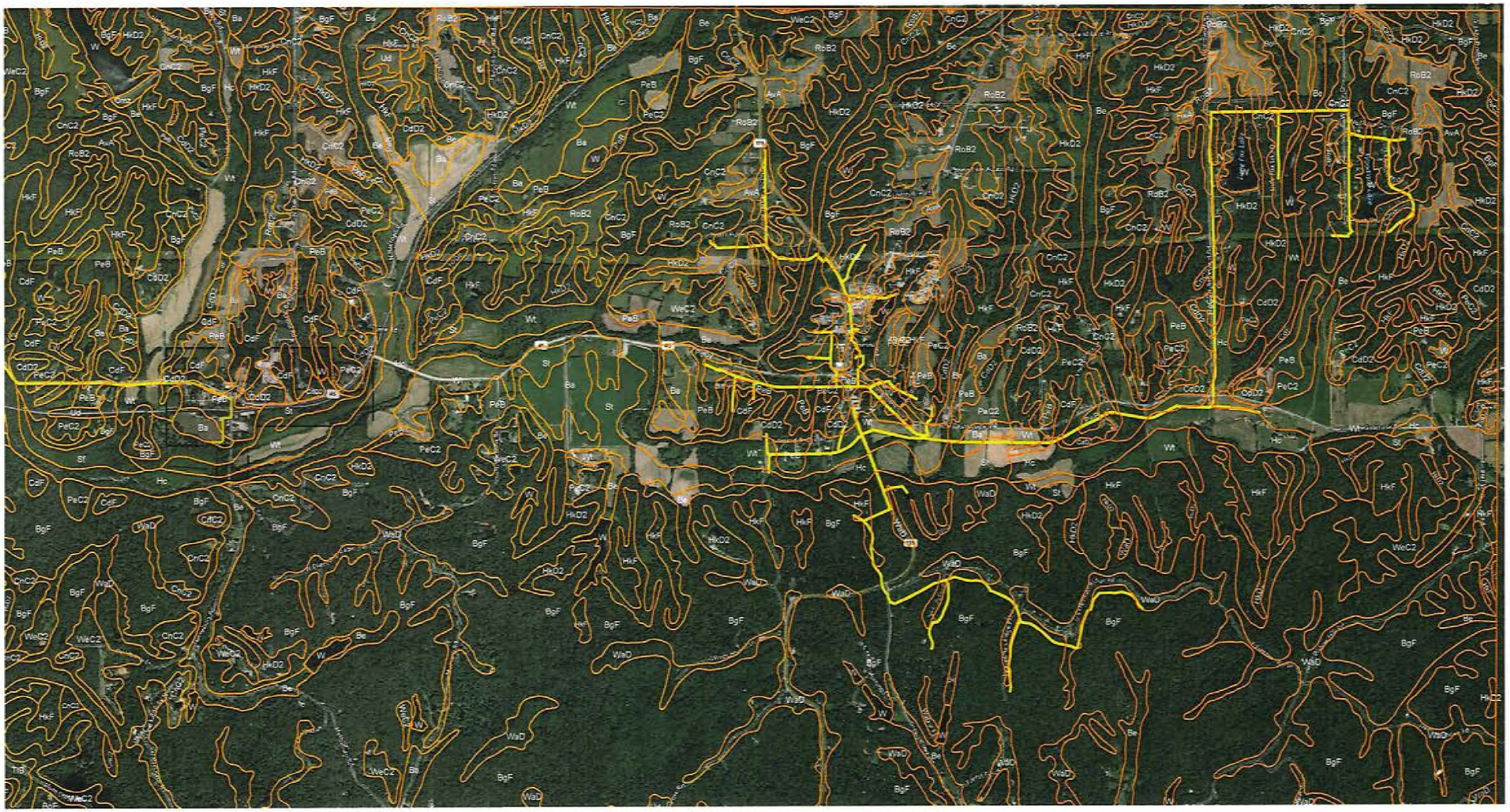
| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 3000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-1a |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures 2.dwg



0 3000' 6000'

SCALE: 1" = 3000'

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# SOILS MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 3000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-1b |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures 2.dwg

| ID | Map Unit Name |
|---|---|
| **Brown County** | |
| AvA | Avonburg silt loam, 0 to 2 percent slopes |
| Ba | Bartle silt loam, 0 to 3 percent slopes |
| Be | Beanblossom channery silt loam, occasionally flooded |
| BgF | Berks–Treviac–Wellston complex, 20 to 70 percent slopes |
| CdD2 | Chetwynd loam, 12 to 20 percent slopes, eroded |
| CdF | Chetwynd loam, 20 to 50 percent slopes |
| CnC2 | Cincinnati silt loam, Wabash Lowland, 6 to 12 percent slopes, eroded |
| Hc | Haymond silt loam, frequently flooded |
| HkD2 | Hickory silt loam, 12 to 18 percent slopes, eroded |
| HkF | Hickory silt loam, 20 to 70 percent slopes |
| Omz | Orthents, earthen dam |
| PeB | Pekin silt loam, 2 to 6 percent slopes |
| PeC2 | Pekin silt loam, 6 to 12 percent slopes, eroded |
| RoB2 | Nabb silt loam, 2 to 6 percent slopes, eroded |
| Sf | Steff silt loam, 0 to 2 percent slopes, frequently flooded |
| St | Stendal silt loam, 0 to 2 percent slopes, frequently flooded, brief duration |
| Sv | Stendal silt loam, frequently flooded, very long duration |
| TlB | Tilsit silt loam, 2 to 6 percent slopes |
| Ud | Udorthents, loamy |
| W | Water |
| WaD | Wellston–Berks–Treviac complex, 6 to 20 percent slopes |
| WeC2 | Wellston–Gilpin silt loams, 6 to 20 percent slopes, eroded |
| Wt | Wilbur silt loam, frequently flooded |

| ID | Map Unit Name |
|---|---|
| **Monroe County** | |
| Ba | Bartle silt loam, 0 to 2 percent slopes |
| BdB | Bedford silt loam, 2 to 6 percent slopes |
| BkF | Brownstown–Gilwood silt loams, 25 to 75 percent slopes |
| Bu | Burnside silt loam, occasionally flooded |
| CrB | Crider silt loam, 2 to 6 percent slopes |
| CrC | Crider silt loam, 6 to 12 percent slopes |
| Cu | Cuba silt loam, frequently flooded |
| EkF | Elkinsville silt loam, upland, 20 to 40 percent slopes |
| GpD | Gilpin silt loam, 12 to 18 percent slopes |
| GrD | Gilpin–Gullied land complex, 12 to 22 percent slopes |
| Hd | Haymond silt loam, frequently flooded |
| HoB | Hosmer silt loam, 2 to 6 percent slopes |
| PeA | Pekin silt loam, 0 to 2 percent slopes |
| PeB | Pekin silt loam, 2 to 6 percent slopes |
| PeC | Pekin silt loam, 6 to 12 percent slopes |
| TlB | Zanesville silt loam, 2 to 6 percent slopes |
| W | Water |
| WmC | Wellston–Gilpin silt loams, 6 to 20 percent slopes |



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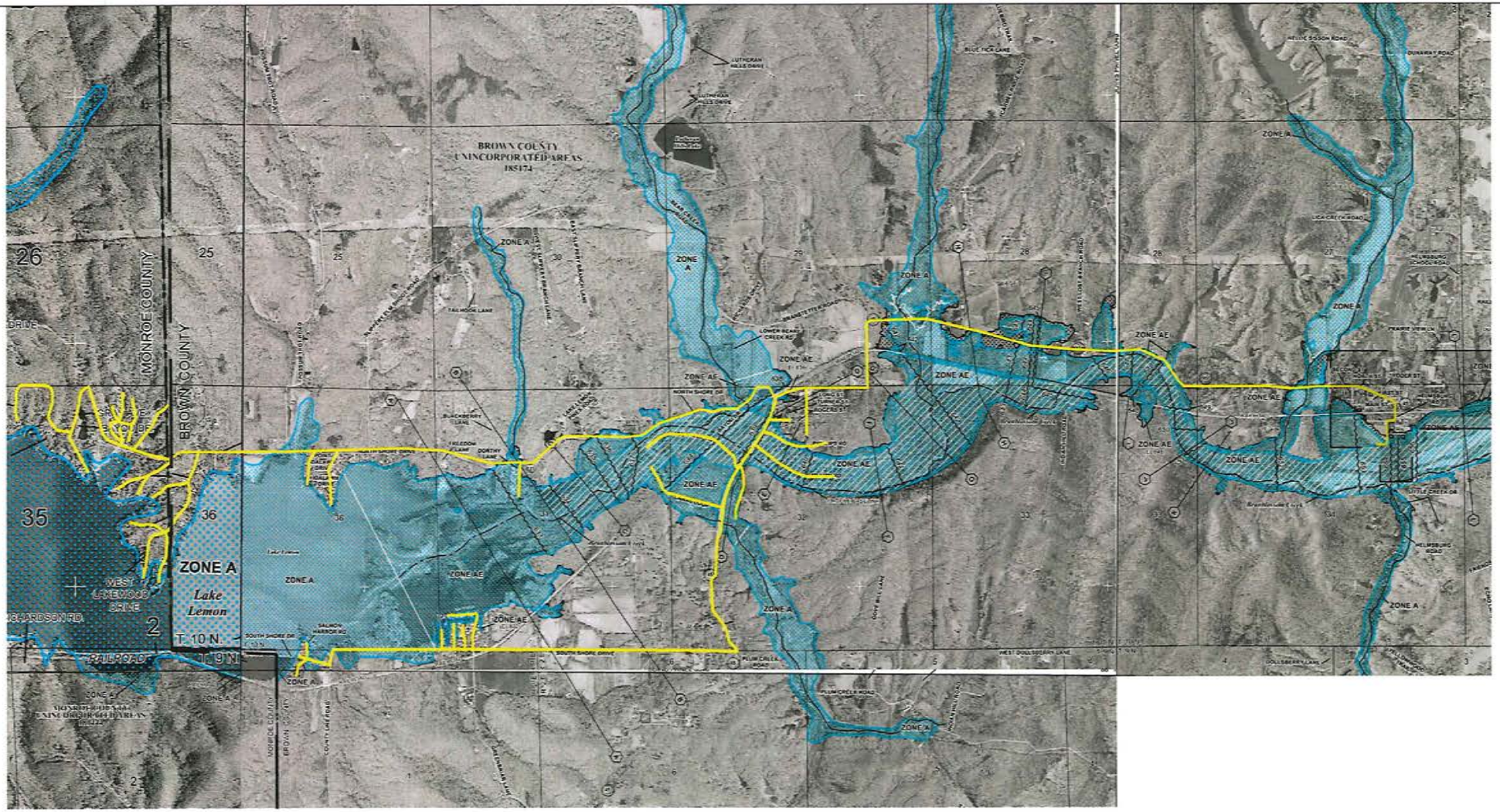
SOILS MAP LEGEND

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | | |
|---|---|---|---|
| GRW PROJECT NO: 4826 | DESIGNED: RAM | DATE: DEC. 2019 | |
| CLIENT PROJECT NO: XXXX | DRAWN: JAJ | SCALE: N/A | |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-1c | |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | | |

FILE NAME: G:\4826-Helmsberg FIA\Reports and Manuals\4826 PER Figure 2.dwg




0 3000' 6000'

SCALE: 1" = 3000'

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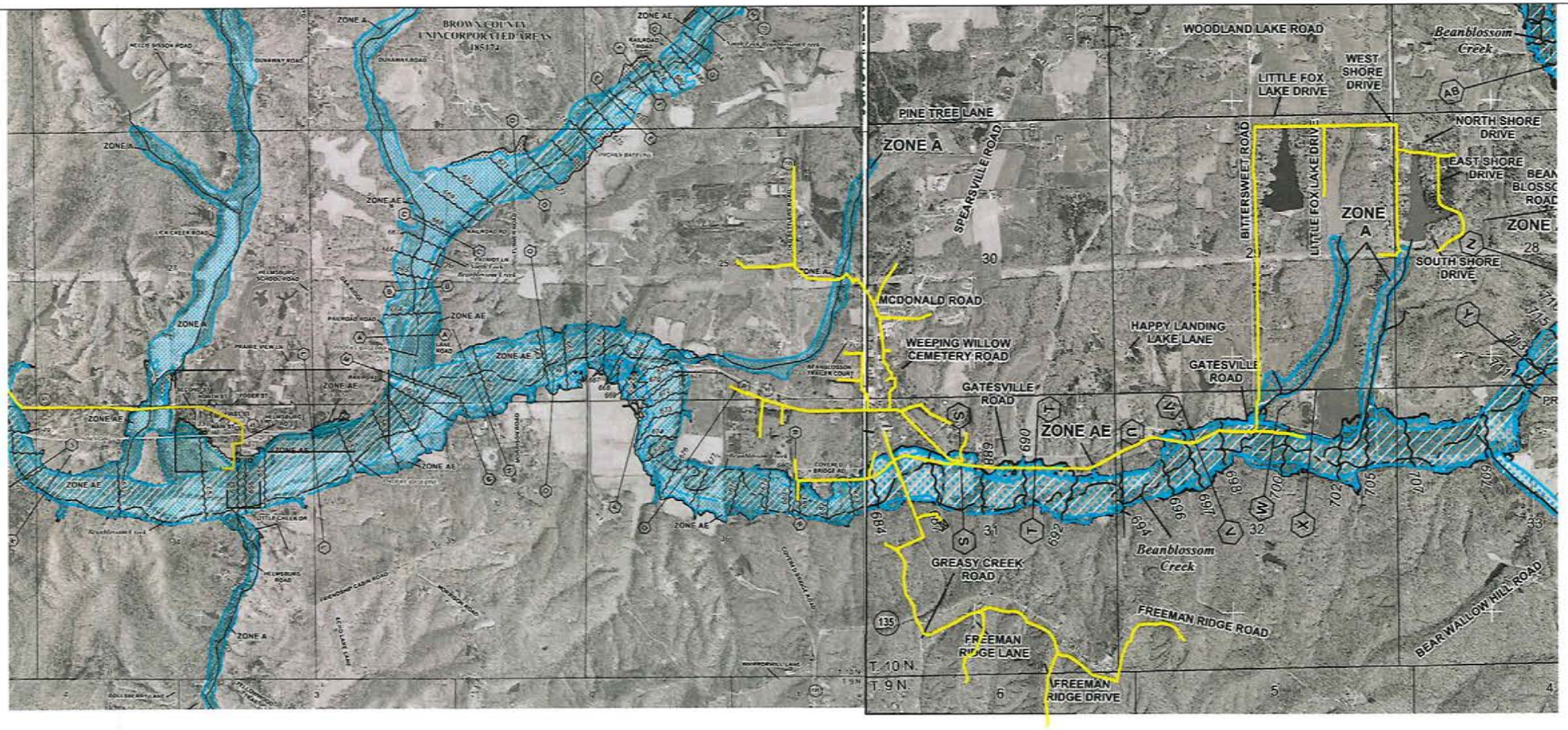
# FLOOD MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 3000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-2a |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures 2.dwg

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# FLOOD MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 3000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-2b |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures 2.dwg

LEGEND:

- PROPOSED FORCE MAIN
- OUTSTANDING BRIDGE
- NOTABLE STRUCTURE
- OUTSTANDING STRUCTURE
- CEMETERY

0 3000' 6000'

SCALE: 1" = 3000'

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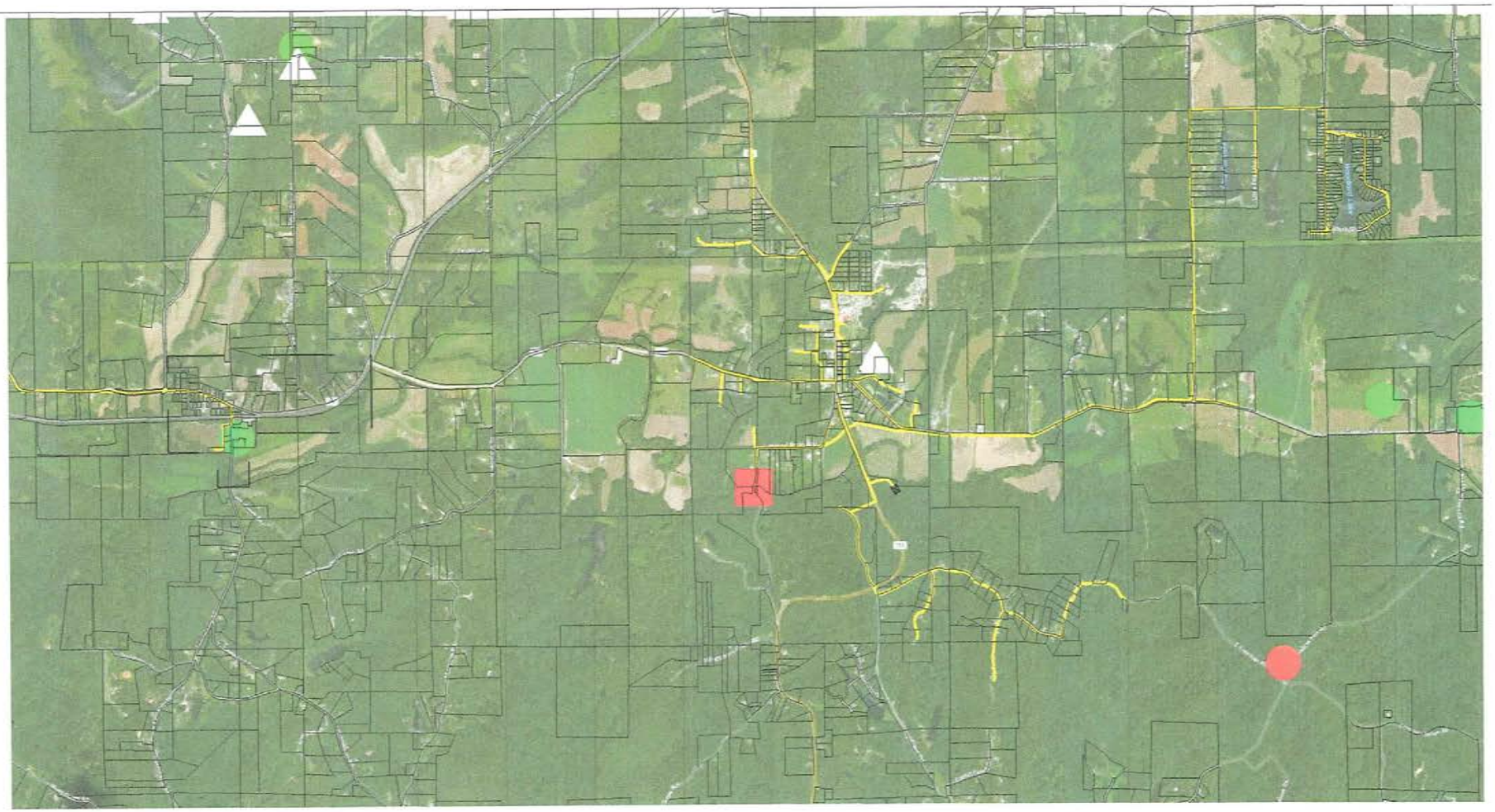
# SHAARD MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 3000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-3a |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsburg FIA\Reports and Manuals\4826 PER Figure 2.dwg



LEGEND:

- PROPOSED FORCE MAIN
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0 3000' 6000'

SCALE: 1" = 3000'

# SHAARD MAP

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BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

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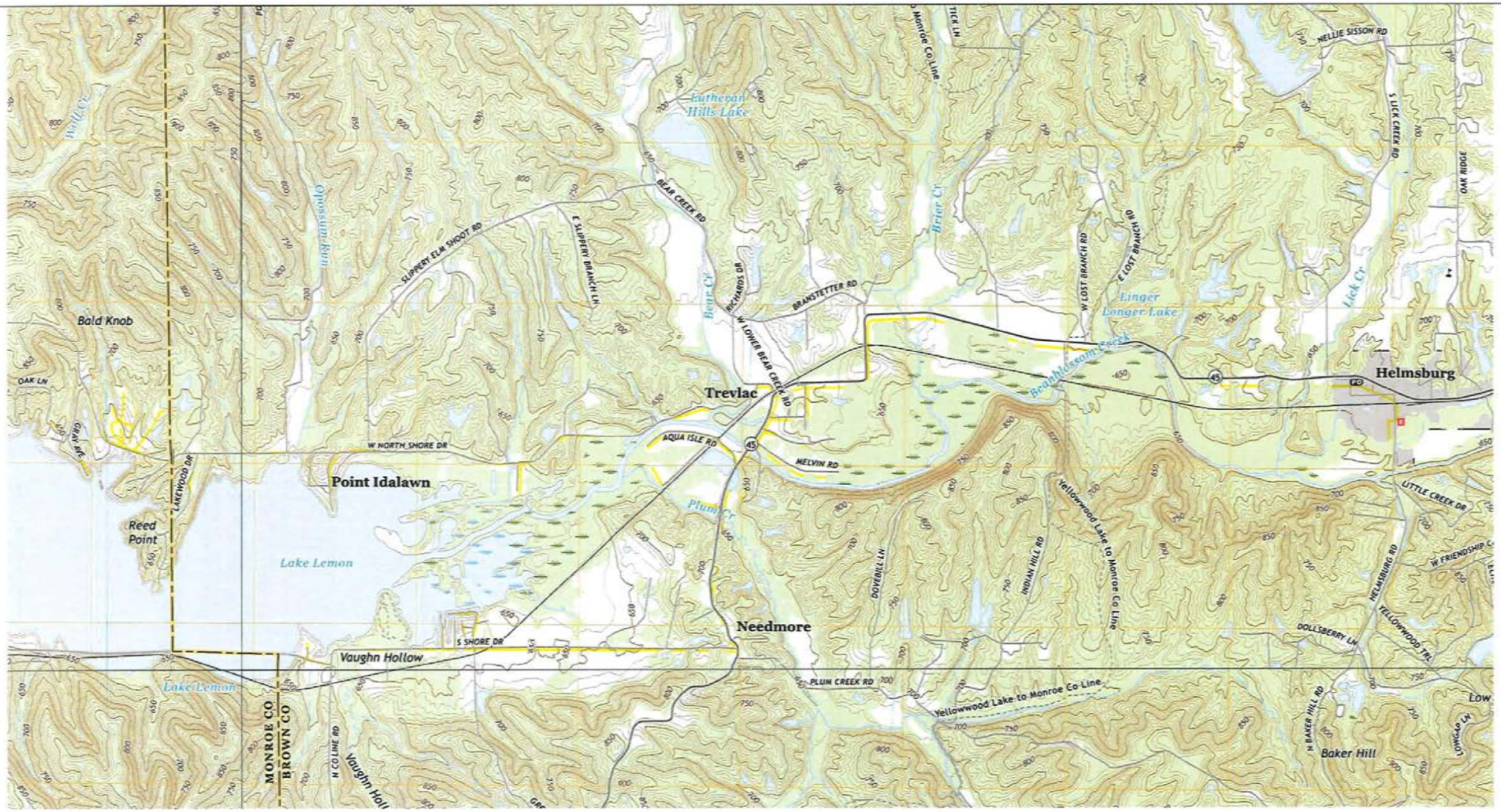
FILE NAME: G:\4826-Helmsburg FIA\Reports and Manuals\4826 PER Figure 2.dwg

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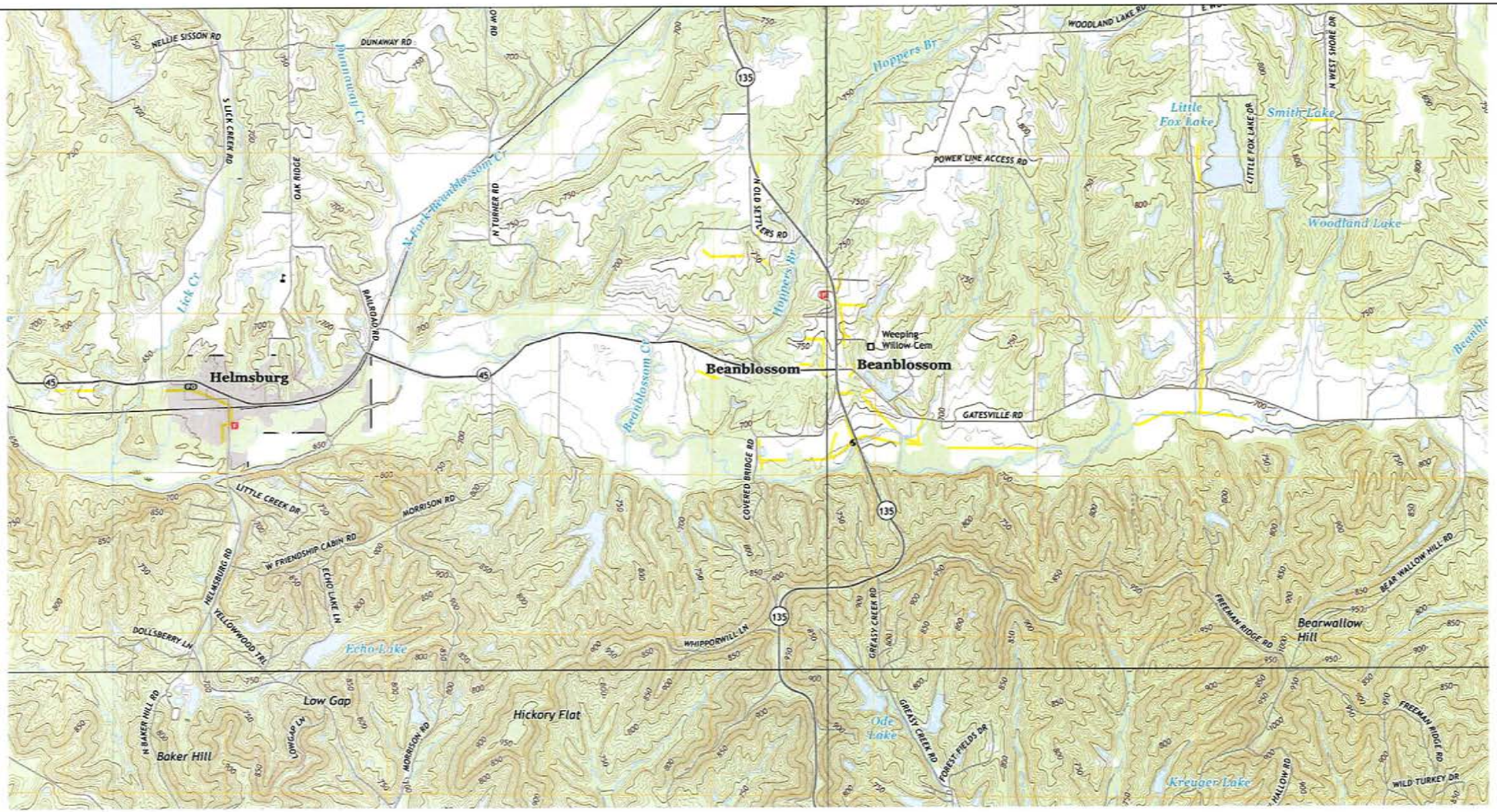
# USGS QUADRANGLE MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
| CLIENT PROJECT NO. XXXX | DRAWN: JAJ | SCALE: 1" = 3000' |
| SOURCE: BING MAPS | REVIEWED: EM | FIGURE NO. 5-4a |
| SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED | APPROVED: EM | |

FILE NAME: G:\4826-Helmsberg FMR\Reports and Manuals\4826 PER Figures 2.dwg




0 3000' 6000'

SCALE: 1" = 3000'

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# USGS QUADRANGLE MAP

REGIONAL ASSISTANCE PLAN
BROWN COUNTY R.S.D. / HELMSBURG R.S.D.

| | | |
|---|---|---|
| GRW PROJECT NO.4826 | DESIGNED: RAM | DATE: DEC. 2019 |
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FILE NAME: G:\4826-Helmsberg FM\Reports and Manuals\4826 PER Figures 2.dwg

# EXHIBIT 6
# T/M/F – HELMSBURG RSD

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**
**Revised June 2014**

# System Information

## Background on Your System

| | | Fill in the Blank Answers |
|---|---|---|
| 1 | System Name: | Helmsburg RSD |
| 2 | Discharge Permit Number: | IN0058416 |
| 3 | Which RCAP region is the system in? | |
| | — CRG | |
| | — Great Lakes RCAP | X |
| | — MAP | |
| | — RCAC | |
| | — RCAP Solutions | |
| | — Southeast RCAP | |
| 4 | What state/territory is the system in? | Indiana |
| 5 | What is the primary 5 digit zip code for the system? | 46160 |
| 6 | RCAP Technical Assistance Provider name: | |
| 7 | **What stage does this assessment cover?** | |
| | • **Initial Assessment** | XX |
| | • **Mid-project Benchmark** | |
| | • **Project Close-out** | |
| | **Comments:** | |

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**

**System Name: Helmsburg RSD**
**Discharge Permit Number: IN0058416**

| | | Fill in the Blank Answers | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Critical Concern !!! | Green Points |
|---|---|---|---|---|---|---|---|
| # | **Technical Capacity** | | | | | | |
| | **Your System and Its Components** | | | | | | |
| 1 | How many people are served by your wastewater system? | 158 | | | | | |
| 2 | How many service connections does your wastewater system have? | 62 | | | | | |
| 3 | **Does your system have long term legal access to all physical components of the wastewater system?** | | | | | | |
| | • **Yes** | | X | | | | |
| | • **Actively working on it, but not complete** | | | | | | |
| | • **No** | | | | | | |
| | **Comments:** | | | | | | |
| 4 | **Has the system conducted an asset inventory in which assets were identified, quantified (number of units, linear feet, etc.), and described as to age, condition and replacement cost?** | | | | | | |
| | • **Yes** | | | | | | |
| | • **Actively working on it, but not complete** | | | X | | | |
| | • **No** | | | | | | |
| | **Comments:Not Reviewed** | | | | | | |
| 5 | What are the discharge points for your wastewater system? (*check any that apply*) | | | | | | |
| | — River, lake or other body of fresh water | X | | | | | |
| | — Ocean or bay | | | | | | |
| | — Injection well/drainfield | | | | | | |
| | — Wastewater reclamation plant | | | | | | |
| | — Land application | | | | | | |
| | — Other (describe): | | | | | | |
| | **Comments: Bean Blossom Creek** | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 6 | What is your system's total treatment capacity in million gallons per day (MGD)? | 0.025 | | | | | |
| 7 | **Has your system ever experienced capacity shortfalls during storms or other peak load periods?**<br>**• No**<br>**• Yes**<br>**Comments:No t Large Peaks** | | X | | | | |
| 8 | **Does your wastewater system have an emergency or standby electrical power source sufficient to run pumps, treatment works, and other critical system components?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | | X | | | | |
| 9a | **Does your wastewater system have accurate maps or as-built drawings and adequate system documentation of the complete collection, treatment and discharge components?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments: O&M Manual Suppled by Manufacturer** | | X | | | | |
| 9b | **Is there a program or procedure in place for updating as-built drawings?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | | | | X | | |
| 10 | **Does your wastewater treatment plant have correct cross-connection control devices installed wherever necessary?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | | X | | | | |
| 11 | **Does your system experience any routine failures (e.g., leaks, blockages)?**<br>**• No**<br>**• Yes**<br>**Comments:** | | X | | | | |

## Certified Operators

| | | |
|---|---|---|
| 12 | **Is an appropriate grade certified wastewater treatment plant operator on duty or on call at all times? If No, explain in Comments field.**<br>• **Yes, certified operator on duty or on call at all times**<br>• **No, certified operator not on duty or on call at all times**<br>**Comments: Class 3 Operator; Class 1 Plant** | X |

## Preventive Maintenance

| | | |
|---|---|---|
| 13a | **Does your wastewater system have a written operations and maintenance plan?**<br>• **Yes**<br>• **Actively working on it, but not complete**<br>• **No** | X |
| 13b | **Do system personnel follow the operations and maintenance plan?**<br>• **Yes**<br>• **Not applicable - system has no plan**<br>• **No**<br>**Comments:** | X |

## Regulatory Compliance

| | | |
|---|---|---|
| 14a | Which permits, licenses, plans, or other agreements is your system (including collection system) required to have on file? List all in the Comments field.<br>Comments: NPDES Permit | |
| 14b | **Are all of the required permits, licenses, plans, or other agreements actually on file?**<br>• **Yes**<br>• **No** | X |
| 15 | **Has your system ever exceeded any permit limitations?**<br>• **No**<br>• **Yes, but damages were mitigated**<br>• **Yes, this is a current problem - explain in Comments field**<br>**Comments: Ammonia Violations about 15 years ago** | X |

| | | |
|---|---|---|
| 16a | Have all deficiencies on your system's last inspection by your oversight agency been corrected?<br>• Yes<br>• Not applicable<br>• Actively working on it, but not complete<br>• No<br>Comments: No Deficiencies Noted | X |
| 16b | Date of last inspection by your oversight agency | 4/2/18 |
| 17 | Has your wastewater system received any administrative order or notice of violation from the state or EPA in the past five years? If Yes, explain in the Comments field.<br>• No<br>• Yes, but all deficiencies have been corrected<br>• Yes, and some or all of the deficiencies have not been corrected<br>Comments: | X |
| 18 | Does your system have an approved method of biosolids disposal?<br>• Yes<br>• Not applicable - explain in Comments field<br>• No<br>Comments: Hauled to Nashville WWTP | X |

## Operations Recordkeeping

| | | |
|---|---|---|
| 19 | Does the system operator regularly report to management a summary of maintenance and repair activities performed, a summary of flows and loading, major operational or maintenance problems and recommendations for resolving those problems, *and* the status of any construction projects underway?<br>• Yes; all of the above reported<br>• No; one or more of the above are not reported<br>Comments: MROs | X |
| 20 | Does your wastewater system have and maintain wastewater treatment records, including operations and maintenance records?<br>• Yes, have and maintain<br>• No<br>Comments: | X |

| | | | | | | |
|---|---|---|---|---|---|---|
| 21 | Do your system operators perform any sort of regular process control monitoring; e.g., testing sent to an outside lab or in-house process control testing performed at the wastewater treatment plant?<br>• Yes<br>• No<br>Comments: Element | | X | | | |

## Emergency Planning

| | | | | | | |
|---|---|---|---|---|---|---|
| 22 | Does your wastewater system have a vulnerability assessment?<br>• Yes, and it is current<br>• Actively working on it, but not complete<br>• Yes, but it needs to be updated<br>• No | | | | X | |
| 23 | Does your wastewater system have an emergency response plan?<br>• Yes, and it is current<br>• Actively working on it, but not complete<br>• Yes, but it needs to be updated<br>• No | | | | X | |

## Sustainability check: How green is your wastewater system?

| | | | | | | |
|---|---|---|---|---|---|---|
| GT1 | Does your system recycle or reuse biosolids (e.g., composting or land application)?<br>• Yes<br>Comments: | | | | | |
| | Count of Technical Responses | 17 | 1 | 3 | 0 | 0 |

**In the space below, identify any known technical capacity deficiencies or wastewater system technical problems not identified above.**

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**

**System Name: Helmsburg RSD**
**Discharge Permit Number: IN0058416**

| | | Fill in the Blank Answers | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Green Points |
|---|---|---|---|---|---|---|
| # | **Managerial Capacity** | | | | | |
| | **Authority and Responsibility** | | | | | |
| 23 | What type of ownership best describes your wastewater system? | | | | | |
| | — Local government | X | | | | |
| | — State government | | | | | |
| | — Federal government | | | | | |
| | — Not for profit: corporation, mutual, association, cooperative, etc. | | | | | |
| | — For profit: corporation, sole proprietorship, partnership, cooperative, etc. | | | | | |
| | — Tribal | | | | | |
| | — Other (specify): | | | | | |
| 24 | What type of governance best describes your wastewater system? | | | | | |
| | — Board or council | X | | | | |
| | — Private ownership | | | | | |
| | — Other (specify): | | | | | |
| 25a | Which of the following organizational documents are relevant and, therefore, should be in the wastewater system's files? (Check all that apply) | | | | | |
| | — Articles of Incorporation | | | | | |
| | — Corporation Bylaws | | | | | |
| | — Certificates of Operating Authority | | | | | |
| | — Certificates of Public Convenience & Necessity | | | | | |
| | — State or Local Enabling Legislation | X | | | | |
| | — Municipal or County Charter | | | | | |
| | — Other (specify): | | | | | |
| | — Other (specify): | | | | | |
| | — Other (specify): | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 25b | **Does the wastewater system have *all* relevant organizational documents on file?**<br>• Yes, and all documents are up to date<br>• Yes, but some or all need to be updated<br>• No<br>**Comments: Attorney maintains documents** | | X | | | |
| 26 | **Do the organizational documents provide clear authority for the organization to levy fees and enforce payment?**<br>• Yes<br>• No | | X | | | |

## Meetings

| | | | | | | |
|---|---|---|---|---|---|---|
| 27 | **Does the board or council hold regularly scheduled, publicly announced meetings?**<br>• Yes<br>• Not applicable - private, for profit entity<br>• No<br>**Comments:** | | X | | | |
| 28 | **Are board or council meetings frequently cancelled due to lack of a quorum?**<br>• No<br>• Not applicable - private, for profit entity<br>• Yes<br>**Comments:** | | X | | | |
| 29 | **For each board or council meeting, is there:**<br>► **a written agenda;**<br>► **time on the agenda designated for comments from customers and other stakeholders; *and***<br>► **a complete and accurate written record of matters discussed and actions taken?**<br>• Yes, all of the above<br>• Not applicable - private, for profit entity<br>• No<br>**Comments:** | | X | | | |

## Governing, Managing, Operating

| | | | | | | |
|---|---|---|---|---|---|---|
| 30 | Does your system have organizational charts and job descriptions for all positions (including policy makers, elected officials, employees and volunteer positions) that describe the roles and reporting relationships of key wastewater system personnel?<br>• Yes<br>• No<br>Comments: Board Members Only | | X | | | |
| 31 | Are policy makers and managers (e.g., board or council members, general manager) provided with orientation and systematic training in their duties and responsibilities?<br>• Yes<br>• No<br>Comments: | | | | X | |
| 32 | Does the wastewater system's management periodically assess percentage of system capacity used?<br>• Yes<br>• No<br>Comments: | | X | | | |
| 33 | Does your system maintain adequate insurance coverage (e.g., general liability, extended fire and property damage, workmen's compensation, errors and omissions)?<br>• Yes<br>• No<br>Comments: | | X | | | |

## Personnel

| | | | | | | |
|---|---|---|---|---|---|---|
| 34 | Does your wastewater system provide systematic training for operators and other employees in order to enable them to maintain their skills?<br>• Yes<br>• Not applicable - contracted operations<br>• No<br>Comments: | | X | | | |

## Customers

| | | |
|---|---|---|
| 35 | **Does your system make available to customers its adopted rules and regulations?**<br>• **Yes**<br>• **Not applicable - no customers**<br>• **No**<br>**Comments:** | X |
| 36a | Has your system adopted formal policies on: | |
| | ▶ customer deposits and payments; | X |
| | ▶ collections; | X |
| | ▶ wastewater rates; | X |
| | ▶ connection charges; | X |
| | ▶ customer complaints; | |
| | ▶ prohibited acts; | X |
| | ▶ prospective customers with excessive requirements for service; | X |
| | ▶ extensions for connecting new customers; | X |
| | ▶ commercial/industrial connections; *and* | X |
| | ▶ excess strength, fats, oils, and grease? | X |
| 36b | **Do your current policies adequately address these issues?**<br>• **Yes**<br>• **Not applicable - no customers**<br>• **No**<br>**Comments:** | X |

## Sustainability check: How green is your wastewater system?

| | | | | | | |
|---|---|---|---|---|---|---|
| GM1 | Has your system completed an energy management audit?<br>• Yes<br>Comments: | | | | | |
| GM2 | Does your system use measureable water reuse goals?<br>• Yes<br>Comments: | | | | | |
| GM3 | Has your system investigated the feasibility of alternative forms of energy for operations?<br>• Yes<br>Comments: | | | | | |
| GM4 | Do your operations and maintenance plan and standard operating procedures include energy efficiency measures?<br>• Yes, both include energy efficiency<br>Comments: | | | | | |
| GM5 | Does your system offer customers replicable demonstrations on best management practices, like water reclamation for landscaping and alternative energy solutions?<br>• Yes<br>Comments: | | | | | |
| | **Count of Managerial Responses** | | **11** | **0** | **1** | **0** |

**In the space below, identify any known managerial capacity deficiencies or wastewater system managerial problems not identified above.**

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**

**System Name: Helmsburg RSD**
**Discharge Permit Number: IN0058416**

| | Fill in the Blank Answers | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Green Points |
|---|---|---|---|---|---|
| **Financial Capacity** | | | | | |
| **Financial Management** | | | | | |
| 37 Does the wastewater system have processes, policies, or written procedures for:<br>► restricting the use and expenditure of funds to approved purposes;<br>► restricting the transfer of reserves to other accounts;<br>► the purchase of goods or services; and<br>► internal fiscal controls (e.g., more than one signature on checks, regular reconciliation of bank accounts, division of tasks and responsibilities between two or more people in the finance and accounting function)?<br>• Yes, all of the above<br>• No, some or all are missing (identify the missing policies or procedures in the Comments field below)<br>Comments: Procedures are not written. All expenditures are approved at the Board Metings. There is only one fund | | | | X | |
| 38 Does the system's board/council or other owner receive written expense and revenue reports from system bookkeeping personnel at each routinely scheduled meeting?<br>• Yes<br>• No<br>Comments: Board will implement | | | | X | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 39 | Do the financial reports for the review period:<br>▶ compare total revenues against the total expenses;<br>▶ show all transfers of funds between general operating accounts and other accounts of the system;<br>▶ show the net financial gain (or loss); and<br>▶ show the *actual year-to-date* revenues and expenditures, compared to *projected* revenues and expenses shown in the approved budget?<br>• Yes, all of the above<br>• No, some of these are not included in the financial reports (in the Comments field below, identify the ones listed above that are not included in the financial reports)<br>Comments: There is only one account. No projections are made. | | | | X | |
| 40 | Does the system's board/council or other owner review bank deposit statements?<br>• Yes<br>• No<br>Comments: | | X | | | |
| 41a | Are wastewater system financial records and transactions audited regularly or as required by state law by an *independent* auditor (e.g., CPA or peer group)?<br>• Yes<br>• No<br>Comments: State Board of Accounts audit | | X | | | |
| 41b | Does the system's board/council or other owner review audit reports?<br>• Yes<br>• No<br>Comments: | | | | | |
| 41c | Does the system's board/council or other owner implement major recommendations made by the auditor?<br>• Yes<br>• No<br>Comments: Not Applicable | | | | X | |

## Annual Budget Process

| | | | | | | |
|---|---|---|---|---|---|---|
| 42 | Does the system's policy making body or other owner prepare and adopt an annual budget?<br>• Yes<br>• No<br>Comments: Adopted at the January meeting | | X | | | |
| 43 | If the wastewater system owner operates other utilities or services, does the annual budget separate revenue and expense accounts for each utility/service?<br>• Yes<br>• Not applicable - does not operate other utilities<br>• No<br>Comments: | | X | | | |
| 44 | Does the annual budget include sufficient sub-accounts for operating and maintenance expenses (e.g., salaries, chemicals, repairs, supplies, power, telephone) to enable tracking of key expense items?<br>• Yes<br>• No<br>Comments: | | | | X | |
| 45a | Does the annual budget include necessary reserve funds, *or* is a separate schedule available to explain allocation of beginning balance funds for these purposes?<br>Examples of reserve funds:<br>► Operating reserve<br>► Debt service reserve<br>► Equipment replacement reserve<br>► Emergency reserve<br>► Capital improvements reserve<br>• Yes<br>• No<br>Comments: | | | | X | |
| 45b | Are funds allocated to wastewater reserves dedicated to wastewater purposes only?<br>• Yes<br>• No<br>Comments: | | X | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 46 | **Does your system have a multi-year budget projection that addresses future expenses and compensates for inflation?**<br>• **Yes**<br>• **No**<br>**Comments:** | | | | X | |

## Rate Setting

| | | | | | | |
|---|---|---|---|---|---|---|
| 47a | What is the average total billing charge to a residential customer discharging wastewater to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | $70/month | | | | |
| 47b | What is the average total billing charge to an industrial/commercial customer discharging wastewater to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | | | | | |
| 47c | What is the average total billing charge to a customer discharging fats, oils and grease to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | | | | | |
| 47d | What is the average total excess strength (BOD) billing charge to a customer discharging wastewater to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | | | | | |
| 48 | When was the last time your system calculated the costs of treating wastewater? Explain in the Comments field.<br>Comments: Raised Rates | Jan-19 | | | | |
| 49 | **Have you ever compared the recovery of revenues from your customers for "fairness"?**<br>• **Yes**<br>• **Not applicable - all customers are similar**<br>• **No**<br>**Comments:** | | X | | | |
| 50 | **Does your wastewater system's current rate structure produce enough income to cover current expenses (operations and maintenance) and *all* necessary reserves (see question 45a)?**<br>• **Yes**<br>• **No, but reserves are adequate to cover current expenses**<br>• **No**<br>**Comments:** | | X | | | |

## Capital Improvements Planning

| | | | | | | |
|---|---|---|---|---|---|---|
| 51 | Does your system have a capital improvements plan?<br>• Yes<br>• Actively working on it, but not complete<br>• No<br>Comments: Not written | | | X | | |

## Sustainability check: How green is your wastewater system?

| | | | | | | |
|---|---|---|---|---|---|---|
| GF1 | Does your system consider long term costs to include savings from the implementation of renewable energy?<br>• Yes<br>Comments: | | | | | |
| GF2 | Does your utility know about available energy rebates and incentives?<br>• Yes<br>Comments: | | | | | |
| GF3 | Have you contacted your energy supplier to discuss peak and non-peak costs and other potential areas for savings?<br>• Yes<br>Comments: | | | | | |
| GF4 | Does your system have an asset management plan?<br>• Yes<br>Comments: | | | | | |
| GF5 | Has your utility mapped its energy usage patterns (e.g., for aeration and pumping)?<br>• Yes<br>Comments: | | | | | |
| | Count of Financial Responses | | 7 | 1 | 7 | 0 |

**In the space below, identify any known financial capacity deficiencies or wastewater system financial problems not identified above.**

# Rural Community Assistance Partnership
# Wastewater System Technical, Managerial and Financial Capacity Assessment

**System Name: Helmsburg RSD**

**Discharge Permit Number: IN0058416**

| Capacity Component | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Critical Concern !!! | Green Points |
|---|---|---|---|---|---|
| Technical | 17 | 1 | 3 | 0 | 0 |
| Managerial | 11 | 0 | 1 | | 0 |
| Financial | 7 | 1 | 7 | | 0 |
| Total of All Components | 35 | 2 | 11 | 0 | 0 |

**Summary of assessment findings/additional comments:**

**Note: RCAP technical assistance providers must enter below, at a minimum, the completion date and the TAP's name.**

Assessment completion date: 9/23/19

Assessment submitted by RCAP:

Ethel L. Morgan
Technical Assistance Provider

Assessment received on behalf of the water system by:

Title:

B52112

# STATE OF INDIANA

AN EQUAL OPPORTUNITY EMPLOYER

STATE BOARD OF ACCOUNTS
302 WEST WASHINGTON STREET
ROOM E418
INDIANAPOLIS, INDIANA 46204-2769

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Web Site: www.in.gov/sboa

February 12, 2019

Board of Trustees
Helmsburg Regional Sewer District
2347 State Road 45, P.O. Box 147
Helmsburg, IN 47435

This report is supplemental to the audit report of the Helmsburg Regional Sewer District (District), for the period from January 1, 2013 to December 31, 2017. It has been provided as a separate report so that the reader may easily identify any Examination Findings that pertain to the District. It should be read in conjunction with the financial statement audit report of the District, which provides an opinion on the District's financial statements. This report may be found at www.in.gov/sboa/.

As authorized under Indiana Code 5-11-1, we engaged private examiners under our review to perform the audit of the District and perform procedures to determine compliance with applicable Indiana laws and uniform compliance guidelines established by the Indiana State Board of Accounts. The Examination Findings and Results contained herein describe the identified reportable instances of noncompliance found as a result of these procedures.

We have reviewed the Supplemental Audit Report for Helmsburg Regional Sewer District prepared by Crowe LLP, Independent Public Accountants, for the period January 1, 2013 to December 31, 2017. In our opinion, the Supplemental Audit Report was prepared in accordance with the guidelines established by the State Board of Accounts.

We call your attention to the findings in the report. Pages 3 through 4 contain four Examination Findings and Results.

The report is filed with this letter in our office as a matter of public record.

Paul D. Joyce

Paul D. Joyce, CPA
State Examiner

# COMPLIANCE EXAMINATION OF
# HELMSBURG REGIONAL SEWER DISTRICT

Brown County, Indiana
January 1, 2013 to December 31, 2017

HELMSBURG REGIONAL SEWER DISTRICT

Brown County, Indiana
January 1, 2013 to December 31, 2017

CONTENTS

HELMSBURG REGIONAL SEWER DISTRICT
SCHEDULE OF OFFICIALS
January 1, 2013 to December 31, 2017

| Office | Official | Term |
|---|---|---|
| Treasurer | Harrietta Weddle | 01-01-13 to 12-31-17 |
| President of the Board | Jeff Keener | 01-01-13 to 12-31-17 |

# INDEPENDENT ACCOUNTANT'S REPORT

To the Indiana State Board of Accounts and
Management of Helmsburg Regional Sewer District

We have examined Helmsburg Regional Sewer District's ("Unit") compliance with the Indiana State Board of Accounts' *Accounting and Uniform Compliance Guidelines Manual For Special Districts* during the period January 1, 2013 to December 31, 2017. Management of the Unit is responsible for the Unit's compliance with the specified requirements. Our responsibility is to express an opinion on the Unit's compliance with the specified requirements based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the Unit complied, in all material respects, with the specified requirements referenced above. An examination involves performing procedures to obtain evidence about whether the Unit complied with the specified requirements. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material noncompliance, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our qualified opinion.

Our examination does not provide a legal determination on the Unit's compliance with specified requirements.

Our examination disclosed material noncompliance with the *Accounting and Uniform Compliance Guidelines Manual For Special Districts* applicable to the Unit during the period January 1, 2013 to December 31, 2017, as described in items 2018-001, 2018-002, 2018-003 and 2018-004 on the following Schedule of Examination Findings and Results.

In our opinion, except for the material noncompliance described in the preceding paragraph, the Unit complied, in all material respects, with the aforementioned requirements during the period January 1, 2013 to December 31, 2017.

Crowe LLP
Crowe LLP

Indianapolis, Indiana
December 21, 2018

## FINDING 2018-001: BANK ACCOUNT RECONCILIATION REVIEW

**Criteria:** Indiana Code 5-13-6-1(e) states, *"All local investment officers shall reconcile at least monthly the balance of public funds, as disclosed by the records of the local officers, with the balance statements provided by the respective depositories."*

**Condition:** During testing, we noted that there is no formal, documented review of bank account reconciliations.

## FINDING 2018-002: APPROVAL OF DISBURSEMENTS

**Criteria:** Indiana Code 5-11-10-1.6 states in part, *". . . (b) As used in this section, 'claim' means a bill or an invoice submitted to a governmental entity for goods or services. (c) The fiscal officer of a governmental entity may not draw a warrant or check for payment of a claim unless: (1) there is a fully itemized invoice or bill for the claim; (2) the invoice or bill is approved by the officer or person receiving the goods and services; (3) the invoice or bill is filed with the governmental entity's fiscal officer; (4) the fiscal officer audits and certifies before payment that the invoice or bill is true and correct; and (5) payment of the claim is allowed by the governmental entity's legislative body or the board or official having jurisdiction over allowance of payment of the claim. . . ."*

**Condition:** During testing of disbursements, we noted the Board approves AP Claim Vouchers after the disbursement has already been made. The outside CPA receives the invoices at each monthly meeting that were paid in the previous month. He then creates AP claim vouchers and the Board signs off as approved.

## FINDING 2018-003: MINIMUM LEVEL OF INTERNAL CONTROLS

**Criteria:** The Indiana State Board of Accounts (SBOA) is required under Indiana Code 5-11-1-27(e) to define the acceptable minimum level of internal control standards. To provide clarifying guidance, the State Examiner compiled the standards contained in the manual, *Uniform Internal Control Standards for Indiana Political Subdivisions*. All political subdivisions subject to audit by SBOA are expected to adhere to these standards. The standards include adequate control activities. According to this manual: *"Control activities are the actions and tools established through policies and procedures that help to detect, prevent, or reduce the identified risks that interfere with the achievement of objectives. Detection activities are designed to identify unfavorable events in a timely manner whereas prevention activities are designed to deter the occurrence of an unfavorable event. Examples of these activities include reconciliations, authorizations, approval processes, performance reviews, and verification processes. An integral part of the control activity component is segregation of duties. . . .There is an expectation of segregation of duties. If compensating controls are necessary, documentation should exist to identify both the areas where segregation of duties are not feasible or practical and the compensating controls implemented to mitigate the risk. . . ."*

**Condition:** During testing, we noted that the Unit did not have formal documentation regarding the implementation of the minimum level of internal controls.

## FINDING 2018-004: MATERIALITY THRESHOLD

**Criteria:** SBOA State Examiner Directive 2015-6 requires political subdivisions to develop a materiality threshold policy approved through ordinance or resolution and policies and procedures to administer and report.

**Condition**: During testing, we noted that the Unit had not adopted a materiality threshold for the period under audit.

The contents of this report were discussed on December 21, 2018, with Frank Muzzillo, External Accountant, and Denise Broussard, President of the Board. The officials acknowledged the findings.

**RESOLUTION NO: 2016- 01**

# RESOLUTION OF THE HELMSBURG REGIONAL SEWAGE DISTRICT ADOPTING UNIFORM INTERNAL CONTROL STANDARDS FOR INDIANA POLITICAL SUBDIVISIONS

**WHEREAS**, I.C.5-11-1-27 requires each political subdivision to maintain a system of internal controls in order to promote accountability and transparency; and,

**WHEREAS**, in September 2015 pursuant to I.C.5-11-1-27(e) the Indiana State Board of Accounts developed and published the Uniform Internal Control Standards for Indiana Political Subdivisions in order to provide the basis of common understanding to assist public sector managers in complying with the internal control requirements; and,

**WHEREAS**, the Uniform Internal Control Standards for Indiana Political Subdivisions Manual is available on the government website at www.in.gov/sboa and contains the acceptable minimum level of internal control standards; and,

**WHEREAS**, pursuant to I.C.5-11-1-27(g) after June 30th, 2016 all Indiana Political Subdivisions must develop local policies regarding internal controls and insure that personnel receive training on internal controls; and,

**WHEREAS**, the Helmsburg Regional Sewage District ("HBRSD") finds that the policy regarding internal controls should be the internal control standards as set forth by the Indiana State Board of Accounts Uniform Internal Control Standards for Indiana Political Subdivisions Manual; and,

**WHEREAS**, the fiscal officer of HBRSD is Frank Muzzillo, Financial Clerk, and pursuant to the Uniform Internal Control Standards for Indiana Political Subdivisions, the fiscal officer shall certify in writing that the Uniform Internal Control Standards have been adopted; and,

**WHEREAS**, the Uniform Internal Control Standards require and mandate that the legislative body insures that personnel as defined in I.C.5-11-1-27 shall receive training concerning the Uniform Internal Control Standards for Indiana Political Subdivisions and that the fiscal officer shall certify in writing that the personnel as defined by statute have received the required training.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE HELMSBURG REGIONAL SEWAGE DISTRICT THAT:**

1. The above recitations are adopted as findings by HBRSD.

2. It is further ordered and determined that HBRSD hereby adopts as policy the internal control standards as set forth by the Indiana Start Board of Accounts Uniform Internal Control Standards for Indiana Political Subdivisions manual as expressly written and published by the Indiana State Board of Accounts in September, 2015, and as amended from time to time.

3. It is further determined that at the time the annual financial report is electronically filed, the fiscal officer of HBRSD shall certify in writing that the Uniform Internal Control Standards for Indiana Political Subdivisions have been adopted and shall certify that the personnel have been trained as required by law.

4. It is further resolved that HBRSD officially adopts the Uniform Internal Control Standards as published by the Indiana State Board of Accounts as the Internal Controls for HBRSD.

5. It is further resolved that this Resolution takes effect upon its adoption by HBRSD.

6. It is further resolved that any resolutions inconsistent or in conflict with the terms of this Resolution are of no further force and effect and are specifically repealed. This Resolution shall be in full force and effect immediately upon adoption as set forth herein.

**THIS RESOLUTION DULY PASSED THIS** 16TH **DAY OF MAY, 2016** by the HBRSD Board of Directors, having been passed by a vote 3 in Favor and 0 Opposed. This Resolution shall take effect immediately upon adoption.

**HELMSBURG REGIONAL SEWAGE DISTRICT BOARD OF DIRECTORS**

| | Aye | Nay |
|---|---|---|
| Jeff Keener, Chairman | X | |
| Virginia White, Vice Chairman | X | |
| Harrietta Weddle, Secretary | X | |

**RESOLUTION NO: 2016- 02**

# RESOLUTION OF THE HELMSBURG REGIONAL SEWAGE DISTRICT DETERMINING THE MATERIALITY THRESHOLD FOR REPORTING IRREGULAR VARIANCES, LOSSES, SHORTAGES AND THEFTS

**WHEREAS**, I.C.5-11-1-27 provides that all political subdivisions must develop their own policy of materiality for purposes of recognizing and reporting irregular variances, losses, shortages, and thefts which may occur; and,

**WHEREAS**, I.C.5-11-1-27(j) requires that all erroneous or irregular material variances, losses, shortages or thefts of district funds or property shall be reported immediately to the State Board of Accounts and that the Helmsburg Regional Sewage District ("HBRSD") may define what is considered material for reporting purposes; and,

**WHEREAS**, the HBRSD, by and through its Board of Directors, acting in its capacity as the fiscal body of HBRSD and acting as such designating body for purposes of I.C.5-11-1-27 is the best determiner of the qualitative and quantitative factors unique to HBRSD in arriving at materiality; and,

**WHEREAS**, the HBRSD has been provided a report from the fiscal officer regarding an analysis of any variances, losses, overages or shortages which occur within the political subdivision and HBRSD does find that said amounts are typically de-minimis and not material; and,

**WHEREAS**, the HBRSD, through separate Resolution, is further maintaining and establishing a system of internal controls required to promote accountability and transparency; and,

**WHEREAS**, the HBRSD specifically recognizes, confirms and acknowledges that pursuant to I.C.5-11-1-27(1) public officials who have actual knowledge of or reasonable cause to believe that there has been a misappropriation of public funds shall send written notice of the misappropriation to the State Board of Accounts and the prosecuting attorney and nothing set forth in this materiality resolution adopting internal controls is intended to circumvent the provisions of the above cited statute; and,

**WHEREAS**, the District Manager and fiscal officer of HBRSD maintains documentation regarding the assets, properties, and accounting of the monies and property of HBRSD and shall continue to do so in the future; and,

**WHEREAS**, after thorough consideration and review, the HBRSD Board of Directors determines that in accordance with I.C.5-11-1-27 the materiality level for HBRSD shall be the sum of ONE HUNDRED Dollars ($ 100.00 ); and,

**WHEREAS**, the HBRSD Board of Directors believes it is in the best interest of the customers of HBRSD that HBRSD, as the fiscal body, should establish a policy of materiality.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE HELMSBURG REGIONAL SEWAGE DISTRICT THAT:**

1. That the above recitations are adopted as findings by HBRSD.

2. It is further ordered and determined that the materiality level for HBRSD for purposes of I.C.5-11-1-27 shall be the sum of ONE HUNDRED Dollars ($ 100.00 ).

3. It is further determined that the provisions of I.C.5-11-1-21 are recognized and acknowledged as said statutes require public officials who have actual knowledge or reasonable cause to believe there has been a misappropriation of public funds shall immediately send written notice of the misappropriation to the State Board of Accounts.

4. It is further determined and adopted that the materiality level for HBRSD shall be ONE HUNDRED Dollars ($ 100.00 ) applicable to funds and to public property.

5. It is further resolved that the office of HBRSD shall maintain all documentation related to the public funds and property of HBRSD as well as any documentation and resolution of incidents that do not meet the materiality threshold.

6. It is further enacted that any resolutions inconsistent or in conflict with the terms of this Resolution are of no further force and effect and are specifically repealed. This Resolution shall be in full force and effect immediately upon adoption as set forth herein and approval by the Board of Directors of HBRSD.

**THIS RESOLUTION DULY PASSED THIS 16TH DAY OF MAY, 2016** by the HBRSD Board of Directors, having been passed by a vote 3 in Favor and 0 Opposed. This Resolution shall take effect immediately upon adoption.

**HELMSBURG REGIONAL SEWAGE DISTRICT BOARD OF DIRECTORS**

| | Aye | Nay |
|---|---|---|
| Jeff Keener, Chairman | X | — |
| Virginia White, Vice Chairman | X | — |
| Harrietta Weddle, Secretary | X | — |

# EXHIBIT 7
# T/M/F – BROWN COUNTY RSD

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**
**Revised June 2014**

# System Information

## Background on Your System

| | | Fill in the Blank Answers |
|---|---|---|
| 1 | System Name: | |
| 2 | Discharge Permit Number: | n/a |
| 3 | Which RCAP region is the system in? | |
| | — CRG | |
| | — Great Lakes RCAP | x |
| | — MAP | |
| | — RCAC | |
| | — RCAP Solutions | |
| | — Southeast RCAP | |
| 4 | What state/territory is the system in? | Indiana |
| 5 | What is the primary 5 digit zip code for the system? | |
| 6 | RCAP Technical Assistance Provider name: | Vicki Perry |
| 7 | **What stage does this assessment cover?** | |
| | • **Initial Assessment** | x |
| | • **Mid-project Benchmark** | |
| | • **Project Close-out** | |
| | **Comments: Utility is in planning phase; no physical components to assess.** | |

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**

**System Name:**
**Discharge Permit Number: n/a**

| | | Fill in the Blank Answers | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Critical Concern !!! | Green Points |
|---|---|---|---|---|---|---|---|
| # | **Technical Capacity** | | | | | | |
| | **Your System and Its Components** | | | | | | |
| 1 | How many people are served by your wastewater system? | TBD | | | | | |
| 2 | How many service connections does your wastewater system have? | TBD | | | | | |
| 3 | **Does your system have long term legal access to all physical components of the wastewater system?** | | | | | | |
| | • **Yes** | | | | | | |
| | • **Actively working on it, but not complete** | | | | | | |
| | • **No** | | | | | | |
| | **Comments:** | | | | | | |
| 4 | **Has the system conducted an asset inventory in which assets were identified, quantified (number of units, linear feet, etc.), and described as to age, condition and replacement cost?** | | | | | | |
| | • **Yes** | | | | | | |
| | • **Actively working on it, but not complete** | | | | | | |
| | • **No** | | | | | | |
| | **Comments:** | | | | | | |
| 5 | What are the discharge points for your wastewater system? (*check any that apply*) | | | | | | |
| | — River, lake or other body of fresh water | x | | | | | |
| | — Ocean or bay | | | | | | |
| | — Injection well/drainfield | | | | | | |
| | — Wastewater reclamation plant | | | | | | |
| | — Land application | | | | | | |
| | — Other (describe): | | | | | | |
| | **Comments:** | | | | | | |

| | | |
|---|---|---|
| 6 | What is your system's total treatment capacity in million gallons per day (MGD)? | TBD |
| 7 | **Has your system ever experienced capacity shortfalls during storms or other peak load periods?**<br>**• No**<br>**• Yes**<br>**Comments:** | |
| 8 | **Does your wastewater system have an emergency or standby electrical power source sufficient to run pumps, treatment works, and other critical system components?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | |
| 9a | **Does your wastewater system have accurate maps or as-built drawings and adequate system documentation of the complete collection, treatment and discharge components?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | |
| 9b | **Is there a program or procedure in place for updating as-built drawings?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | |
| 10 | **Does your wastewater treatment plant have correct cross-connection control devices installed wherever necessary?**<br>**• Yes**<br>**• Actively working on it, but not complete**<br>**• No**<br>**Comments:** | |
| 11 | **Does your system experience any routine failures (e.g., leaks, blockages)?**<br>**• No**<br>**• Yes**<br>**Comments:** | |

## Certified Operators

**12** **Is an appropriate grade certified wastewater treatment plant operator on duty or on call at all times? If No, explain in Comments field.**

- **Yes, certified operator on duty or on call at all times**
- **No, certified operator not on duty or on call at all times**

**Comments:**

## Preventive Maintenance

**13a** **Does your wastewater system have a written operations and maintenance plan?**

- **Yes**
- **Actively working on it, but not complete**
- **No**

**13b** **Do system personnel follow the operations and maintenance plan?**

- **Yes**
- **Not applicable - system has no plan**
- **No**

**Comments:**

## Regulatory Compliance

14a Which permits, licenses, plans, or other agreements is your system (including collection system) required to have on file? List all in the Comments field.

Comments:

**14b** **Are all of the required permits, licenses, plans, or other agreements actually on file?**

- **Yes**
- **No**

**15** **Has your system ever exceeded any permit limitations?**

- **No**
- **Yes, but damages were mitigated**
- **Yes, this is a current problem - explain in Comments field**

**Comments:**

| | | |
|---|---|---|
| 16a | Have all deficiencies on your system's last inspection by your oversight agency been corrected?<br>• Yes<br>• Not applicable<br>• Actively working on it, but not complete<br>• No<br>Comments: | |
| 16b | Date of last inspection by your oversight agency | |
| 17 | Has your wastewater system received any administrative order or notice of violation from the state or EPA in the past five years? If Yes, explain in the Comments field.<br>• No<br>• Yes, but all deficiencies have been corrected<br>• Yes, and some or all of the deficiencies have not been corrected<br>Comments: | |
| 18 | Does your system have an approved method of biosolids disposal?<br>• Yes<br>• Not applicable - explain in Comments field<br>• No<br>Comments: | |

## Operations Recordkeeping

| | | |
|---|---|---|
| 19 | Does the system operator regularly report to management a summary of maintenance and repair activities performed, a summary of flows and loading, major operational or maintenance problems and recommendations for resolving those problems, *and* the status of any construction projects underway?<br>• Yes; all of the above reported<br>• No; one or more of the above are not reported<br>Comments: | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 20 | Does your wastewater system have and maintain wastewater treatment records, including operations and maintenance records?<br>• Yes, have and maintain<br>• No<br>Comments: | | | | | | |
| 21 | Do your system operators perform any sort of regular process control monitoring; e.g., testing sent to an outside lab or in-house process control testing performed at the wastewater treatment plant?<br>• Yes<br>• No<br>Comments: | | | | | | |

## Emergency Planning

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 22 | Does your wastewater system have a vulnerability assessment?<br>• Yes, and it is current<br>• Actively working on it, but not complete<br>• Yes, but it needs to be updated<br>• No | | | | | | |
| 23 | Does your wastewater system have an emergency response plan?<br>• Yes, and it is current<br>• Actively working on it, but not complete<br>• Yes, but it needs to be updated<br>• No | | | | | | |

## Sustainability check: How green is your wastewater system?

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GT1 | Does your system recycle or reuse biosolids (e.g., composting or land application)?<br>• Yes<br>Comments: | | | | | | |
| | Count of Technical Responses | 0 | 0 | 0 | 0 | 0 | |

**In the space below, identify any known technical capacity deficiencies or wastewater system technical problems not identified above.**

BCRSD is in the planning phase, but the Board will ensure it has as-builts, an appropriate operator on staff, an ERP, good recordkeeping, and operate within its (future) NPDES permit once it has a WWTP.

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**

**System Name:**
**Discharge Permit Number: n/a**

# Managerial Capacity

## Authority and Responsibility

| | | Fill in the Blank Answers | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Green Points |
|---|---|---|---|---|---|---|
| 23 | What type of ownership best describes your wastewater system? | | | | | |
| | — Local government | | | | | |
| | — State government | | | | | |
| | — Federal government | | | | | |
| | — Not for profit: corporation, mutual, association, cooperative, etc. | | | | | |
| | — For profit: corporation, sole proprietorship, partnership, cooperative, etc. | | | | | |
| | — Tribal | | | | | |
| | — Other (specify): Special District | x | | | | |
| 24 | What type of governance best describes your wastewater system? | | | | | |
| | — Board or council | x | | | | |
| | — Private ownership | | | | | |
| | — Other (specify): | | | | | |
| 25a | Which of the following organizational documents are relevant and, therefore, should be in the wastewater system's files? (Check all that apply) | | | | | |
| | — Articles of Incorporation | | | | | |
| | — Corporation Bylaws | x | | | | |
| | — Certificates of Operating Authority | | | | | |
| | — Certificates of Public Convenience & Necessity | | | | | |
| | — State or Local Enabling Legislation | x | | | | |
| | — Municipal or County Charter | | | | | |
| | — Other (specify): | | | | | |
| | — Other (specify): | | | | | |

| | | |
|---|---|---|
| | — Other (specify): | |
| 25b | **Does the wastewater system have *all* relevant organizational documents on file?**<br>**• Yes, and all documents are up to date**<br>**• Yes, but some or all need to be updated**<br>**• No**<br>**Comments:** | x |
| 26 | **Do the organizational documents provide clear authority for the organization to levy fees and enforce payment?**<br>**• Yes**<br>**• No** | x |

## Meetings

| | | |
|---|---|---|
| 27 | **Does the board or council hold regularly scheduled, publicly announced meetings?**<br>**• Yes**<br>**• Not applicable - private, for profit entity**<br>**• No**<br>**Comments:** | x |
| 28 | **Are board or council meetings frequently cancelled due to lack of a quorum?**<br>**• No**<br>**• Not applicable - private, for profit entity**<br>**• Yes**<br>**Comments:** | x |

| | | |
|---|---|---|
| 29 | For each board or council meeting, is there:<br>▶ a written agenda;<br>▶ time on the agenda designated for comments from customers and other stakeholders; *and*<br>▶ a complete and accurate written record of matters discussed and actions taken?<br>• Yes, all of the above<br>• Not applicable - private, for profit entity<br>• No<br>Comments: | x |

## Governing, Managing, Operating

| | | |
|---|---|---|
| 30 | Does your system have organizational charts and job descriptions for all positions (including policy makers, elected officials, employees and volunteer positions) that describe the roles and reporting relationships of key wastewater system personnel?<br>• Yes<br>• No<br>Comments: RSD has no employees. Board roles are in the bylaws. | x |
| 31 | Are policy makers and managers (e.g., board or council members, general manager) provided with orientation and systematic training in their duties and responsibilities?<br>• Yes<br>• No<br>Comments: No employees. Board members attend RCAP Board Training and IRSDA events. | x |
| 32 | Does the wastewater system's management periodically assess percentage of system capacity used?<br>• Yes<br>• No<br>Comments: n?A | |
| 33 | Does your system maintain adequate insurance coverage (e.g., general liability, extended fire and property damage, workmen's compensation, errors and omissions)?<br>• Yes<br>• No<br>Comments: n/a | |

## Personnel

**34** **Does your wastewater system provide systematic training for operators and other employees in order to enable them to maintain their skills?**

- **Yes**
- **Not applicable - contracted operations**
- **No**

**Comments:**

## Customers

**35** **Does your system make available to customers its adopted rules and regulations?**

- **Yes** x
- **Not applicable - no customers**
- **No**

**Comments:**

36a Has your system adopted formal policies on:

- ▶ customer deposits and payments;
- ▶ collections;
- ▶ wastewater rates;
- ▶ connection charges;
- ▶ customer complaints;
- ▶ prohibited acts;
- ▶ prospective customers with excessive requirements for service;
- ▶ extensions for connecting new customers;
- ▶ commercial/industrial connections; *and*
- ▶ excess strength, fats, oils, and grease?

**36b** **Do your current policies adequately address these issues?**

- **Yes** x
- **Not applicable - no customers**
- **No**

**Comments:**

## Sustainability check: How green is your wastewater system?

| | | | | | |
|---|---|---|---|---|---|
| GM1 | Has your system completed an energy management audit?<br>• Yes<br>Comments: | | | | |
| GM2 | Does your system use measureable water reuse goals?<br>• Yes<br>Comments: | | | | |
| GM3 | Has your system investigated the feasibility of alternative forms of energy for operations?<br>• Yes<br>Comments: | | | | |
| GM4 | Do your operations and maintenance plan and standard operating procedures include energy efficiency measures?<br>• Yes, both include energy efficiency<br>Comments: | | | | |
| GM5 | Does your system offer customers replicable demonstrations on best management practices, like water reclamation for landscaping and alternative energy solutions?<br>• Yes<br>Comments: | | | | |
| | **Count of Managerial Responses** | 9 | 0 | 0 | 0 |

**In the space below, identify any known managerial capacity deficiencies or wastewater system managerial problems not identified above.**

There is no system yet, but the Board is committed to reducing its environmental impact where possible.

**Rural Community Assistance Partnership**
**Wastewater System Technical, Managerial and Financial Capacity Assessment**

**System Name:**
**Discharge Permit Number: n/a**

| | Fill in the Blank Answers | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Green Points |
|---|---|---|---|---|---|

# Financial Capacity

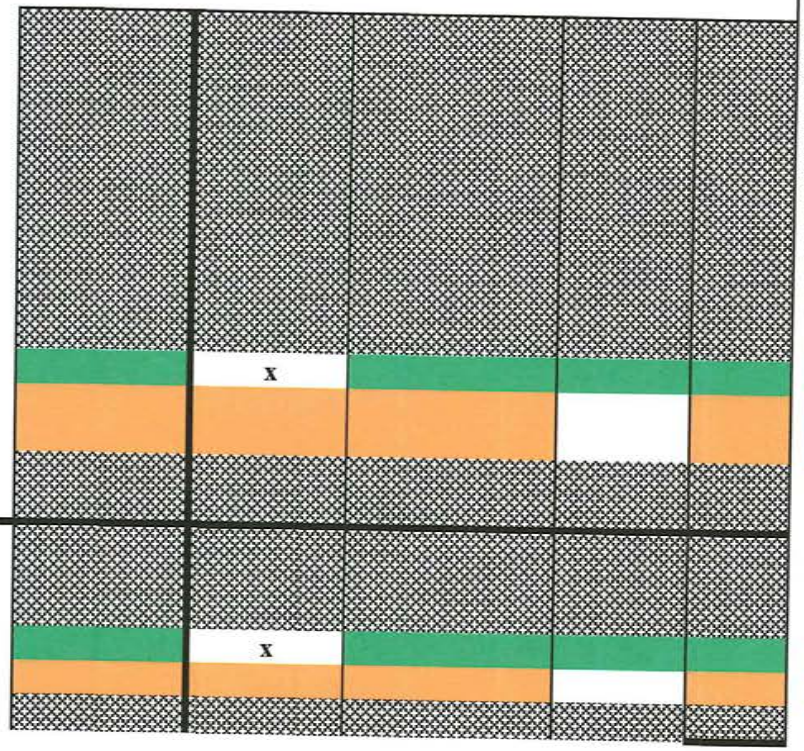
## Financial Management

**37** Does the wastewater system have processes, policies, or written procedures for:

- ▶ restricting the use and expenditure of funds to approved purposes;
- ▶ restricting the transfer of reserves to other accounts;
- ▶ the purchase of goods or services; and
- ▶ internal fiscal controls (e.g., more than one signature on checks, regular reconciliation of bank accounts, division of tasks and responsibilities between two or more people in the finance and accounting function)?

• Yes, all of the above
• No, some or all are missing (identify the missing policies or procedures in the Comments field below)

Comments:RSD is bound by SBoA protocol regarding the above but has not yet adopted specific policies.




**38** Does the system's board/council or other owner receive written expense and revenue reports from system bookkeeping personnel at each routinely scheduled meeting?

• Yes
• No

Comments:

| | | | | | | |
|---|---|---|---|---|---|---|
| 39 | Do the financial reports for the review period:<br>► compare total revenues against the total expenses;<br>► show all transfers of funds between general operating accounts and other accounts of the system;<br>► show the net financial gain (or loss); and<br>► show the *actual year-to-date* revenues and expenditures, compared to *projected* revenues and expenses shown in the approved budget?<br>• Yes, all of the above<br>• No, some of these are not included in the financial reports (in the Comments field below, identify the ones listed above that are not included in the financial reports)<br>Comments: | | | | | |
| 40 | Does the system's board/council or other owner review bank deposit statements?<br>• Yes<br>• No<br>Comments: | | x | | | |
| 41a | Are wastewater system financial records and transactions audited regularly or as required by state law by an *independent* auditor (e.g., CPA or peer group)?<br>• Yes<br>• No<br>Comments: | | x | | | |
| 41b | Does the system's board/council or other owner review audit reports?<br>• Yes<br>• No<br>Comments: Hasn't been audited yet. Audits are done by SBoA | | x | | | |
| 41c | Does the system's board/council or other owner implement major recommendations made by the auditor?<br>• Yes<br>• No<br>Comments: n/a | | | | | |

## Annual Budget Process

| | | |
|---|---|---|
| 42 | **Does the system's policy making body or other owner prepare and adopt an annual budget?**<br>• Yes<br>• No<br>**Comments: Don't need one yet.** | |
| 43 | **If the wastewater system owner operates other utilities or services, does the annual budget separate revenue and expense accounts for each utility/service?**<br>• Yes<br>• Not applicable - does not operate other utilities<br>• No<br>**Comments:** | x |
| 44 | **Does the annual budget include sufficient sub-accounts for operating and maintenance expenses (e.g., salaries, chemicals, repairs, supplies, power, telephone) to enable tracking of key expense items?**<br>• Yes<br>• No<br>**Comments:** | |
| 45a | **Does the annual budget include necessary reserve funds, *or* is a separate schedule available to explain allocation of beginning balance funds for these purposes?**<br>**Examples of reserve funds:**<br>► Operating reserve<br>► Debt service reserve<br>► Equipment replacement reserve<br>► Emergency reserve<br>► Capital improvements reserve<br>• Yes<br>• No<br>**Comments:** | |

| | | |
|---|---|---|
| 45b | **Are funds allocated to wastewater reserves dedicated to wastewater purposes only?**<br>**• Yes**<br>**• No**<br>**Comments:** | |
| 46 | **Does your system have a multi-year budget projection that addresses future expenses and compensates for inflation?**<br>**• Yes**<br>**• No**<br>**Comments:** | |

## Rate Setting

| | | |
|---|---|---|
| 47a | What is the average total billing charge to a residential customer discharging wastewater to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | |
| 47b | What is the average total billing charge to an industrial/commercial customer discharging wastewater to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | |
| 47c | What is the average total billing charge to a customer discharging fats, oils and grease to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | |
| 47d | What is the average total excess strength (BOD) billing charge to a customer discharging wastewater to your system? Please enter your response in the format $_____ / time period (e.g., $20/bi-monthly) | |
| 48 | When was the last time your system calculated the costs of treating wastewater? Explain in the Comments field.<br>Comments: | |
| 49 | **Have you ever compared the recovery of revenues from your customers for "fairness"?**<br>**• Yes**<br>**• Not applicable - all customers are similar**<br>**• No**<br>**Comments:** | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 50 | Does your wastewater system's current rate structure produce enough income to cover current expenses (operations and maintenance) and *all* necessary reserves (see question 45a)?<br>• Yes<br>• No, but reserves are adequate to cover current expenses<br>• No<br>Comments: | | | | | |

## Capital Improvements Planning

| | | | | | | |
|---|---|---|---|---|---|---|
| 51 | Does your system have a capital improvements plan?<br>• Yes<br>• Actively working on it, but not complete<br>• No<br>Comments: | | | | | |

## Sustainability check: How green is your wastewater system?

| | | | | | | |
|---|---|---|---|---|---|---|
| GF1 | Does your system consider long term costs to include savings from the implementation of renewable energy?<br>• Yes<br>Comments: | | | | | |
| GF2 | Does your utility know about available energy rebates and incentives?<br>• Yes<br>Comments: | | | | | |
| GF3 | Have you contacted your energy supplier to discuss peak and non-peak costs and other potential areas for savings?<br>• Yes<br>Comments: | | | | | |
| GF4 | Does your system have an asset management plan?<br>• Yes<br>Comments: | | | | | |
| GF5 | Has your utility mapped its energy usage patterns (e.g., for aeration and pumping)?<br>• Yes<br>Comments: | | | | | |
| | **Count of Financial Responses** | | 6 | 0 | 0 | 0 |

**In the space below, identify any known financial capacity deficiencies or wastewater system financial problems not identified above.**

| |
|---|
| The RSD is not yet operational. Any expenses are for planning, which are covered by grant. Budgets were developed for the grants. Much of the above is N/A but the Board is aware of their fiduciary responsibilities. |

# Rural Community Assistance Partnership
# Wastewater System Technical, Managerial and Financial Capacity Assessment

**System Name:**

**Discharge Permit Number: n/a**

| Capacity Component | Acceptable | In Progress; Not Complete; Still Deficient | Deficient | Critical Concern !!! | Green Points |
|---|---|---|---|---|---|
| **Technical** | **0** | **0** | **0** | **0** | **0** |
| **Managerial** | **9** | **0** | **0** | | **0** |
| **Financial** | **6** | **0** | **0** | | **0** |
| **Total of All Components** | **15** | **0** | **0** | **0** | **0** |

**Summary of assessment findings/additional comments:**

There is no system is place. RSD is in planning phase, but has attended Board Training and has necessary policies and procedures in place that are needed at this point. RSD is aware of its TMF responsibilities. I see no compliance issues.

**Note: RCAP technical assistance providers must enter below, at a minimum, the completion date and the TAP's name.**

Assessment completion date: 10.15.19

Assessment submitted by RCAP:

Technical Assistance Provider

Assessment received on behalf of the water system by:

Title: