



# State Revolving Fund Loan Programs

## Drinking Water, Wastewater, Nonpoint Source

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### ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

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#### TOWN OF GREENTOWN

#### Wastewater Treatment Plant Improvements

#### STATE REVOLVING FUND PROJECT WW 12 34 05 01

**DATE:** July 13, 2012

**TARGET PROJECT APPROVAL DATE:** August 13, 2012

#### I. INTRODUCTION

The above entity has applied to the Waste Water State Revolving Fund (WWSRF) Loan Program for a loan to finance all or part of the waste water project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed at <http://www.in.gov/ifa/srf/>.

#### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The WWSRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

#### III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

**Sarah Hudson**  
**Senior Environmental Manager**  
**State Revolving Fund**  
**100 N. Senate Ave. IGCN 1275**  
**Indianapolis, IN 46204**  
**317-232-8663; [sahudson@ifa.in.gov](mailto:sahudson@ifa.in.gov)**

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**ENVIRONMENTAL  
ASSESSMENT**

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**I. PROJECT IDENTIFICATION**

Project Name and Address: Wastewater Treatment Plant Improvements  
Town of Greentown  
112 N. Meridian Street  
Greentown, IN 46936

Authorized Representative: Ms. Joyce Higginbottom  
Town Council President

**II. PROJECT LOCATION AND BACKGROUND**

The project area is located in Greentown, Indiana, in the Liberty Civil Township of Howard County. Specifically, the projects are located in Township 23 N, Range 5 E, Sections 4 and 5 of the Greentown USGS quadrangle. See Exhibit A-4 and A-9.

**III. PROJECT NEED AND PURPOSE**

Greentown's wastewater treatment plant (WWTP) is deteriorated and undersized.

The existing WWTP structures and equipment are aging. Many structures show significant deterioration and need to be rehabilitated or replaced. Although nearly all of the mechanical equipment was replaced between 1990 and 2000, most of this equipment was installed in 1990 and has reached the end of its useful service life or has limited capability for processing the current wastewater flow.

During wet weather, flow to the plant regularly exceeds the design and peak flow capacity causing the first manhole upstream of the plant to overflow into Wildcat Creek. These sanitary sewer overflows violate the town's operating permit, and cause safety and human health related concern because Wildcat Creek ultimately becomes part of Kokomo Waterworks Reservoir #2. Since the plant discharges almost directly to the reservoir, discharge permit limits are stringent and the WWTP has not consistently met them for *E. coli* and ammonia-nitrogen. As a result, the town is under a Sewer Connection Ban and an Agreed Order with the Indiana Department of Environmental Management (IDEM).

Rehabilitating and expanding the WWTP will prevent further deterioration and violation of State and Federal regulations.

**IV. PROJECT DESCRIPTION**

The WWTP improvements project includes installing a new influent sewer, new influent structure with raw sewage pumping and screening, new raw sewage force main, improvements to the existing surge tank and oxidation ditch, new flow splitter box, two new secondary clarifiers, new RAS/WAS pump station, new alum storage and feed and electrical building, new primary digesters with sludge transfer pumps, new digester blowers, new solids handling system, new liquid sludge loading station, new UV disinfection system with post aeration, improvements to the polishing ponds and control structure, new plant effluent and headwall, yard piping, and site work. See Exhibit A-9.

**V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING**

**A. Selected Plan Estimated Cost Summary**

**CONSTRUCTION COSTS**

1.	New 24" Influent Sewer	\$50,000
2.	New Influent Structure/Raw Sewage Pump Station/Fine Screen	\$320,000
3.	Demo Existing Influent Structure/Building/Digesters	\$50,000
4.	New 16" D.I. Raw Sewage Force Main	\$30,000
5.	Improvements – Surge Tank	\$35,000
6.	Improvements – Oxidation Ditch	\$325,000
7.	New Flow Splitter Box	\$30,000
8.	New Secondary Clarifiers (2 @ 45' diameter each)	\$650,000
9.	New RAS/WAS Pump Station	\$80,000
10.	New Alum Storage/Feed and Electrical Building	\$200,000
11.	New Primary Digesters (2) with Sludge Transfer Pumps	\$360,000
12.	New Digester Blowers	\$40,000
13.	New Solids Handling System	\$70,000
14.	New Liquid Sludge Loading Station	\$15,000
15.	New UV Disinfection System with Post Aeration	\$180,000
16.	Demo Existing Post Aeration Basin	\$20,000
17.	Improvements – Polishing Ponds/Control Structure	\$70,000
18.	New 18" Plant Effluent and Headwall	\$35,000
19.	New Yard Piping and Valves	\$250,000
20.	Site Work	\$50,000
21.	Plant Drive Pavement Repair	\$75,000
22.	Site Dewatering	\$50,000
23.	Bypass Pumping	\$50,000
24.	Temp. Treatment Controls	\$100,000
25.	Coatings, Labeling, Signage	\$50,000
26.	Electrical and Instrumentation/Controls	\$600,000
27.	Mobilization, Demobilization, Bonds, Insurance	\$190,000
	<b>Construction Sub-Total</b>	<b>\$3,975,000</b>
	Contingency	395,000
	<b>Construction Total</b>	<b>\$4,370,000</b>

**NON-CONSTRUCTION COSTS**

1.	Administrative, Financial & Legal	\$133,000
2.	Design & Bidding Engineering Services	\$350,000
3.	Construction Engineering Services	\$200,000
4.	Permit & Warranty Assistance Engineering Services	\$70,000
5.	Resident Project Representative Services	\$280,000
6.	WWTP Start-up Assistance & O&M Manual Services	\$60,000
	<b>Non-Construction Total</b>	<b>\$1,093,000</b>

**Total Project Costs** **\$5,463,000**

**B.** Greentown plans to finance the project through a future 20-year SRF loan at an interest rate to be determined at the loan closing. Monthly user rates and charges may need to be analyzed to

determine if adjustments are required for loan repayment.

## VI. DESCRIPTION OF EVALUATED ALTERNATIVES

- A. No-Action:** The no-action alternative was evaluated. It was determined that the no-action alternative would not provide a solution to sanitary sewer overflows, discharge permit violations, and facility deterioration. The requirements of the Agreed Order would not be met. Additionally, the Sewer Ban would continue, hampering the town's development and economic growth. Therefore, this alternative was rejected.
- B. Existing Facilities Optimization:** The age and limitations of both peak and average treatment capacities of the existing facility make this a non-viable alternative.
- C. Collection System Rehabilitation or Replacement:** Although infiltration and inflow is a concern in the collection system, there is only one sanitary sewer overflow point, which is just upstream of the WWTP. This indicates that the existing collection system is sized sufficiently to convey all flows to the WWTP. Since the WWTP itself is the limiting factor, collection system rehab or replacement alone is a non-viable alternative.
- D. New WWTP:** The existing WWTP site has limited land available for growth, so a new WWTP would require selection and purchase of land elsewhere, and new pumping facilities to convey the wastewater. This alternative would be more expensive and pose higher environmental impacts than the other alternatives and was therefore not selected.
- E. WWTP Upgrade and Expansion:** It is economically feasible to reuse as many existing equipment, tanks, and structures that are still in good structural or operational condition while improving or replacing aging or inadequately sized equipment and tanks. Therefore, this is the selected alternative.

## VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

**Disturbed / Undisturbed Land:** The only project components occurring on undisturbed land are the 18-inch effluent outfall line and effluent outfall structure (also referred to as headwall). All other improvements will occur on land disturbed by the original construction of the wastewater treatment plant (WWTP) in 1963 and subsequent improvements in 1990 and 2000.

An Indiana Archaeological Short Report was completed on January 10, 2012, which resulted in the following findings:

1. "Phase 1a reconnaissance has located no archaeological resources in the project area".
2. "The archeological records check has determined that the project area does not have the potential to contain archaeological resources and no further work is recommended before the project is allowed to proceed".

**Structural Resources:** Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

**Wetlands:** Wetlands will be impacted by this project, specifically by the installation of the 18-inch effluent outfall line and effluent outfall structure, and the 24-inch influent line. Both projects will impact Brunk Ditch.

A wetland delineation for the site will be conducted to determine the wetland boundaries. A Section 404 Permit under the Clean Water Act through the U.S. Army Corps of Engineers (USACE) will be required for the proposed work in the wetland areas. Additionally, a Section 401 Water Quality Certification permit through the Indiana Department of Environmental Management (IDEM) will be required. All required USACE and IDEM permits will be obtained prior to any construction work.

**Surface Waters:** The installation of the 18-inch effluent outfall line and effluent outfall structure, and the 24-inch influent line will require disturbances to Brunk Ditch.

The proposed construction activities on the 18-inch effluent outfall line and effluent outfall structure may disturb areas below the Ordinary High Water Mark (OHWM) of Brunk Ditch. A Section 404 Permit under the CWA through the USACE and a Section 401 Water Quality Certification permit through IDEM will be required for any work below the OHWM of Brunk Ditch. All required USACE and IDEM permits will be obtained prior to any construction work. A Certificate of Approval for Construction in a Floodway was issued on May 24, 2012 from the DNR Division of Water (Application #FW-26617).

The project will not adversely affect waters of high quality listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 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).

**Floodplain:** Construction of the 24-inch influent line and influent structure, 18-inch effluent outfall line and effluent outfall structure, a portion of the northeast rain garden, and the permanent riparian establishment will occur in the floodplain along the north boundary. There is no history of flooding at the WWTP site since an earthen berm was constructed (previously) along the north and south boundaries. The Indiana Department of Natural Resources (DNR) Division of Water was contacted by the town's consultant to complete a Floodplain Analysis and Regulatory Assessment (July 28, 2011). The floodplain construction activities will adhere to DNR standards and structures will be protected from the 100-year flood.

**Groundwater:** Dewatering may be required to temporarily lower the groundwater in some areas. Discharge from dewatering activities will be filtered or settled to remove sediment and will not be directly discharged in any waterway, wetland, or storm water conveyance. Notes to this effect will be included in the project plans and specifications. Groundwater will not be adversely affected by construction of these projects. The project will not impact a sole source aquifer.

**Plants and Animals:** Tree removal will be necessary in to install the 18-inch effluent outfall line and effluent outfall structure. Tree removal is not expected at any other project areas. The construction and operation of the project are not expected to pose a threat to or negatively impact state or federal-listed endangered species and their habitat.

The Indiana Bat (*Myotis soldalis*) is a Federal and State listed endangered species that migrates into Indiana in the summer months. Since the project area is adjacent to wooded areas and a waterway, there is a potential for Indiana Bats to be present. Tree removal is expected to be minimal for construction of this project. When tree removal is required, it will not be conducted

between April 1 and September 30 to avoid potential impacts to the Indiana Bat. If it is determined that a species from the Indiana or Federal List is found to be disturbed by construction activities, then DNR will be contacted immediately.

**Prime Farmland:** The project will not cause conversion of prime farmland.

**Air Quality:** Construction activities may generate dust and noise. Reasonable and proper construction techniques and clean-up practices will be implemented. No direct long-term air quality impacts are expected.

**Open Space and Recreational Opportunities:** The project will neither create nor destroy any open space and recreation opportunities.

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

**National Natural Landmarks:** Construction and operation of the proposed project will not impact National Natural Landmarks.

## **B. Indirect Impacts**

The town's Preliminary Engineering Report (PER) states: The Town, through the authority of the council, planning commission or other means, will ensure that future development, as well as future sanitary sewer or treatment works projects connecting to SRF-funded facilities, will not adversely impact wetlands, archaeological/historical/structural resources, or other sensitive environmental resources. The Town will require new development and sewer projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, DNR, IDEM, and other environmental review authorities.

## **C. Comments by Environmental Review Authorities**

In a letter dated November 14, 2011, the Natural Resources Conservation Service has determined that the project will not affect prime/unique farmland.

A Certificate of Approval for Construction in a Floodway was issued on May 24, 2012 from the DNR Division of Water (Application #FW-26617). An Early Coordination letter dated July 5, 2012 states that the special conditions contained in the FW-26617 permit must be implemented to minimize impacts to fish, wildlife, and botanical resources.

The Indiana Department of Natural Resources (IDNR) Division of Historic Preservation and Archaeology noted "no historic properties will be altered, demolished, or removed by the proposed project" in a letter dated July 3, 2012.

The U.S. Fish and Wildlife Service in a letter dated July 2, 2012 states:

If a trench cut is used for the influent line crossing of Brunk Ditch, we recommend that it be conducted during the low water season. We also recommend the following measures for the mitigation site.

1. Plant the entire site with native trees and shrubs suitable for riparian wetlands.
2. Make the planting area contiguous with the existing narrow wooded corridor along the Wildcat Creek.

3. Permanently protect the mitigation area with a deed restriction.

There is suitable summer habitat for the Indiana bat in the forested corridors along the Wildcat Creek and Brunk Ditch. The project will not eliminate enough habitat to affect the Indiana bat, but to avoid incidental take from removal of an occupied roost tree we recommend that tree-clearing be avoided during the period April 1 – September 30.

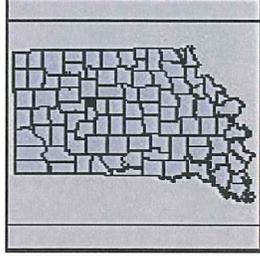
#### **VIII. MITIGATION MEASURES**

Erosion control measures will be implemented during all construction activity. Areas disturbed by construction will be restored and revegetated with seeding and other measures such as erosion control blankets, as necessary. The removal of trees and other natural vegetation will be limited to September 30 through April 1 for completion so as to not disturb the habitat of the Indiana Bat (*Myotis soldalis*). A Rule 5 permit for erosion control will be obtained from IDEM prior to construction. Section 401 and 404 permits will be obtained from IDEM and USACE for disturbances to jurisdictional wetland or waterways. Mitigation measures cited in comment letters will be implemented.

#### **IX. PUBLIC PARTICIPATION**

A properly noticed public hearing was held on December 12, 2011 at 6:30 pm at the Town Hall, 112 N. Meridian Street to discuss the project's preliminary engineering report. No comments on this project were voiced at the public hearing, and no written comments were submitted in the five-day period following the public hearing.

# Greentown WWTP - Project Environmental Map



## Legend

Streams (NHD)



Rivers (NHD)

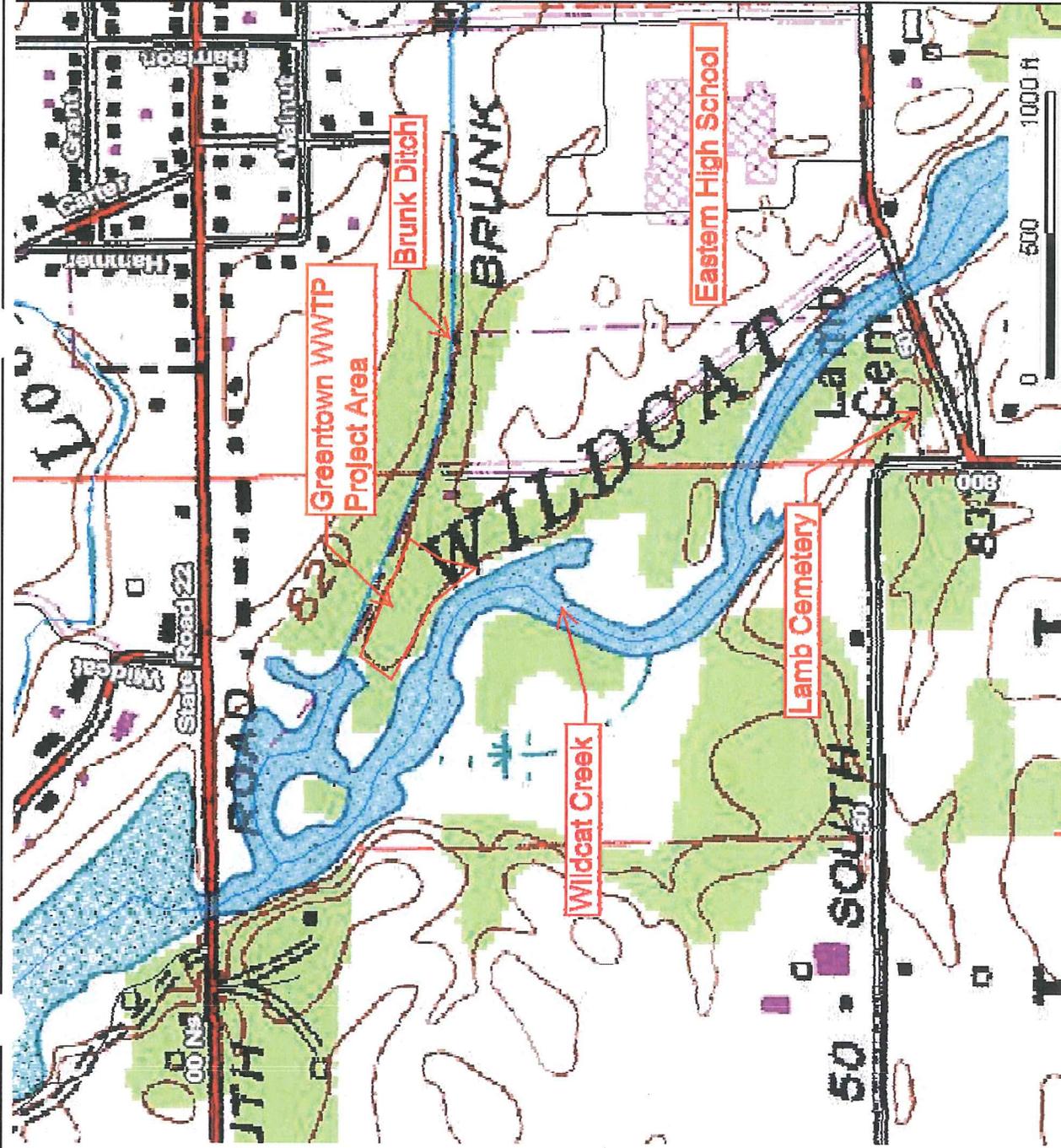


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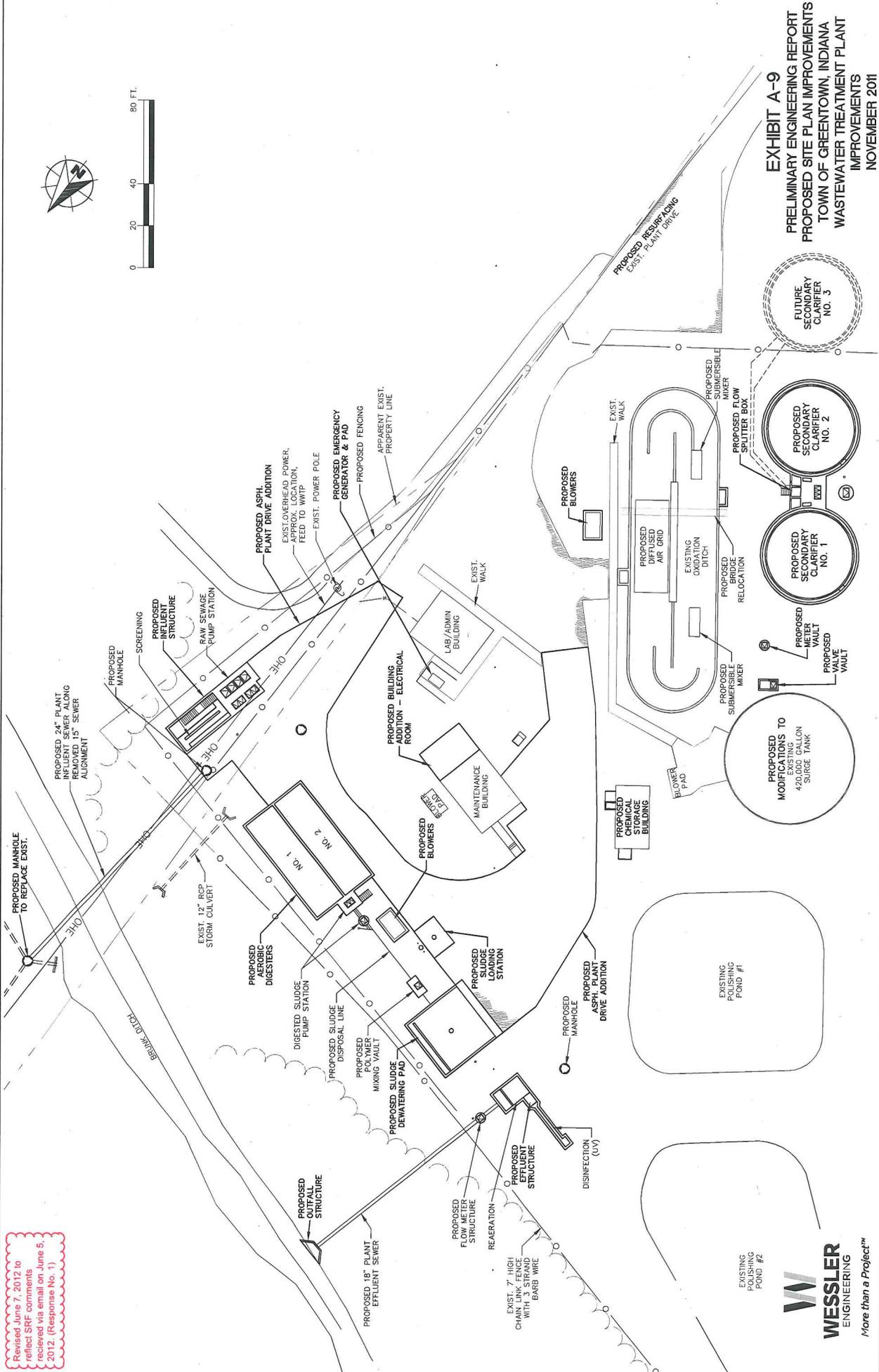
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Indiana Geological Survey

**EXHIBIT A-4**  
**PRELIMINARY ENGINEERING REPORT**  
**PROJECT ENVIRONMENTAL MAP**  
**TOWN OF GREENTOWN, INDIANA**  
**WASTEWATER TREATMENT PLANT**  
**IMPROVEMENTS**  
**NOVEMBER 2011**



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**EXHIBIT A-9**  
**PRELIMINARY ENGINEERING REPORT**  
**TOWN OF GREENTOWN, INDIANA**  
**WASTEWATER TREATMENT PLANT**  
**IMPROVEMENTS**  
**NOVEMBER 2011**

Revised June 7, 2012 to reflect SRF comments received via email on June 5, 2012. (Response No. 1)