ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

CITY OF FRANKFORT
Wastewater System Expansion
SRF PROJECT WW 18 16 12 01

DATE: June 20, 2019
TARGET PROJECT APPROVAL DATE: July 22, 2019

I. INTRODUCTION

The above entity has applied to the Clean Water State Revolving Fund (SRF) Loan Program for a loan to finance all or part of the wastewater 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 in color at http://www.in.gov/ifa/srf/.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Clean Water Program 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 5-1.2-3, 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 target approval 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:

Staci Orr Gardner
Environmental Review Coordinator
State Revolving Fund
100 N. Senate Ave.  IGCN 1275
Indianapolis, IN 46204
317-232-8623
sorr@ifa.in.gov
I. PROJECT IDENTIFICATION

Project Name and Address: **Wastewater System Expansion**
City of Frankfort
100 Washington Avenue
Frankfort, IN 46041

SRF Project Number: WW 18 16 12 01

Authorized Representative: Mr. Mike Kelley, Utility Service Board Chairman

II. PROJECT LOCATION

The Wastewater Treatment Plant (WWTP) project will be located at the City’s existing Wastewater Treatment Plant (WWTP), which is located in Clinton County, Center Township, Frankfort 24K USGS Quadrangle, Township 21N, Range 1W, and section 3. See Figure 1.

The collection system (County Road (CR) 200W Lift Station and Force Main) project will be located within Clinton County, Center Township, Frankfort 24K USGS Quadrangle, Township 21N, Range 1W, and sections 3, 4, and 5. See Figure 2.

III. PROJECT NEED AND PURPOSE

Frankfort’s existing WWTP is in relatively good condition and consistently meets its discharge permit limits. However, the plant is operating at 91% of its average design capacity which leaves minimal room for the projected peak and average daily flows from the future service area. The WWTP’s peak design flow was exceeded on 16 days in 2017. In addition, the plant relies solely on chemical phosphorus treatment, which will be increasingly expensive as flows increase.

The CR 200W Lift Station has a firm capacity of 2,000 gpm and experiences dry weather flows up to 1,900 gpm. The lift station has pumped wet weather flows up to 2,240 gpm, exceeding the firm capacity. Without modifications, the lift station is inadequate to handle existing flows and incapable of handling additional flows. The sanitary sewer that the lift station currently discharges into does not have adequate capacity and a new discharge location is necessary.

IV. PROJECT DESCRIPTION

The collection system project will increase the firm capacity of the CR 200W Lift Station to 3,000 gpm and includes the installation of 14,200 feet of 18-inch force main that will discharge at the WWTP headworks.

The WWTP project will increase the average design flow from 4.68 to 9.0 MGD with a peak flow of 15.0 MGD. The proposed WWTP project includes the following components:

- Four new raw sewage pumps;
- Equalization basin concrete repairs and joint replacement;
• Two new pumps in the existing Controlled Rate Pump Station;
• New Controlled Rate Pump Station No. 2 and force main;
• Conversion of existing aeration basin complex to the Anaerobic/Anoxic/Oxic (A2O) method;
• Two new 90-foot diameter secondary clarifiers;
• New cloth media filters;
• Conversion of the secondary anaerobic digester to a second primary anaerobic digester;
• New thickening and dewatering building;
• Drying bed modifications, including covers;
• Long term biosolids storage building;
• Administrative building renovation; and
• Electrical and control upgrades including standby power, analyzers, and SCADA system.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

<table>
<thead>
<tr>
<th>Construction Costs</th>
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<tbody>
<tr>
<td>Collection system improvements</td>
<td>$2,400,000</td>
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<tr>
<td>WWTP improvements</td>
<td>$16,000,000</td>
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<tr>
<td>Contingency</td>
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<tr>
<td>Non-Construction Costs</td>
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<tr>
<td>Total Estimated Project Cost</td>
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B. The City of Frankfort will finance the project with a loan from the State Revolving Fund Loan Program for a term and annual fixed interest rate to be determined at loan closing. The actual loan amount will depend on the bids received. 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. The “No Action” alternative limits Frankfort’s ability to transport and treat wastewater. The existing WWTP is nearing capacity and would not be able to service the City’s needs. The No Action alternative is not a viable alternative for the City.

B. The option of sending wastewater from Frankfort to another community was evaluated, but the Regionalization alternative is not a viable alternative for this area. Frankfort is the largest community within a 25-mile radius and already serves as a regional wastewater provider for the unincorporated area of Jefferson and from select portions of Clinton County.

C. Existing Facilities Optimization: Although the WWTP is well maintained, because it is operating at 90% of its design capacity, improvements must be made to accept more flow. Therefore, the Existing Facilities Optimization alternative is not a viable alternative.

D. Collection System Project

   a. Alternative 1 – Prairie Creek Interceptor: This alternative consists of increasing the capacity of the CR 200W lift station to 3,000 gpm and providing a new 16-inch diameter force main that discharges into the Prairie Creek Interceptor at the intersection of Prairie and Kyger, for a total force main length of 9,300 feet.
b. Alternative 2 – WWTP Headworks: This alternative consists of increasing the capacity of the CR 200W lift station to 3,000 gpm and providing a new 18-inch diameter force main that discharges at the head of the WWTP, for a total force main length of 14,200 feet. Although the capital cost is higher for Alternative 2, the sewer will be easier to construct. In addition, Alternative 2 allows a significant amount of flow capacity to remain in the Prairie Creek Interceptor. Therefore, Alternative 2 – WWTP Headworks is the selected collection system alternative.

E. Wastewater Treatment Plant Project

a. Alternative 1 – Traditional Extended Aeration: This alternative expands the plant’s capacity while keeping the treatment process as similar as possible to the existing plant. The existing raw sewage pumps will be replaced with dry pit submersible pumps. Spot repairs and joint replacements will address aging concrete in the equalization basins. Replacement and additional equalization control rate pumps will allow for additional treatment capacity. Two new primary clarifiers will be required, along with a primary flow splitter structure and replacement primary sludge pumps. The secondary treatment process will expand the aeration basin capacity by repurposing the aerobic digester into additional aeration, and constructing two new aeration tanks. Two new secondary clarifiers and flow splitter structure will be added to meet the larger flows. To increase filtration capacity, cloth media filters will replace the existing filters. Additional anaerobic digester capacity will be achieved by converting the existing secondary digester into a primary digester, requiring piping additions and modifications as well as additions to the boiler and heat exchangers. In order to increase the WAS solids concentration, mechanical thickening and dewatering will be included. Sludge production will increase, so drying beds will be used and long term storage will be covered to reduce loss of nutrients from the biosolids and reduce runoff contamination. The administration building will have needed upgrades to the floors, restrooms, furniture, paint and new windows to prevent leaking. New PLCs, networking, and computer/SCADA systems will be added along with replacing the main switchgear.

b. Alternative 2 – MLE Process: This alternative is similar to Alternative 1, but the secondary treatment process is the Modified Ludzack Ettinger process which utilizes anoxic/aerobic cycling in conjunction with an internal mixed liquor recycle from the aerobic zone to the anoxic zone.

c. Alternative 3 – A2O Method: This alternative is also similar to Alternative 1, but 1) primary clarification is not needed, 2) the secondary treatment process is the Anaerobic/Anoxic/Oxic method, and 3) the solids handling modifications require less sludge storage and dewatering. Not only is this alternative the most cost effective, it also provides the most complete treatment. This alternative will allow for enhanced biological phosphorus removal, denitrification, and nitrification. This will significantly reduce the amount of chemical required for phosphorus removal and it prepares the plant for more stringent nitrogen limits. With the addition of anaerobic and anoxic zones, the loadings into the aeration basin will be reduced, resulting in lower air demands and reduced energy consumption. This alternative reuses and repurposes all of the existing tankage. Therefore, Alternative 3 – A2O Method is the selected WWTP alternative.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed/Undisturbed Land: The project will be built on previously disturbed land, with the exception of portions of the sanitary force main.
**Structural Resources** (Figures 3 – 4): Construction and operation of the proposed 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.”

**Floodplain** (Figures 5 – 6): Construction will not occur in a floodway and will not impact the existing floodplain levels. The proposed improvements will be installed at grade or underground to replace existing infrastructure.

**Surface Waters** (Figures 7 – 8): The proposed project will not adversely affect outstanding state resource waters listed in 327 IAC 2-1.3-3(d), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), or Salmonid Streams listed in (327 IAC 2-1.5-5(a)(3) or streams on the Outstanding River List for Indiana.

**Wetlands** (Figures 9 – 10): Construction of the force main will transverse Blinn Ditch, a riverine wetland, but will not be impacted by the project due to directional drilling practices. Letters about the project including any protective measures from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.

**Groundwater:** Dewatering of the proposed project site may be necessary during construction. The groundwater table will only be impacted during construction and will return to normal once construction is complete.

**Plants and Animals:** The Preliminary Engineering Report (PER) states: *Endangered, threatened, and rare species are evaluated by the DNR and the U.S. Fish and Wildlife Service (USFWS) to protect significant natural areas and the species that depend on those areas. Protecting these areas and species is important to biodiversity, agriculture, and ecosystems. The construction and operation of the Proposed Project is not expected to pose a threat to or negatively impact state or federal-listed endangered species and their habitat.*

*DNR will be contacted immediately if it is determined that a species from the Indiana or Federal List is found to be disturbed by construction activities. The Proposed Project will be implemented to minimize impacts to non-endangered species and their habitat. Mitigation measures cited in comment letters received from the DNR and USFWS will be implemented.*

*The Indiana Bat (Myotis sodalist) is a Federal and State listed endangered species that migrates into Indiana in the summer months. Tree removal is expected for the Proposed Project. If recommended by USFWS or DNR, tree removal will not be conducted between April 1 and September 30 to avoid potential impacts to the Indiana Bat.*

*Emerald Ash Borer (Argilus planipennis Fairmaire) is an exotic beetle that damages all species of ash trees (genus Fraxinus) and other hardwood trees. Clinton County is designated as an Emerald Ash Borer Quarantined County by the DNR. In accordance with State (327 IAN 18-3-18) and Federal (7 CFR 301.53-1 through 301.53-9) regulations, all trees potentially containing Emerald Ash Borer will be managed appropriately.*

**Prime Farmland:** The project will cause a conversion of prime farmland.

**Air Quality:** Construction activities may generate some noise, fumes and dust, but should not significantly affect air quality.
Open Space and Recreational Opportunities: The project will neither create nor destroy open space or recreational opportunities.

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

B. Indirect Impacts

The city’s PER states: *The City, through the authority of its council, planning commission or other means, will ensure that future development, as well as future wastewater infrastructure projects connected to SRF-funded facilities will not adversely impact wetlands, wooded areas, steep slopes, archaeological/historical/structural resources, or other sensitive environmental resources. The City will require new development and infrastructure projects to be constructed within the guidelines of the USFWS, IDNR, IDEM, and other environmental review authorities.*

C. Comments from Environmental Review Authorities

In correspondence dated April 26, 2019, the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology stated:

*Pursuant to IC 13-18-21 and 327 IAC 14 and Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and 36 C.F.R. Part 800, the Indiana State Historic Preservation Officer ("Indiana SHPO") is conducting an analysis of the materials dated and received by the Indiana SHPO on March 29, 2019 for the above indicated project in Frankfort, Clinton County, Indiana.*

Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and 29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. 800.

In correspondence dated April 23, 2019, the United States Fish and Wildlife Service stated:

*These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U.S. Fish and Wildlife Service's Mitigation Policy.*

The proposed project consists of upgrades at the waste water treatment plant (WWTP) to provide greater capacity, rehabilitation of an existing pump station along CR 200 West, and the construction of 14,200 linear feet of 18-inch force main between the pump station and the WWTP.

Endangered Species

The proposed project is within the range of the Federally endangered Indiana bat (Myotis sodalis) and the threatened northern long-eared bat (Myotis septentrionalis). However, there is no known habitat for these species within the proposed project area. Although some trees will
need to be removed to construct the new force main, no large woodlands will be impacted, and the trees are adjacent to heavily developed areas. Therefore, we agree that the proposed project is not likely to adversely affect these endangered and threatened species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinitiate consultation.

In correspondence dated May 15, 2019 the Department of Natural Resources Environmental Unit stated:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: If the proposed line crosses the unnamed tributary to South Fork Wildcat Creek (Blinn Ditch), this proposal will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1, unless it qualities for a general license under Administrative Rule 312 IAC 10-5 that applies to utility line crossings (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the general license criteria.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: We recommend that all creek or stream crossings be done using a trenchless method. The length of the bore should include any forested riparian areas along the creek to minimize impacts to forested habitat. Install erosion control measures such as silt fencing or other appropriate devices around directional drilling pits in order to prevent drilling mud from leaving the immediate area of the pit or entering the stream.

If the open-trench method is necessary and the only feasible option at any of the planned stream crossings due to the site conditions, then the following measures should be implemented:

a. Any open-trench stream crossing should be timed to coincide with the low-water time of year (typically mid- to late-summer).

b. Restore disturbed streambanks using bioengineering bank stabilization methods and revegetate disturbed banks with native trees, shrubs and herbaceous plants. Stream bank slopes after project completion should be restored to stable-slope steepness (not steeper than 2:1).

c. The cleared width through any forested area should be the minimum needed to install the line and no more than 20 feet wide through the forested area to allow the canopy to close over the line.

d. Use graded stone or riprap to protect the section of trench below the normal water level from scour or erosion (any stone or riprap fill in the streambed must not be placed above the existing streambed elevation to avoid creating a fish passage obstruction).
The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas that will not be mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in regularly mowed areas only.

2. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.

3. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.

4. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.

5. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.

6. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3: 1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

In correspondence dated November 20, 2018, the Natural Resources Conservation Service Stated:

The proposed project to make wastewater treatment plant expansions in Clinton County, Indiana, as referred to in your letter received October 24, 2018, will cause a conversion of prime farmland.

VIII. M ITIGATION MEASURES

City of Frankfort’s PER states:

Erosion control measures will be implemented during all construction activity. Areas disturbed by construction will be restored and revegetated with seeing and other measures such as erosion control blankets, as necessary. A Rule 5 permit for stormwater runoff associated with construction activities is expected for the Proposed Project, since it will disturb more than one acre of land. Wetlands, floodplains, and tree removal will be avoided where possible. Tree cutting restrictions may be required to minimize the potential for impacts to the Indiana Bat.

IX. P UBLIC PARTICIPATION

A properly noticed public hearing was held on December 17, 2018, at 7:00 pm at the City of Frankfort’s Council Chambers to discuss the PER. No written comments were received during the public comment period.
LEGEND
Floodplains - FIRM (June 2016)
Flood Hazard Potential

- Floodway
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance, Protected by Levee
- 0.2% Annual Chance Flood Hazard

WASTEWATER SYSTEM EXPANSION:

PROPOSED FORCE MAIN
PROPOSED WWTP IMPROVEMENTS
FUTURE WWTP IMPROVEMENTS

OUTDOOR DRYING BEDS & PROPOSED THICKENING/DEWATERING BUILDING
PROPOSED COVERED BIO SOLIDS STORAGE
FUTURE BLOWER BUILDING & AERATION BASINS
PROPOSED & FUTURE ANAEROBIC BASINS
PROPOSED & FUTURE SECONDARY CLARIFIERS, SECONDARY SPLITTER BOX, RAS PUMPING BUILDING

Figure 5
FLOODPLAIN MAP
WWTP

City of Frankfort, Indiana
Wastewater System Expansion
Preliminary Engineering Report
March 2019
193216-01-001
**LEGEND**

**Floodplains - FIRM (June 2016)**

- Floodway
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard
- 0.2% Annual Chance Flood Hazard

**WASTEWATER SYSTEM EXPANSION:**
- PROPOSED FORCE MAIN
- PROPOSED WWTP IMPROVEMENTS
- FUTURE WWTP IMPROVEMENTS

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**Figure 6**

**FLOODPLAIN MAP FORCE MAIN**

City of Frankfort, Indiana
Wastewater System Expansion
Preliminary Engineering Report

March 2019
193216-01-001

SRF Clean Water Program
City of Frankfort Environmental Assessment: Wastewater System Expansion
Distributed June 20, 2019 for 30-day comment period to the public.
LEGEND
- Waterbody Discrete (NHD)
- Waterbody Linear (NHD)
- Flowline Unclassified (NHD)
- Flowline Classified (NHD)

WASTEWATER SYSTEM EXPANSION:
- PROPOSED FORC MAIN
- PROPOSED WWTP IMPROVEMENTS
- FUTURE WWTP IMPROVEMENTS

Figure 7
SURFACE WATER MAP
WWTP

City of Frankfort, Indiana
Wastewater System Expansion
Preliminary Engineering Report
March 2019
193216-01-001
Figure 8
SURFACE WATER FORCE MAIN

City of Frankfort, Indiana
Wastewater System Expansion
Preliminary Engineering Report
March 2019
193216-01-001
Figure 9
WETLANDS MAP
WWTP

City of Frankfort, Indiana
Wastewater System Expansion
Preliminary Engineering Report

March 2019
193216-01-001

LEGEND
- Wetlands Historic NWI (USFWS)
- Wetlands NWI Lines (USFWS)
- Wetlands NWI (USFWS)

WASTEWATER SYSTEM EXPANSION:
- PROPOSED FORCE MAIN
- PROPOSED WWTP IMPROVEMENTS
- FUTURE WWTP IMPROVEMENTS

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