ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

CORDRY-SWEETWATER CONSERVANCY DISTRICT
Drinking Water Improvements Project
SRF PROJECT DW 16 08 07 01

DATE: November 15, 2016
TARGET PROJECT APPROVAL DATE: December 15, 2016

I. INTRODUCTION

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

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Drinking 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 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 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:

April Douglas
Senior Environmental Manager
State Revolving Fund
100 N. Senate Ave. IGCN 1275
Indianapolis, IN 46204
317-234-7294; adouglas@ifa.in.gov
I. PROJECT IDENTIFICATION

Project Name and Address: Cordry-Sweetwater Conservancy District (CSCD) Drinking Water Improvements Project 8377 Cordry Drive Nineveh, IN 46164

SRF Project Number: DW 16 08 07 01

Authorized Representative: Stacy Wethington, Conservancy Manager

II. PROJECT LOCATION

Project is in multiple locations in Brown County, see Figure 1:

- Water Main Replacement – Hamblen Township, Nineveh USGS Quadrangle, Township 10 North, Range 4 East, Sections 5, 7 and 8;
- “Blue Tank” Improvements, Supervisory Control and Data Acquisition (SCADA) Upgrades – Hamblen Township, Beanblossom USGS Quadrangle, Township 10 North, Range 4 East, Section 7;
- Water Meter Replacements, Valve Additions - Hamblen Township, Beanblossom and Nineveh USGS Quadrangles, Township 10 North, Range 4 East, Sections 5, 7, 8, 17, 18, 19, and 20;
- CSCD Office SCADA Upgrades - Hamblen Township, Nineveh USGS Quadrangle, Township 10 North, Range 4 East, Section 8;
- “White Tank” SCADA Upgrades - Hamblen Township, Nineveh USGS Quadrangle, Township 10 North, Range 4 East, Section 17;
- CSCD Purchase Water Connection with Prince’s Lake SCADA Upgrades - Nineveh Township, Nineveh USGS Quadrangle, Township 11 North, Range 4 East, Section 33;
- Booster Station Replacement, SCADA Upgrades - Hamblen Township, Nineveh USGS Quadrangle, Township 10 North, Range 4 East, Section 5;

III. PROJECT NEED AND PURPOSE

Improvements to the storage, distribution, and Supervisory Control and Data Acquisition (SCADA) systems will satisfy the District’s needs which are described as follows:

Storage: The District’s “Blue” water storage tank needs repair and recoating in order to attain structural integrity, safety, and proper operation.
Distribution System:

- The District’s most critical transmission main, 17,000 linear feet (L.F.), in the system needs to be replaced in order to:
  - eliminate the risk of failure of 50 year old asbestos cement water main pipe;
  - reduce the potential for needing emergency repairs and better protect public health concerns by avoiding interruptions to water service related to failure of a deteriorated water main;
  - improve the reliability of water supply to customers;
  - reduce potential risk of exposure to asbestos; and
  - improve flow capacity with a larger water main pipe.

- The District’s water meters need to be replaced in order to:
  - reduce the possibility of human error and increase data accuracy;
  - reduce labor cost to manually read meters;
  - reduce unaccounted for water loss and revenues in older meters; and
  - provide metering features to help customers identify leaks, which will reduce lost water and the resulting high bills.

- The booster station needs to be replaced in order to:
  - eliminate risk of failure of the 45 year old package booster station;
  - provide for better operation and control, which will reduce energy costs;
  - reduce potential for emergency repair needs related to booster pump failure, which will avoid interruptions to water service that can cause public health concerns; and
  - improve reliability of water supply to customers.

SCADA System:

- The existing SCADA system needs to be upgraded in order to improve reliability and update technology.

IV. PROJECT DESCRIPTION

The Drinking Water Facilities Improvement Project includes improvements to the storage, distribution, and SCADA systems, described as follows:

Storage:

- Re-coating of the exterior and interior surfaces of the existing 100,000 gallon elevated water storage tank, aka “Blue Tank”.

• Repairs and improvements to the tank structure which include:
  o replacement of interior ladder fall prevention equipment;
  o replacement of the tank vent with frost free vent;
  o replacement of the roof hatch;
  o installation of a flap gate on the overflow pipe; and
  o installation of a roof platform and handrail.

Distribution System:
• Replacement of approximately 17,000 L.F. of existing water main with new 10-inch PVC water main, including gate valves, standard hydrants, and miscellaneous appurtenances.
• Replacement of approximately 1,230 manual read residential 5/8-inch meters with new radio read meters, along with the replacement of 1,350 water meter lids.
• Replacement of a Booster Station which includes the installation of: Two (2) new 360 gpm pumps, a new valve vault, security fencing, electrical and piping connections, a manual transfer switch, and miscellaneous appurtenances, see Figure 2.
• Abandonment of the existing booster station.

SCADA System:
• Installation of a new SCADA system which includes the installation of new Remote Terminal Units (RTUs) at the existing “Blue” and “White” water storage tanks, the Cordry-Sweetwater Conservancy District (CSCD) office, the proposed booster station site, and the CSCD purchase water connection point with Prince’s Lake.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

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<th>Construction Costs</th>
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B. Cordry-Sweetwater Conservancy District will finance the project with a loan from the State Revolving Fund Loan Program for a 20-year term at an annual fixed interest rate to be determined at loan closing. The actual loan amount will depend on the bids received.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

Storage:
Alternative 1: Re-coating Blue water storage tank and making repairs. This alternative was selected.
Alternative 2: Construction of a new water storage tank.
Alternative 3: No Action. The No Action alternative entails maintaining the status quo. The tank would continue to deteriorate and would eventually cease to provide reliable.

Distribution System:
A. Water Transmission Main

Alternative 1: Water Main Replacement. This alternative was selected.
Alternative 2: Water Main Rehabilitation.
Alternative 3: No Action. The No Action alternative entails that the transmission main, connecting the CSCD to its water supply, would continue to age and be at risk for failure.

B. Water Meters

Alternative 1: Water Meter Replacement. This alternative was selected.
Alternative 2: No Action. The No Action alternative entails maintaining the status quo. Data, from the existing meters, would continue to be collected manually, which is labor-intensive. Manual data collection also introduces more opportunities for data collection errors.

C. Booster Station

Alternative 1: Replacement of the Booster Station. This alternative was selected.
Alternative 2: Rehabilitation of the Booster Station.
Alternative 3: No Action. The No Action alternative entails that the booster station would continue to age and be at risk for failure.

SCADA System:

Alternative 1: Update the SCADA System. This alternative was selected.
Alternative 2: No Action. The No Action alternative entails maintaining the status quo. The District would not benefit from the available technology for remote monitoring and control. The SCADA system equipment would continue to be outdated, until it no longer functions or the utility can no longer obtain parts to repair it.
VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

**Disturbed/Undisturbed Land:** The following projects will occur on previously disturbed land:

1. Water Storage Tank ("Blue Tank") Improvements - within footprint of existing structure;
2. Water Meter Replacement - within footprint of existing structure;
3. SCADA System Improvements - within footprint of existing structures.

The installation of the Water Main Replacement and the Booster Station Replacement will likely occur on a portion of undisturbed land, and therefore was subject to an archaeological reconnaissance.

**Structural Resources** (Figures 3-4): 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 Preservation Act is: “no historic properties affected.”

**Surface Waters:** There are seven stream crossings: six are crossings of unnamed tributaries to Mud Creek, and one is a crossing of an unnamed tributary to Cordy Lake. Crossings will be installed via open-cut construction method; unless otherwise required by a permitting agency.

The 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 5-7): There are seven stream crossings: six are crossings of unnamed tributaries to Mud Creek, and one is a crossing of an unnamed tributary to Cordy Lake. Crossings will be installed via open-cut construction method; unless otherwise required by a permitting agency.

Mitigation measures to lessen and compensate for wetland impacts cited in comment letters about the project from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.

**Floodplain:** The project will not occur within the floodplain.

**Groundwater:** The project will not affect groundwater. Dewatering is not expected. The project will not impact a sole source aquifer.

**Plants and Animals:** Minor tree removal is likely along the water main replacement project, although the route will be kept as close to the road as possible to lessen the need for tree removal. No impacts to plants and animals are expected. The project will be implemented to minimize impact to non-endangered species and their habitat. Mitigation measures cited in comment letters from the IDNR and USFWS will be implemented.

**Prime Farmland:** The project will not convert 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.

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

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

B. Indirect Impacts

Cordry-Sweetwater Conservancy District’s Preliminary Engineering Report (PER) states: The utility will ensure that future drinking water infrastructure 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 utility will require new drinking water infrastructure projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.

C. Comments from Environmental Review Authorities

In correspondence dated November 10, 2016, 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 October 13, 2016, for the above indicated project in Hamblen Township, Brown 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 & 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days.

In correspondence dated August 5, 2016, the United States Fish and Wildlife Service stated:

This responds to your letter of August 2, 2016 requesting U.S. Fish and Wildlife Service (FWS) review of proposed Cordry-Sweetwater Conservancy District water system improvements in Brown County, Indiana.

These comments 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 installation of new water main, replacement of existing water main, recoat an existing water storage tanks, and various other improvements. The project will require several stream crossings and work within wetland areas. We do not anticipate significant impacts on fish and wildlife resources from this project, but we recommend the following mitigation measures to minimize impacts.
1. Avoid or minimize removal of mature native hardwood trees within the construction corridor.

2. Use directional drilling at all stream crossings to avoid stream and riparian impacts.

3. If directional drilling is not feasible, construct the stream crossings during a low flow period and use best management practices to prevent erosion and soil runoff to the streams.

4. Establish vegetated buffer strips along stream banks after work is completed. Buffer strips should be at least 10 feet and preferably 25 feet.

5. Avoid disturbance within the stream channel during the fish spawning season (April 1-June 30). Ephemeral streams, agricultural ditches and badly degraded streams can be excluded from this recommendation.

6. Revegetate disturbed areas as soon as possible after construction, using native vegetation. We recommend seed mixes that include species of nectar-producing plants and milkweed native to the area where the mix is applied.

Wetland and stream impacts may require permits from the US Army Corps of Engineers, the Indiana Department of Environmental Management’s Water Quality Certification program and the Indiana Department of Natural Resources. Wetland impacts should be avoided, and any unavoidable impacts should be compensated for in accordance with the Corps of Engineers mitigation guidelines.

Endangered Species

Brown County is within the range of the federally endangered Indiana bat (Myotis sodalis) and the northern long-eared bat (Myotis septentrionalis).

Indiana bats hibernate in caves, then disperse to reproduce and forage in relatively undisturbed forested areas associated with water resources during spring and summer. Recent research has shown that they will inhabit fragmented landscapes with adequate forest for roosting and foraging. Young are raised in nursery colony roosts in trees, typically near drainageways in undeveloped areas. Like all other bat species in Indiana, the Indiana bat diet consists exclusively of insects.

During the summer, northern long-eared bats typically roost singly or in colonies in cavities, underneath bark, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on presence of cavities or crevices or presence of peeling bark. It has also been occasionally found roosting in structures like barns and sheds (particularly when suitable tree roosts are unavailable). They forage for insects in upland and lowland woodlots and tree lined corridors. During the winter, northern long-eared bats predominantly hibernate in caves and abandoned mine portals. Additional habitat types may be identified as new information is obtained.

There is suitable summer habitat for the Indiana bat and northern long-eared bat present throughout the area surrounding the project site. There are no current records of Indiana bats near the site but to our knowledge the area has not been surveyed. The project will not eliminate enough habitat to affect these species, 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. If this measure is implemented we concur that the proposed project is not likely to adversely affect these listed species.
This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act. If project plans are changed significantly, please contact our office for further consultation.

In correspondence dated September 1, 2016 the Department of Natural Resources Environmental Unit Stated:

Project: Cordry-Sweetwater Conservancy District Drinking Water improvements: replacement of 17,000' of water mains that will cross 6 UNT Mud Creek, 1 UNT Cordry Lake & wetlands; recoating of water storage tank; & replacement of water meters; SRF #DW 16 08 07 01

County/Site info: Brown

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: This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile, unless it qualifies for a general license under Administrative Rule 312 IAC 10-5 that applies to the 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. The managed land and species below have been documented within ½ mile of the project area.

A) MANAGED LAND: Atterbury Reserve Forces Training Area, US Dept. of Defense
B) BIRD: Least Bittern (Ixobrychus exilis), state endangered
C) MAMMAL: Least Weasel (Mustela nivalis), state special concern
D) BATS:
   1. Indiana Bat (Myotis sodalis), federally & state endangered
   2. Northern long-eared Bat (Myotis septentrionalis), fed. threatened & state special concern
   3. Eastern Red Bat (Lasiurus borealis), state special concern
   4. Tri-colored Bat (Lasiurus borealis), state special concern
   5. Hoary Bat (Lasiurus cinereus), state special concern

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Animal Species:
   a. BIRD: Least bitterns prefer marshes of dense emergent vegetation. The project area consists of mowed lawns or mowed rights-of-way transecting forest habitat, which are not suitable for least bitterns. Therefore, we do not foresee any impacts to this species as a result of this project.

   b. MAMMAL: Least weasels are habitat generalists, but prefer area with dense cover where they can hunt for their prey. The removal of trees and the blocking of the creeks
may not be ideal as it could ruin this type of habitat. We recommend as little disturbance to the natural resources as possible to minimize impacts to this species.

c. BATS: To minimize impacts to the Indiana bat and Northern long-eared bat, do not cut any trees suitable for roosting (greater than 3 inches dbh, living or dead, with loose or hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30. To minimize impacts to foliage roosting species (such as the Tri-colored Bat), avoid the cutting of deciduous canopy trees as well from April 1 through September 30 to the extent possible. Foliage roosting species show no strong preference to certain tree species.

2) Directional Boring: 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. 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).

3) Riparian Habitat: Minimize the removal of trees and brush by placing the line on the least forested side of the road. Place the line as close as possible to the road to avoid and minimize direct impacts to forested habitat and the fragmentation of forested habitat.

   We recommend a mitigation plan be developed (and submitted with the permit application, if required) if habitat impacts will occur. The mitigation site should be located on the floodway, downstream of one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat. The DNR’s Floodway Habitat Mitigation guidelines (and plant lists) can be found online at: http://www.in.gov/legislative/iac/20120801-JR-312120434NRA.xml.pdf.

   Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area.

   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 with a mixture of grasses, sedges, wildflowers, and native shrub and hardwood tree species as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants (e.g. crown-vetch).

2. Minimize and contain within the project limits in-channel disturbance and the clearing of trees and brush.

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

4. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.

5. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.

6. Post “Do Not Mow or Spray” signs along the right-of-way.

7. 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.

8. Seed and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets (follow manufacturer’s recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

In correspondence dated September 15, 2016 the Natural Resources Conservation Service Stated:

The proposed project to make water utility improvements in the Cordry-Sweetwater Conservation District, Brown County, Indiana, as stated in your letter received August 29, 2016, will not cause a conversion of prime farmland.

VIII. MITIGATION MEASURES

Cordry-Sweetwater Conservancy District’s PER states:

Precaution shall be taken during construction to prevent erosion and sediment transport. Project plans shall include requirements for construction sequencing and both temporary and permanent erosion control measures. All disturbed, vegetated land shall be permanently seeded and maintained as necessary until vegetation growth is established.

A Rule 5 permit is required through IDEM for Construction/Stormwater Pollution Prevention. This plan shall be approved by the Brown County Soil and Water Conservation District and recommended for approval to IDEM. The County SWCD will routinely inspect the construction area to ensure that appropriate measures are taken to minimize erosion and sediment transport off-site. All mitigating measures recommended by reviewing authorities shall be implemented for this project.

IX. PUBLIC PARTICIPATION

A properly noticed public hearing was held on June 21, 2016, at 6:30 pm at the Cordry Sweetwater Conservancy District Clubhouse 8751 Nineveh Road, Nineveh, IN to discuss the PER. No written comments were received during the 5-day comment period following the hearing.
Cordry-Sweetwater Conservancy District Proposed Booster Station

Figure 2

UNNAMED TRIBUTARY OF MUD CREEK

PROPOSED 10" WATER MAIN

PROPOSED BOOSTER STATION SITE

CORDRY SWEETWATER CONSERVANCY DISTRICT
PROPOSED NEW BOOSTER STATION
Figure 3

CSCD Water Improvements - SHAARD Map - North

Connection Point with Prince's Lakes

CSCD Proposed Booster Station

Water Main Replacement

"Blue Tank"

CSCD Office

Sources: Esri, HERE, DeLorme, USGS, Intermap, Increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, Indiana Department of Natural Resources

Revised August 8, 2016

Map Coordinate System:
WGS_1984_Web_Mercator_Auxiliary_Sphere

1:31,341
Relative Scale

Indiana Dept. of Natural Resources
Geographic Information Systems
Figure 4

CSCD Water Improvements - SHAARD Map - South

- Proposed Emergency Connection with Brown County Water Utility; Site 013-035-00017 no longer exists.

Map Coordinate System:
WGS_1984_Web_Mercator_Auxiliary_Sphere

1:20,491 Relative Scale

Indiana Dept. of Natural Resources Geographic Information Systems

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Earl Japan, METI, Esri China (Hong Kong), Earl (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community, Indiana Department of Natural Resources

Author:

Legend:

- Cemetery
- Demolished
- Outstanding
- Notable
- Contributing
- Non-Contributing
Figure 5: CSCD Water Main Replacement Project - Wetland and Floodplain Map

CSCD Connection Vault with Prince's Lakes. All improvements to occur within the footprint of existing facility.

Existing CSCD Booster Station, which will be abandoned.

Proposed Water Main Replacement

Match to Figure 6

May 31, 2016 Revised August 8, 2016
Proposed Booster Station Replacement Site

Proposed Water Main Replacement

Stream Crossings of unamed tributaries of Mud Creek

Nineveh Road

Beech Tree Road

Match to Figure 7

Match to Figure 5

1% Risk (aka 100-yr Flood Zone)

Floodway

Streams (Local-Resolution NHD)

Rivers - Outstanding (NRC)

Landsurvey - Counties

Wetlands NWI (USFWS)

Wetlands Project Metadata NWI (USFS)

Lakes (NHD)

Floodplains - FIRM (May 2015)

0.2% Risk (aka 500-year Flood Zone)

U.S. Geological Survey

U.S. Fish and Wildlife Service (USFWS), National Standards and Support Team, National Wetlands Inventory (NWI)

National Resource Commission

Indiana Spatial Data Portal, IUTS, ESRI
Figure 7: CSDC Emergency Connection to Brown County Water Utility - Floodplain and Wetland Map

- Wetlands NWI (USFWS)
- Wetlands Project Metadata NWI (USFS)
- Lakes (NHD)
- Rivers - Outstanding (NRC)
- Streams (Local-Resolution NHD)

Floodplains - FIRM (May 2015)
- 0.2% Risk (aka 500-year Flood Zone)
- 1% Risk (aka 100-yr Flood Zone)
- Floodway

Existing BCWU 4-inch water main
Existing CSDC 8-inch water main
Proposed Emergency Connection with Brown County Water Utility

甜水路
甜水公路

0 0.015 0.03 0.06 mi
0 0.0275 0.055 0.11 km

NORTH

U.S. Geological Survey
U.S. Fish and Wildlife Service (USFWS), National Standards and Support Team, National Wetlands Inventory (NWI)
National Resource Commission
Indiana Spatial Data Portal, UITS, ESRI
ARTICLE 10. FLOOD PLAIN MANAGEMENT

312 IAC 10-2-42 “Utility line crossing” defined
Authority: IC 14-28-1-5; IC 14-28-3-2
Affected: IC 14-27-7; IC 14-28-1; IC 14-28-3

Sec. 42. “Utility line crossing” means the utility crosses the waterway in a straight line at an angle of between forty-five (45) degrees and one hundred thirty-five (135) degrees from the streambank and does not parallel the waterway for more than fifty (50) feet in the floodway before crossing unless the parallel portion of the line is contained within existing road right-of-way. (Natural Resources Commission; 312 IAC 10-2-42; filed Jul 5, 2001, 9:12 a.m.: 24 IR 3389, eff Jan 1, 2002)

Rule 5. General Licenses and Specific Exemptions from Floodway Licensing

312 IAC 10-5-0.3 Determining project eligibility for a general license; general criteria
Authority: IC 14-10-2-4; IC 14-28-1-5
Affected: IC 14-28-1; IC 14-29-1

Sec. 0.3. (a) Except as provided in subsections (b) and (c), a project for a utility line crossing, the removal of logjams and obstructions, or the placement of outfall projects within a floodway is eligible for a general license if the project satisfies the requirements of this rule. For the removal of logjams and obstructions, these requirements include the procedures established by section 0.6 of this rule.
(b) Subsection (a) does not authorize a project in any of the following circumstances:
(1) Within a river or stream listed in the Indiana Register at 15 IR 1312 in the Outstanding Rivers List for Indiana unless prior written approval from the division of water’s environmental unit has been obtained,
(2) Within a salmonid stream designated under 327 IAC 2-1.5(5a)(3).
(3) Within a natural, scenic, or recreational river or stream designated under 312 IAC 7-2.
(4) For a utility line crossing, below the ordinary high watermark of a navigable waterway listed in the Indiana Register at 20 IR 2920 in the Roster of Indiana Waterways Declared Navigable or Nonnavigable unless the utility line is placed beneath the bed of the waterway under section 4(b) of this rule.
(5) Where the project requires an individual permit from the United States Army Corps of Engineers under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act.
(c) Subsection (a) does not authorize the removal of logjams or obstructions within one-half (½) mile of any of the following:
(1) A species listed in the Indiana Register at 15 IR 1312 in the Roster of Indiana Animals and Plants Which Are Extirpated, Endangered, Threatened, or Rare.
(2) A known mussel resource.
(3) A section 4(d) of the Clean Water Act or Section 10 of the Rivers and Harbors Act.
(4) An outstanding natural area, as contained on the registry of natural areas maintained in the national heritage data center of the department.
(d) The limitations contained in subsection (b) and subsection (c) [subsections (b) and (c)] do not apply to section 7 of this rule. (Natural Resources Commission; 312 IAC 10-5-0.3; filed Aug 2, 2004, 3:18 p.m.: 27 IR 3875)

312 IAC 10-5-2 General licensing for utility line crossings
Authority: IC 14-10-2-4; IC 14-28-1-5
Affected: IC 14-27-7; IC 14-28-1; IC 14-29-1

Sec. 2. Except as provided in sections 3 and 4 of this rule, a license is required under IC 14-28-1, IC 14-29-1, and 312 IAC 10-4 to place a utility line in or on a floodway where:
(1) the drainage area of a river or stream is at least one (1) square mile at the downstream end of the line’s floodway segment; or
(2) a dam or levee regulated under IC 14-27-7 is affected. (Natural Resources Commission; 312 IAC 10-5-2; filed Jul 5, 2001, 9:12 a.m.: 24 IR 3394, eff Jan 1, 2002)

312 IAC 10-5-3 Aerial electric, telephone, or cable television lines; general license
Authority: IC 14-10-2-4; IC 14-28-1-5
Affected: IC 14-28-1; IC 14-29-1; IC 14-29-6

Sec. 3. The placement of an aerial electric, telephone, or cable television line is authorized without a written license issued by the department under IC 14-28-1, IC 14-29-1, and 312 IAC 10-4 if:
(1) the activity does not disturb the bed of the waterway beneath the line;
(2) the activity conforms with the minimum clearance requirements of section 4(b)(9) of this rule;
(3) the support mechanisms are located at least seventy-five (75) feet from the top of the bank; and
(4) the utility line crossing is not within the floodway of a natural river, scenic river, or recreational river designated under 312 IAC 7-2. (Natural Resources Commission; 312 IAC 10-5-3; filed Jul 5, 2001, 9:12 a.m.: 24 IR 3394, eff Jan 1, 2002; filed Aug 2, 2004, 3:18 p.m.: 27 IR 3876)
312 IAC 10-5-4 Qualified utility line crossings; general license

Authority: IC 14-10-2-4
Affected: IC 13-11-2-260; IC 14-27-7; IC 14-28-1-29; IC 14-33; IC 36-9-27

Sec. 4. (a) This section establishes a general license for the placement of a qualified utility line crossing in a floodway.

(b) A person who wishes to implement a project for the placement of a qualified utility line crossing on a river or stream, other than on a river or stream identified in section 0.3(b) or 0.3(c) of this rule, may do so without notice to the department if the project conforms to the following conditions:

(1) Tree removal and brush clearing shall be contained and minimized within the utility line crossing area. No more than one (1) acre of trees shall be removed within the floodway.

(2) Construction activities within the waterway from April 1 through June 30 shall not exceed a total of two (2) calendar days.

(3) Best management practices shall be used during and after construction to minimize erosion and sedimentation.

(4) Following the completion of construction, disturbed areas shall be reclaimed and revegetated. Disturbed areas shall be mulched with straw, wood fiber, biodegradable erosion blanket, or other suitable material. To prevent erosion until revegetated species are established, loose mulch shall be anchored by crimping, tackifiers, or netting. To the extent practicable, revegetation must restore species native to the site. If revegetation with native species is not practicable, revegetation shall be performed by the planting of a mixture of red clover, orchard grass, timothy, perennial rye grass, or another species that is approved by the department as being suitable to site and climate conditions. In no case shall tall fescue be used to revegetate disturbed areas.

(5) Disturbed areas with slopes of three to one (3:1) or steeper, or areas where run-off is conveyed through a channel or swale, shall be stabilized with erosion control blankets or suitable structural armament.

(6) No pesticide will be used on the banks.

(7) If a utility line transports a substance that may cause water pollution as defined in IC 13-11-2-260, the utility line will be equipped with an emergency closure system.

(8) If a utility line is placed beneath the bed of a river or stream, the following conditions are met:

(A) Cover of at least three (3) feet measured perpendicularly to the utility line is provided between the utility line and the banks.

(B) If the placement of a utility line is not subject to regulation under IC 14-28-1-29, IC 14-33, or IC 36-9-27, cover is provided as follows:

(i) At least three (3) feet, measured perpendicularly to the utility line, between the lowest point of the bed and the top of the utility line or its encasement, whichever is higher, if the bed is composed of unconsolidated materials.

(ii) At least one (1) foot, measured perpendicularly to the line, between the lowest point of the bed and the top of the utility line or its encasement, whichever is higher, if the bed is composed of consolidated materials.

(C) If the placement of the utility line is subject to regulation under IC 14-28-1-29, IC 14-33, or IC 36-9-27, cover is provided as follows:

(i) At least three (3) feet, measured perpendicularly to the utility line, between the design bed and the top of the line or its encasement, whichever is higher, if the bed is composed of unconsolidated materials.

(ii) At least one (1) foot, measured perpendicularly to the line, between the design bed and the top of the line or its encasement, whichever is higher, if the bed is composed of consolidated materials.

(D) Negative buoyancy compensation is provided where the utility line has a nominal diameter of at least eight (8) inches and transports a substance having a specific gravity of less than one (1).

(9) If a utility line is placed above the bed of a river or stream, the following conditions are met:

(A) Except as provided in clauses (B) and (C), minimum clearance is provided from the lowest point of the utility line (determined at the temperature, load, wind, length of span, and type of supports that produce the greatest sag) calculated as the higher of the following:

(i) Twelve and one-half (12½) feet above the ordinary high watermark.

(ii) Three (3) feet above the regulatory flood elevation.

(B) If the river or stream is a navigable waterway that is subject to IC 14-28-1, the utility line that crosses over the waterway must be placed to provide the greater of the following:

(i) The minimum clearance required under clause (A).

(ii) The minimum clearance required for the largest watercraft that is capable of using the waterway. The utility line must consult in advance with the department to determine the minimum clearance for watercraft at the crossing.

(C) If a utility line is attached to or contained in the embankment of an existing bridge or culvert, no portion of the utility line or its support mechanism may project below the low structure elevation or otherwise reduce the effective waterway area.

(10) A utility line placed in a dam or levee regulated under IC 14-27-7 does not qualify for a general license under this subsection.

(c) A person who elects to act under this section must comply with the general conditions under subsection (b). Failure to comply with these terms and conditions may result in the revocation of the general license, a civil penalty, a commission charge, and any other sanction provided by law for the violation of a license issued under IC 14-28-1 and, if the waterway is navigable, the violation of a license issued under IC 14-29-1. (Natural Resources Commission; 312 IAC 10-5-4; filed Jul 5, 2001; 9:12 a.m.; 24 IR 3394, ef Jan 1, 2002; filed Dec 26, 2001, 2:42 p.m.; 25 IR 1345; errata filed Mar 13, 2002, 11:51 a.m.; 25 IR 2521; filed Aug 2, 2004, 3:18 p.m.; 27 IR 3876)