



State Revolving Fund Loan Programs

Drinking Water, Clean Water, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

CHARLESTOWN STATE PARK Water System Improvements Project STATE REVOLVING FUND PROJECT # DW 22 02 10 02

DATE: September 24, 2021

TARGET PROJECT APPROVAL DATE: October 24, 2021

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 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 www.in.gov/ifa/srf.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The Drinking Water SRF Loan 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 achieved by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Amy Henninger
Compliance Officer
State Revolving Fund Loan Programs
100 N. Senate Ave. IGCN 1275
Indianapolis, IN 46204
317-232-6566
ahenning@ifa.in.gov

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address: **Water System Improvements Project**
Indiana Department of Natural Resources
402 W Washington St., Room W256
Indianapolis, IN 46204

SRF Project Number: DW 22 02 10 02

Authorized Representative: Mr. Daniel W. Bortner, Director

II. PROJECT LOCATION

Charlestown State Park comprises 5,100 acres along the Ohio River in Clarke County, Utica and Charlestown townships. The Park borders the cities of Charlestown and Jeffersonville and is operated by the Indiana Department of Natural Resources (IDNR). Most of the state park is north of the project area. The project will occur in Jeffersonville USGS quadrangle, section 27, and in Charlestown USGS quadrangle, section 96. See **Figure 1**.

III. PROJECT NEED AND PURPOSE

The Charlestown State Park Water Supply including wellfield, water treatment plant, transmission mains, storage tank and booster station first came online in 2011, with a capacity of 2.0 MGD. Since that time, the River Ridge Development Authority has operated the system under contract to IDNR. Due to continued growth within the River Ridge Commerce Center and increasing demand, the State of Indiana commissioned a Water Supply Expansion study by INTERA Incorporated in 2019-2020, which detailed system improvements to meet the current needs of the system. The Park has also recognized the need to connect to the RRDA distribution system for water supply at the northern end of the service area.

The purpose of the project is to expand the capacity of the existing water treatment plant from 2.0 MGD to 6.0 MGD with a firm capacity of 4.0 MGD and to expand the wellfield to sufficiently supply the plant.

IV. PROJECT DESCRIPTION

To increase the supply of the well field, the project will include the construction of Well No 4 with associated structures, pumping equipment, discharge piping, electrical and components. In addition, the project will include installation of variable frequency drives (VFDs) at all four wells, a monitoring probe will be added to well number four, a new generator set for the well field, new electrical controls for the well field, new higher capacity motors and pumps in Wells 1, 2, and 3, a new meter for Wells 1, 2, and 3, replacement of discharge piping and valves from wells 1, 2, and 3, new raw water main to the water treatment plant as well as site work including the installation of a 12' wide crushed stone driveway at the well field.

To treat and distribute the increased supply the project will expand the capacity of the existing water treatment plant from 2.0 MGD to 6.0 MGD with a firm capacity of 4.0 MGD. In addition, the existing plant will modify chemical feed systems; high service pumps, piping and valves; plant piping and valves; backwash system; electrical and SCADA controls; filter media; and painting.

The project will also install 1,800 feet of 8- and 12-inch water main to connect Charlestown State Park at the northern end of the service area to the water distribution system of the River Ridge Development Authority.

See **Figure 2** for a site plan of the proposed Water Treatment plant project and **Figure 3** for the RRDA connection project.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

Construction Costs	
Well Field Improvements	\$ 1,008,000
Water Treatment Plant Expansion	\$ 3,865,000
Water Main Connection to RRDA	\$ 194,000
Contingency (10%)	\$ 506,700
Construction Sub-Total	\$ 5,573,700
Non-Construction Costs	\$ 804,000
Total Estimated Project Cost	\$ 6,377,700

B. The Charlestown State Park will finance the project with a loan from the Drinking Water 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

The “**No Action**” alternative is not a feasible alternative because it will not address the water quality and quantity issues faced by residents and businesses in the River Ridge Development Authority Service Area and would halt development of the area.

Well Field Improvements: This alternative adds one new production well, a new generator, new electrical controls for the well field, new higher capacity motors and pumps to improve functionality and to increase the capacity of the system. This is the selected alternative.

Water Treatment Plant Expansion: This alternative will expand the capacity of the existing water treatment plant from 2.0 MGD to 6.0 MGD. This alternative will meet the current needs of the system. This is the selected treatment alternative.

Water Main Connection to RRDA: This alternative will connect Charlestown State Park at the northern end of the service area to the water distribution system of the River Ridge Development Authority. This connection will provide water supply to the Charlestown State Park from the RRDA and meet the needs of the area. This is the selected alternative.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed/Undisturbed Land: The proposed improvements will take place at the current water treatment plant and well field site. The new well will be installed north of the existing well field. Per the Charlestown State Park’s PER: *This site was previously reviewed*

environmentally prior to construction in 2009-2011. IDNR State Historic Preservation Office approval of the project (DHPA #7335) in 2009 cited the archaeological records check completed by King & Zoll dated 10/2/2009. The prior archaeological records check noted previously recorded sites within one mile of the project area but recommended that the project should be allowed to proceed without additional archaeological assessment. It is also believed that areas have been disturbed previously with construction of facilities for the Indiana Army Ammunition Plant (INAAP). Further archaeological investigations will be completed if deemed necessary.

Structural Resources (Figure 4a & 4b): The construction of the proposed project will remain in areas at or adjacent to the existing water treatment plant. The proposed improvements in the study area are not expected to structurally affect existing buildings designated as Historic.

Surface Waters: 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).

Wetlands (Figure 5a & 5b): Wetlands are not anticipated to be impacted by the construction of the project.

Floodplain (Figure 5a & 5b): The proposed projects will be constructed within and adjacent to the floodplain. Any construction impacts to the floodplain will be temporary and all areas will be restored, and native seed mix will be used to reestablish vegetation. No construction will take place in the floodway.

Groundwater: Groundwater will not be impacted by the construction or operation of the proposed project. Dewatering activities are not expected, and the project will not impact a sole source aquifer.

Plants and Animals: The Preliminary Engineering Report (PER) states: *Limited tree removal is expected; however, trees and shrubs are small diameter trees which are not likely habitat for protected species. 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 impact prime farmland.

Air Quality: Air quality will be temporarily impacted by construction activities, including vehicle exhaust and dust. Mitigation measures to reduce noise, dust, and airborne contaminants will be implemented as required by necessary permits.

Open Space and Recreational Opportunities: The construction and operation of the proposed 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 Charlestown State Park's PER states: *The Indiana Department of Natural Resources (IDNR) 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 September 8, 2021 the Natural Resources Conservation Service states: *The proposed project to proceed with the water supply expansion in Charlestown State Park, Clark County, Indiana, as referred to in your letter received August 4, 2021, will not cause a conversion of prime farmland.*

In correspondence dated July 7, 2021, the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology stated:

Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project. Archaeological site 12CI752 has been recorded within the project area. However, this site appears not eligible for inclusion in the National Register of Historic Places. Therefore, no further archaeological investigations appear necessary.

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 June 16, 2021, the Department of Natural Resources Environmental Unit stated:

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. Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Wells and pumping equipment must be installed by a water well driller and water well pump installer, respectively, that are licensed in the State of Indiana and must be constructed in accordance with IC 25-39 and Rule 312 IAC 13. Contact the Division of Water at (317) 232-4160 or toll free at (877) 928-3755 if the project involves any water withdrawals (including permanent and/or temporary dewatering) having an aggregate withdrawal capacity of 70 gpm or more.

*The Natural Heritage Program's data have been checked. The state threatened Allegheny Stonecrop (*Hylotelephium telephioides*) has been documented immediately south of the project area. The Division of Nature Preserves does not anticipate any impacts to this plant species as a result of this project. 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) Forest & Riparian Habitat:

Both early successional habitat and established forested habitat impacts will result from this project. Well No.4 lies just east/northeast of drainage that is within a mature forested riparian corridor that can be seen on aerial photos dating back as far as they are available on public GIS sites (1992 on GoogleEarth at which point it already consisted of well-established trees).

We recommend a mitigation plan be developed for any unavoidable habitat impacts that will occur. The mitigation site should be located preferably as close to the impact site as possible and adjacent to existing forested riparian habitat. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: <http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.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. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however. Mitigation at a ratio of 1:1 would be needed for a permanent impact to early successional riparian habitat. A native herbaceous riparian seed mixture is planted with at least 10 species of native grasses, sedges, and wildflowers selected from the Herbaceous Riparian Vegetation List in Appendix A. If the area contains scattered shrubs or tree saplings, mitigation includes woody species native to the region.

2) Utility Line Creek Crossing:

Any creek crossings should be done using the jack-and-bore or the directional bore method unless the method is not feasible due to site conditions. The length of the directional bore should include any forested riparian areas along the creek to minimize impacts to forested habitat. Should the directional bore method not be feasible due to the site conditions and the open-trench method is necessary, 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) or whenever an ephemeral stream is dry.*
- 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). Bioengineered bank stabilization methods are presented in the bioengineering manuals located at: <http://directives.sc.egov.usda.gov/>*
- c. *The cleared width through any forested area should be the minimum width needed to install the line and have a final width of no wider than 20ft wide to allow the tree canopy on either side of the cleared easement to close over the line.*
- d. *If a creek crossing cannot be done using the directional bore method 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 remain at the existing streambed level 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 in the floodway with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).*
- 2. Minimize and contain within the project limits inchannel 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. 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.*
- 5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.*
- 6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pump rounds.*
- 7. Use minimum average 6-inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.*
- 8. 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.*
- 9. 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.*

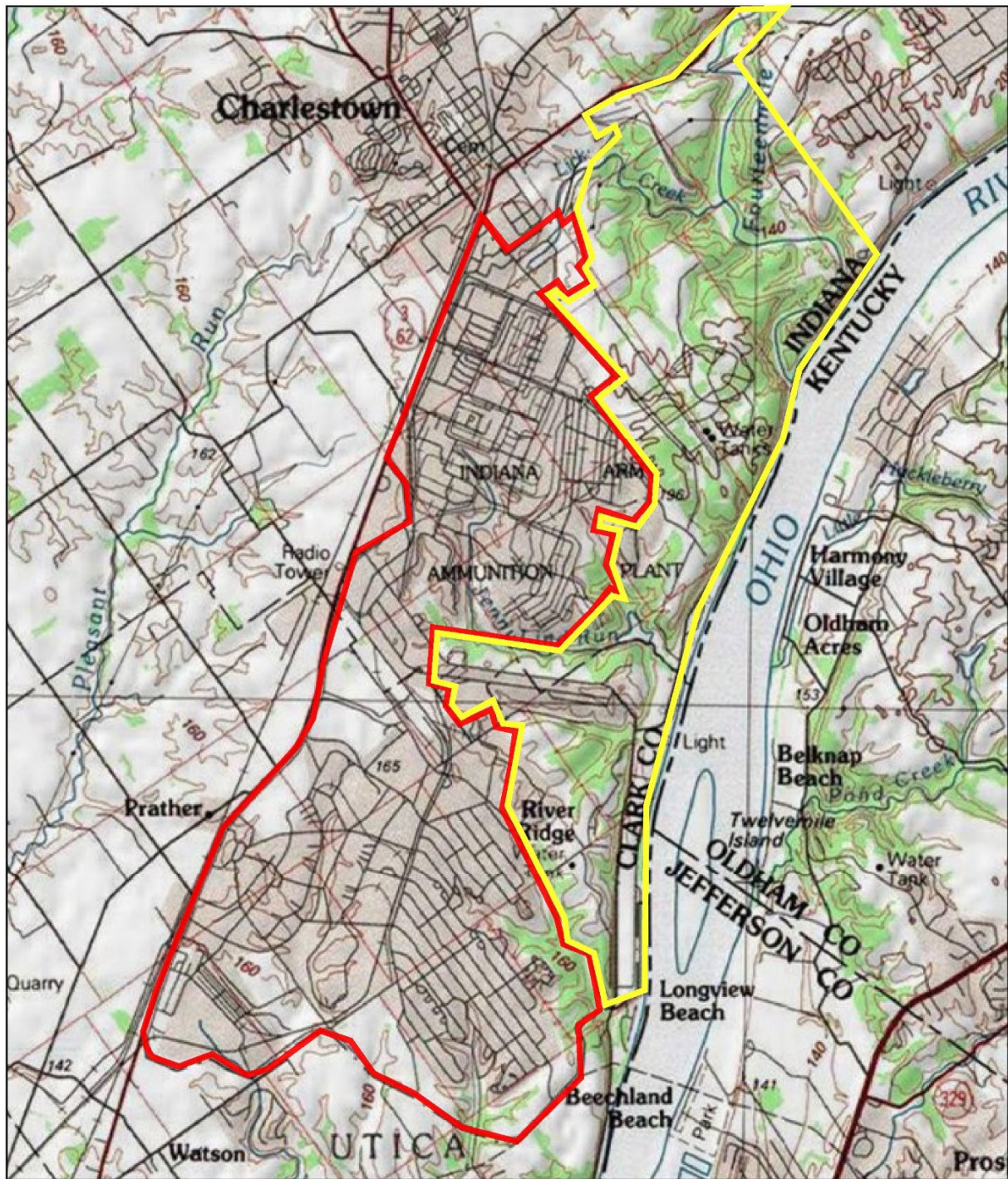
VIII. MITIGATION MEASURES

The Charlestown State Park's PER states:

Precautions 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 areas shall be restored to their pre-construction condition. All vegetated land shall be permanently seeded and maintained as necessary until vegetation growth is established. All mitigating measures recommended by reviewing authorities shall be implemented for this project.

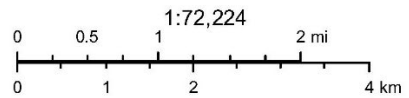
IX. PUBLIC PARTICIPATION

A properly noticed public hearing was held on August 19, 2021, at 10:00 am in the Indiana Finance Authority Board Meeting, One North Capitol Avenue, Suite 900, Indianapolis, IN 46204 to discuss the PER. No written comments were received during the 5-day comment period following the hearing.



LEGEND

- Charlestown State Park Boundaries
- River Ridge Development Authority Boundaries



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Figure 2

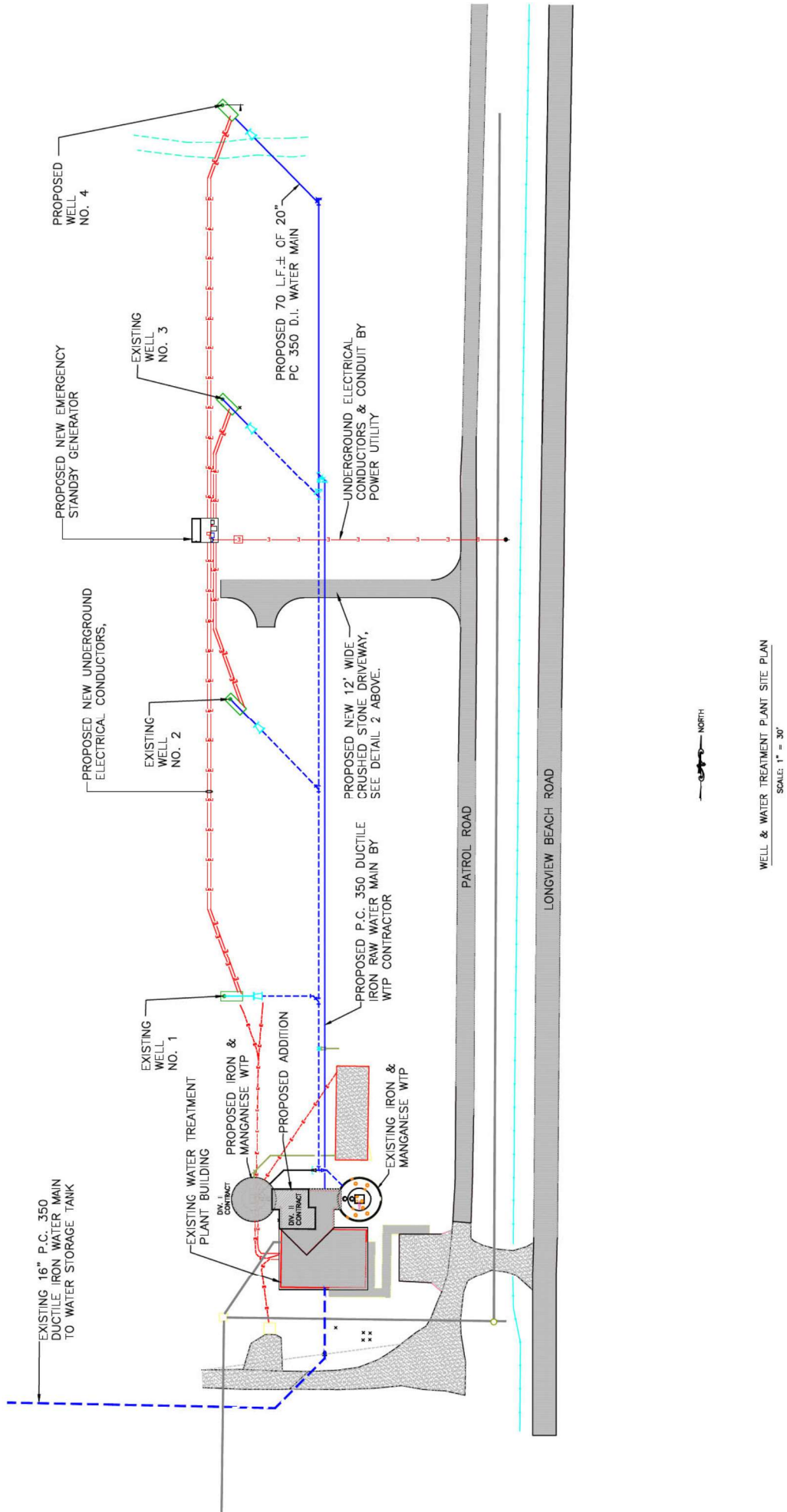
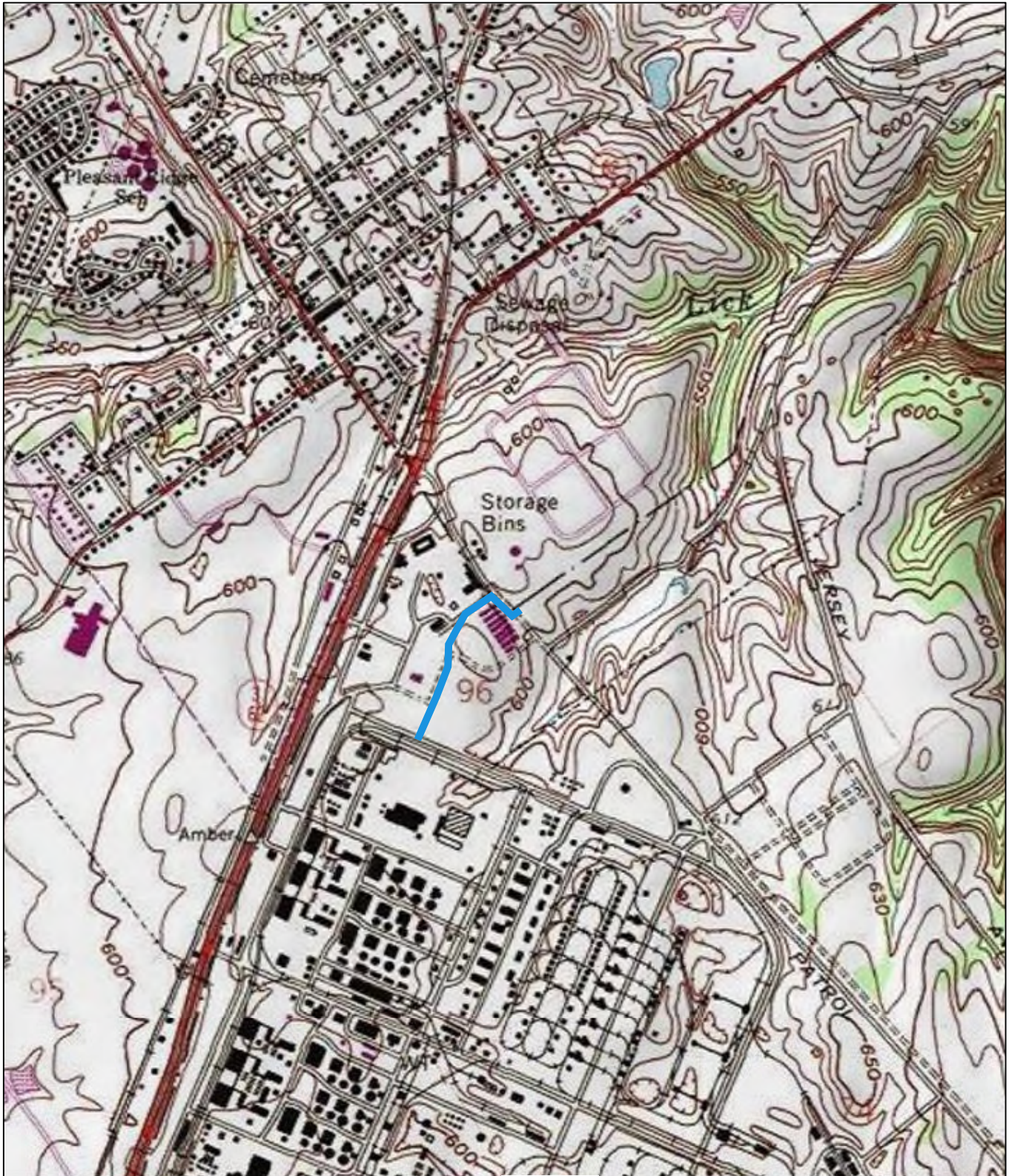
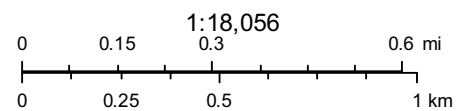


Figure 3: Water Main Connection to RRDA



LEGEND

Water Main






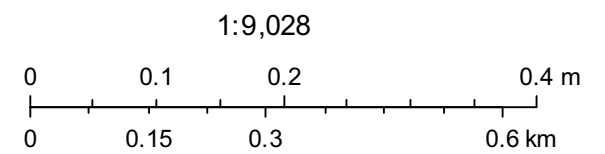
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Figure 4a: Water Treatment Plant & Well Field Historic Resources Map



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-  Cemeter es
- County Survey Sites**
-  Contr but ng
-  Water Treatment Plant & Well Field





Source Esri Maxar GeoEye Earthstar Geographics CNES/Airbus DS USDA USGS AeroGRID IGN and the GIS User Community

Figure 4b: Water Main Connection to RRDA Historic Resources

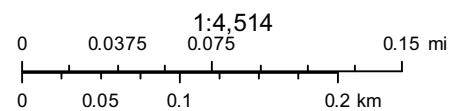


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County Survey Sites

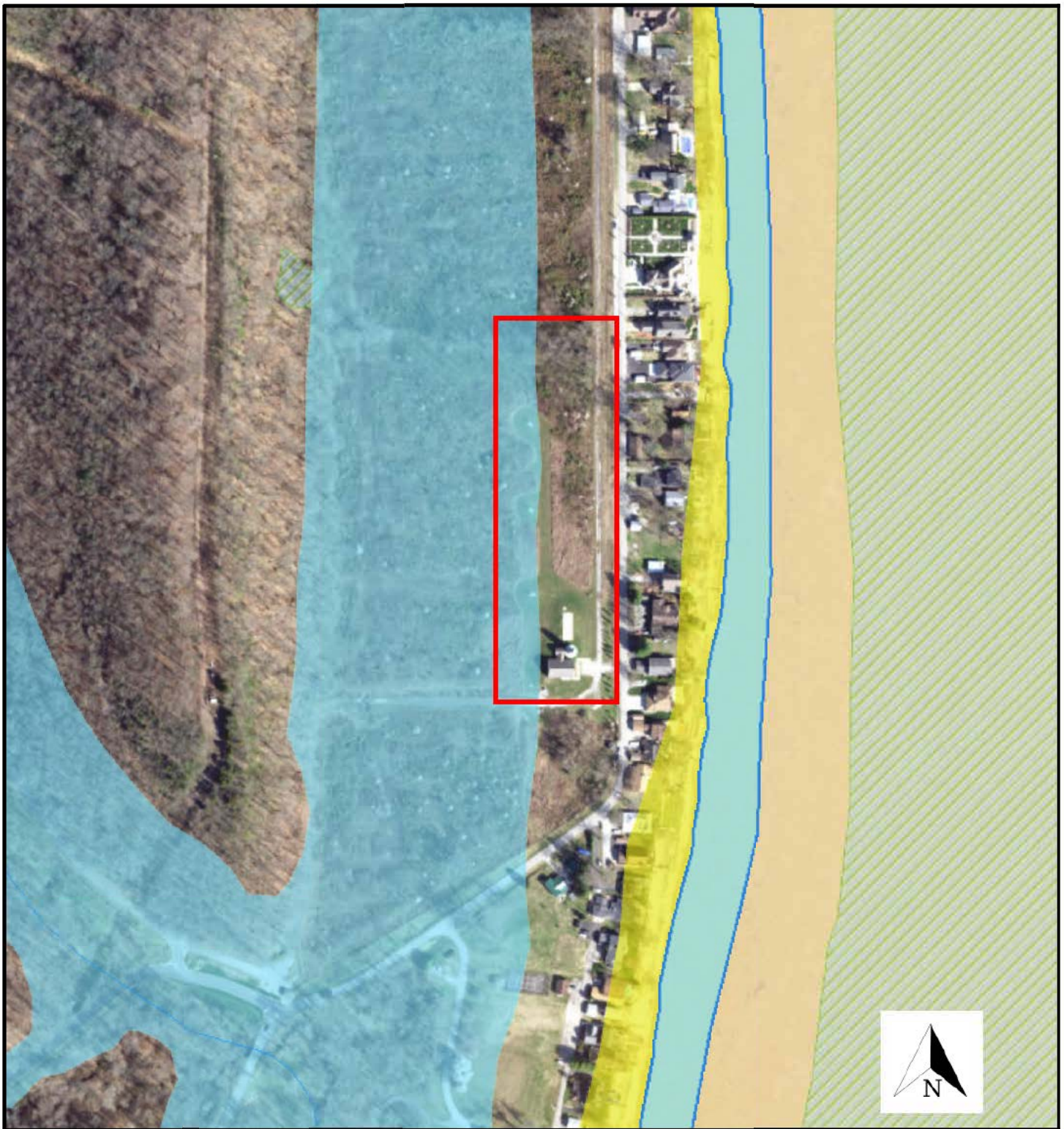
-  Notable
-  Contributing

 Water Main



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

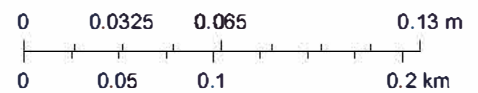
Figure 5a: Wetlands and Floodplain Map



April 21, 2021

1:4,000

- Streams (NHD)
- Rivers (NHD)
- Floodplains - FIRM (Mar 2020)**
- Floodway
- 1% Annual Chance Flood Hazard
- Water Treatment Plant & Well Field
- 0.2% Annual Chance, Protected by Levee
- 0.2% Annual Chance Flood Hazard
- Wetlands NW (USFWS)
- Wetlands Project Metadata NW (USFS)
- 2017 Orthophotography Placeholder



U.S. Geological Survey
 U.S. Fish and Wildlife Service (USFWS) National Standards and Support
 Team National Wetlands Inventory (NW)
 Indiana Office of Information Technology Indiana University Spatial Data
 Portal UTS Woolpert, Inc

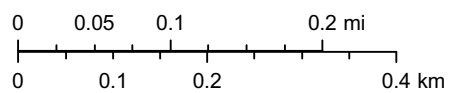
Figure 5b: Water Main Connection to RRDA Wetlands/Floodplains



May 31, 2021

1:8,000

- Streams (NHD)
- Rivers (NHD)
- Floodplains - FIRM (Mar 2020)**
- Floodway
- 1% Annual Chance Flood Hazard
- Water Main
- 0.2% Annual Chance, Protected by Levee
- 0.2% Annual Chance Flood Hazard
- Wetlands NWI (USFWS)
- Wetlands Project Metadata NWI (USFS)
- 2017 Orthophotography - Placeholder



U.S. Geological Survey
 U.S. Fish and Wildlife Service (USFWS), National Standards and Support Team, National Wetlands Inventory (NWI)
 Indiana Office of Information Technology, Indiana University Spatial Data Portal, UITS, Woolpert Inc.