State Revolving Fund Loan Programs
Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

CITY OF JEFFERSONVILLE
NEW NORTH WASTEWATER TREATMENT PLANT
STATE REVOLVING FUND PROJECT # WW06 12 10 06

DATE: August 30, 2011

TARGET PROJECT APPROVAL DATE: September 29, 2011

I. INTRODUCTION

The above entity has applied to the 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 at http://www.in.gov/ifa/srf/.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

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

III. COMMENTS

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

Max Henschen
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-8623; mhensche at ifa.in.gov

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address:	**New North Wastewater Treatment Plant** City of Jeffersonville Jeffersonville City Hall 500 Quartermaster Court Jeffersonville, Indiana 47130
SRF Project Number:	WW06 12 10 06
Authorized Representative:	The Honorable Thomas Galligan, Mayor

II. PROJECT LOCATION

Jeffersonville is in the southeastern portion of Clark County and bordered by the Ohio River. Jeffersonville recently expanded its service area and updated its Twenty Year Master Plan, which resulted in its decision to split the service area into: (1) the southern portion, including the combined sewer area, which will be served by the Downtown Wastewater Treatment Plant (DWWTP) and (2) the northern portion, which will be served by the proposed North Wastewater Treatment Plant (NWWTP).

The proposed NWWTP will be located on the Jeffersonville, IN-KY USGS quadrangle in the Utica Civil Township, Survey No. 38 of the Illinois Grant for Clark County (Figure 1).

III. PROJECT NEED AND PURPOSE

Jeffersonville's collection system consists of both a sanitary sewer system and a combined sewer system (i.e., sewers which carry both storm water and sanitary wastewater). The combined sewer service area (CSSA) covers approximately 15 percent of the city's service area, while the remaining 85 percent comprises the sanitary sewer service area.

The Jeffersonville sewer system collects wastewater from residential, institutional and commercial/industrial users, transporting flow to the DWWTP via three primary pump stations: the Tenth Street Pump Station, Spring Street Pump Station and the Mill Creek Pump Station. The Tenth St. Pump Station primarily serves the combined sewer service area, while the Spring St. Pump Station and the Mill Creek Pump Station serve the northwest and north areas, which are served by sanitary sewers. The Krunchers facility discharges its wastewater directly to the DWWTP. The city is in the process of expanding the Tenth Street Pump Station peak pumping capacity from 15.8 million gallons per day (MGD) to 50 MGD peak hourly flow; the city is also expanding the Mill Creek Pump Station capacity of 6.0 MGD to 8.0 MGD. The Spring St. Pump Station has a peak pumping capacity of 6.0 MGD.

The NWWTP will treat flows from areas currently served by the Liter's Pump Station, the Riverport 2 Pump Station, the Indiana Army Ammunition Plant (INAAP), and future areas of development. The proposed NWWTP will be located adjacent to the 0.5 MGD Load, Assembly, and Packing (LAP) WWTP that only treats flows from the INAAP service area.

The Pleasant Run Pump Station currently discharges to the Liter's Pump Station, which in turn discharges to the Mill Creek Pump Station, which in turn discharges to the DWWTP. Upon completion of the proposed NWWTP project, the flow from the Pleasant Run Pump Station and Liter's Pump Station will be removed from the Mill Creek Pump Station and redirected to the proposed NWWTP. The Riverport 2 Pump Station will discharge to a future Lentzier Creek Pump Station, which will also send the flow to the proposed NWWTP.

Pump stations that currently discharge to the LAP plant and which will eventually discharge to the NWWTP are: River Ridge Onsite Pump Station #1 and the River Ridge Offsite Pump Station #2.

The DWWTP was constructed in 1994 and upgraded in 2006. In 2010, the DWWTP was expanded to a dry weather capacity of 6.0 MGD and a wet weather capacity of 34 MGD. The city is currently expanding the DWWTP to treat a wet weather capacity of 50 MGD from the combined sewer area.

In August 2009, the Jeffersonville Sanitary Sewer Board ratified a Consent Decree with the United States Environmental Protection Agency (U.S. EPA), the Department of Justice, and the Indiana Department of Environmental Management (IDEM). The Consent Decree became effective on November 24, 2009. The Consent Decree calls for Jeffersonville to comply with the "Nine Minimum Controls" for combined sewer overflows (CSOs), to develop and implement a comprehensive Long Term Control Plan (LTCP), and to develop and implement a Sewer System Capacity, Maintenance, Operation and Management Program for its entire sewer system.

Jeffersonville is implementing the LTCP to address combined sewer overflows (CSOs). Included in this plan are provisions to undertake capital improvements, operational modifications and other improvements between 2010 and 2020 to reduce or eliminate CSOs into Cane Run and the Ohio River.

An analysis of treatment options was conducted to determine the best method for handling Jeffersonville's current and future wastewater needs, as well as reduce or eliminate CSOs. The city determined that expanding the DWWTP in conjunction with constructing a North WWTP would adequately address all of its wastewater needs, including creating additional capacity for treating wet weather flow at the DWWTP.

IV. PROJECT DESCRIPTION

The proposed North WWTP includes (Figure 2):

A. a lab/administration building consisting of an operator's office, restrooms, and separate room for housing the Supervisory Control and Data Acquisition system;

B. a process control system at the NWWTP that will include programmable logic controllers in the Headworks Building, in the Secondary Clarifier's Return Activated Sludge (RAS)/Waste Activated Sludge (WAS) Pump Building, in the Sludge Processing Building, and at the DWWTP that will monitor and control plant equipment, as well as the city's lift stations;

C. a mechanical screen with a conveyor and a vortex grit removal system consisting of a grit pump, and grit washer/grit classifier;

D. two oxidation ditches with biological nutrient removal (BNR) tanks;

E. two 80-foot diameter final clarifiers;

F. an ultra-violet (UV) disinfection system having a capacity of 9.0 MGD and an automatic cleaning system;

G. a cascade aerator for the post-aeration system;

H. a gravity belt sludge thickener;

I. two aerated holding tanks to store WAS;

J. a solid bowl centrifuge for the sludge dewatering process;

K. a covered sludge loading bay to store dewatered sludge;

L. a standby generator; and

M. upgrading the River Ridge Onsite Pump Station #1.

The proposed WWTP will be designed to treat the following flow components:

Source	2011 MGD	2031 MGD
Domestic (D)	0.39	1.90
Commercial (C)	0.15	0.30
Industrial (I)	0.26	0.50
Total DCI Flow	**0.80**	**2.70**
Peak Sustained Infiltration	0.20	0.30
Average Design Flow	**1.00**	**3.00**
Peak Hourly Design Flow	**3.00**	**9.00**

The design loadings for the North WWTP are:

- 5 day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)--235 milligrams per liter (mg/l)
- Total Suspended Solids (TSS)--240 mg/l
- Ammonia-Nitrogen (NH3-N) -- 15 mg/l
- Total Nitrogen (TN) -- 25 mg/l
- Phosphorus (P) -- 8 mg/l

The NWWTP effluent will discharge to Lentzier Creek.

The Indiana Department of Environmental Management has proposed the following effluent limitations for Jeffersonville's proposed NWWTP based on a Wasteload Allocation dated July 21, 2010:

	Summer		Winter	
	Monthly Average mg/l	Weekly Average mg/l	Monthly Average mg/l	Weekly Average mg/l
$CBOD_5$	10	15	10	15
TSS	12	18	12	18
NH_3-N	1.1	1.6	1.6	2.4

	Daily Minimum	Daily Maximum	Monthly Average
pH (standard units)	6.0	9.0	---
Dissolved Oxygen	6.0	---	---
E. coli	-----	235 count/100 ml	125 count/100 ml

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

Construction Components	**Costs**
Administration Building	$ 936,000
Headworks Structure/Influent Flow Monitoring	1,934,000
Oxidation Ditch with BNR Tanks	4,807,000
Mixed Liquor Suspended Solids Splitter Box	105,000
Secondary Clarifiers	1,047,000
RAS/WAS Pump Station	850,000
UV Disinfection System	1,020,000
Sludge Stabilization/Dewatering Facility	3,173,000
Cascade Aeration/Effluent Flow Monitoring Structure	175,000
River Ridge Onsite Pump Station	78,000
Scum Pump Station	67,000
Plant Recycle/Drain Pump Station	80,000
Emergency Generator	600,000
Site Work (Demolition, Piping, Erosion Control, Valve Vaults, Bioswale, Rain Gardens)	2,995,000
Mobilization/Demobilization	744,000
Construction Subtotal	**$ 18,611,000**
Contingencies	1,862,000
Total Estimated Construction Cost	**$ 20,473,000**

Non-Construction Items	**Costs**
Legal and Financial	$ 280,000
Engineering Planning	50,000
Additional Surveying	50,000
Engineering Design and Permitting	1,216,000
Engineering Services During Construction	250,000
Resident Observation/Inspection	681,000
Non-Construction Costs	$ 2,527,000
Total Estimated Project Cost	**$ 23,000,000**

B. The city will borrow approximately $23,000,000 through a 20-year State Revolving Fund (SRF) Loan Program loan at an interest rate to be determined at loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

Several alternatives were evaluated in the city's CSO LTCP to control discharges from combined sewers. Based on requirements of the Consent Decree, the city evaluated the following alternatives:

A. **No Action**: This alternative was rejected since the city would not be in compliance with its Consent Decree.

B. **Maximize Flows at the DWWTP**: This alternative was rejected due to the cost of transporting anticipated additional flows from the northern part of the service area a long distance to the DWWTP for treatment.

C. **Construct a North WWTP**: This alternative would allow approximately 30 to 40 percent of the sanitary flow to be diverted from the DWWTP to the NWWTP for treatment. Diverting this wastewater flow from the DWWTP to the NWWTP would allow more capacity at the DWWTP for the treatment of combined sewer flows and would reduce the frequency and/or volume of CSOs. **Based on cost this was the selected alternative.**

The city evaluated several secondary treatment alternatives, and based on a preliminary review, the following alternatives were eliminated: activated sludge, membrane biological reactor, and biological aerated filter. The following secondary treatment alternatives were evaluated:

A. **Sequencing Batch Reactor**: This treatment process allows treatment and settling in a common tank through several sequences of filling and emptying. This alternative was rejected, since it is a complex operation and would not be able to remove phosphorus on a consistent basis, if required, as part of BNR process.

B. **Vertical Loop Reactor**: This alternative is similar to the oxidation ditch, except that the wastewater would flow in a vertical direction as opposed to a horizontal direction and the unit has a smaller footprint than an oxidation ditch. This alternative was rejected since plant personnel are more familiar with the oxidation ditch process, which is used at the DWWTP.

C. **Oxidation Ditch Alternative**: This alternative is designed as an extended aeration process capable of achieving nitrification; it can meet future permit nitrogen and phosphorus limitations, as part of the BNR process. The treated effluent will discharge to Lentzier Creek via a rip-rap-lined ditch. **This was the selected alternative.**

Several sludge stabilization alternatives were evaluated for the NWWTP:

A. **Conventional Aerobic Digestion Alternative**: This alternative consists of a tank that is both aerated and mixed. This alternative was rejected due to cost.

B. **Autothermal Thermophilic Aerobic Digestion (ATAD) Alternative**: This alternative consists of a two-stage process of sludge thickening and digestion. Due to high cost this alternative was rejected.

C. **Aerated Sludge Holding Tanks Alternative**: This alternative involves the waste activated sludge (WAS) being temporarily stored in two holding tanks. The holding tanks will be designed for a detention time of 15 days at 2% solids and will be aerated using positive displacement blowers to help thicken the WAS from 0.8% to 2% solids. **This was the selected alternative, based on cost.**

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Site conditions and Environmental Covenants: Bedrock within the project site is ten feet below grade in most areas, and is primarily Devonian Age limestone and dolomite with minor amounts of shale. The limestone and dolomite is considered karstic, although no sinkholes or other solution features were noticed during geotechnical site visits. Review of the identified karst features indicates that the nearest sinkhole feature is located approximately one mile northeast of the project site.

Disturbed and Undisturbed Areas: The project will not affect archaeological sites. The construction of the new NWWTP will take place adjacent to the LAP WWTP, in an area which has been disturbed by construction of the LAP WWTP, an existing water tower, and associated access roads and piping. The area has been archaeologically surveyed as part of the transfer of land from the INAAP to the River Ridge Development Corporation.

The site may receive fill material from the Tenth St. Pump Station and Mill Creek Effluent Line projects, currently under construction. The soil stockpile areas and a potential borrow area are shown on Figure 3.

The property within the 660 foot Blast Arc shown on Figure 4 will not be disturbed during construction. Eventually, that designation will be lifted; the future use of that portion of the property is not yet defined.

Structural Resources (Figure 5): Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic sites 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 the Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Plants and Animals: The project area's parcels are currently owned by Jeffersonville or leased by Jeffersonville from the River Ridge Development Corporation (Figure 4). Attached to the land transfer agreement between the INAAP and River Ridge Development Corporation are Environmental Covenants, one of which is designed to protect endangered species by restricting impacts to streams and karst resources (i.e., caves, and sinkholes) on the NWWTP site. The covenant applies to whoever owns or leases the property. The most recent version of that Covenant known to the SRF states:

ENDANGERED SPECIES RESTRICTIVE COVENANT FOR THE PROTECTION OF THE GRAY BAT AND THE INDIANA BAT

A. Two species of federally endangered bats, the gray bat ([M]yotis grisescens) and the Indiana bat ([M]yotis sodalist [sic]) are known to inhabit the Property. In order to minimize and/or

avoid impacts to the gray bat, the GRANTEE, and its successors and assigns, shall protect these species of bats and their habitats within the Property by complying with the following requirements:

(1) GRANTEE, its successors and assigns shall not disturb, or permit the disturbance of forest cover within 100 feet (30 meters) of a perennial stream or within 50 feet (15 meters) of an intermittent stream.

(2) GRANTEE, its successors and assigns shall not conduct or permit any earth moving activities and disturbance of natural vegetation within 100 feet (30 meters) of any cave, sinkhole, spring, or underground stream.

(3) In the event the GRANTEE, its successors and assigns conducts or permits any major earth moving activities which are located more than 100 feet (30 meters) from a cave, sinkhole, spring, or underground stream, but still within the drainage area of such cave, sinkhole, spring, or underground stream, GRANTEE, its successors and assigns shall ring and stake the area of activity with silt fencing and hay bales, respectively, to control erosion and prevent debris from entering such cave, sinkhole, spring, or underground stream.

(4) The GRANTEE may routinely apply, or may allow the routine application of registered pesticides to control weeds around buildings located within drainages on the Property as long such application is performed in accordance with the directions listed on the appropriate product labels.

B. The United States shall be deemed a beneficiary to this preservation covenant without regard to whether it remains the owner of any land or interest therein in the locality of the property hereby conveyed and shall have the sole right to enforce this preservation covenant in any court of competent jurisdiction. This preservation covenant, and its restrictions, conditions, and limitations shall be binding on the GRANTEE and its successors, and assigns in perpetuity. The Department of Interior, Fish and Wildlife Service may, for good cause, modify or cancel any or all of the foregoing restrictions upon written application of the GRANTEE, or its successors or assigns.

The proposed project will not impact state- or federal-listed endangered species or their habitat. The rip-rap-lined effluent ditch, and the force main from the future Lentzier Creek Pump Station will share the same 35-foot wide construction corridor.

Some trees will need to be removed to install the effluent ditch and the force mains for the Lentzier Creek Pump Station and the River Ridge Off-site Pump Station #2. However, nearly all of these trees are over 100 feet away from any streams. Force main installation for the Pleasant Run Pump Station, Liters Pump Station and River Ridge On-Site Pump Station #1 may require some tree removal, but not within 100 feet of Lentzier Creek.

Prime Farmland: The proposed project will not convert prime farmland.

Wetlands and Surface Waters (Figure 3): A Water/Wetland Delineation implemented in February 2010 did not find wetlands on the project side of Lentzier Creek. On the other side of the creek, the delineation found three small jurisdictional wetlands, an ephemeral stream, and three intermittent streams; the survey stated that Lentzier Creek is a perennial stream, although the National Wetlands Inventory map and topographic map illustrate it as an intermittent stream.

Lentzier Creek is a riverine wetland. The proposed 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), or 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 waters on the Outstanding Rivers of Indiana list (Natural Resources Commission non-rule policy document). The effluent ditch will be designed to prevent scouring of the Lentzier Creek.

100-Year Floodplain (Figure 3): The proposed project will not affect the 100-year floodplain.

Groundwater: The city anticipates that only normal groundwater control measures will be required during construction. During the NWWTP design, tests will be performed to determine the extent of groundwater in the project area. Proper design considerations will be taken.

Air Quality: Dust and noise will be produced during construction activities.

Open Space and Recreational Opportunities: The proposed project's construction will neither create nor destroy open space and recreational opportunities.

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

B. Indirect Impacts

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

C. Comments from Environmental Review Authorities

In correspondence dated September 27, 2010 the Natural Resources Conservation Service stated: *The proposed project ... will not cause a conversion of prime farmland.*

In correspondence dated August 17, 2011, the U. S. Fish and Wildlife Service stated: *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.*

Your letter states that the City of Jeffersonville proposes to build a new WWTP on previously disturbed land at the site of an existing WWTP on former Indiana Army Ammunition Plant (INAAP) property. The previous effluent outfall to the Ohio River would be abandoned and replaced by a riprap-lined effluent ditch approximately 200 feet long to an upper reach of Lentzier Creek. Based on recent aerial photographs and the ground photos attached to your letter, the stream at that location has a narrow border of small trees and shrubs. We do not anticipate significant impacts to wildlife habitat if best management practices are used to prevent erosion and soil runoff. We recommend stabilizing disturbed soils near the stream bank with native species of vegetation.

Endangered Species: The proposed project is within the range of the federally endangered Indiana bat (Myotis sodalis) and gray bat (M. grisescens). The subject INAAP property was transferred from the Army to River Ridge Development Commission with protective covenants for both species. The gray bat, which has only one known reproductive colony in Indiana, was documented using INAAP property for foraging and possibly for temporary roosting in caves. The relevant covenants for this project are a prohibition against disturbance of forest within 100 feet of a perennial stream or within 50 feet of an intermittent stream, and a prohibition against disturbance of natural vegetation within 100 feet of a surface karst feature, without prior approval from this office of the FWS. Due to the low quality of the riparian habitat along Lentzier Creek at this location and the minor nature of the proposed disturbance, we conclude that the intent of the covenants will not be violated. Approval is hereby granted to proceed without any further endangered species restrictions under the covenants.

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 change significantly please contact our office for further consultation.

In correspondence dated August 28, 2011, the IDNR 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 (16 U.S.C. § 470f) 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 August 10, 2011 for the above indicated project in Jeffersonville, Utica Township, Clark 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 archaeological artifacts, features, or human remains are uncovered during construction, 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 26, 2011, the IDNR Environmental Unit stated:
Regulatory Assessment: *Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.*

Natural Heritage Database: *The National 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: *The cleared width through any forested area should be the minimum needed to install the line and no more than 20 feet wide to allow the canopy to close over the line. Impacts resulting from effluent line and outfall construction to wooded areas located along Lentzier Creek should be mitigated as follows:*

Impacts to non-wetland forested floodway habitat should be calculated by counting/making a tally of all trees to be removed that are 10" in diameter at breast height (dbh) or greater. The impacts to the 10+" dbh trees should be mitigated by planting five trees, at least 2 inches in dbh, for each tree which is removed that is ten inches or greater in dbh. Impacts to non-wetland forested floodway habitat over 1 acre should be mitigated at a minimum 2:1 ratio.

In-stream construction should be timed to coincide with the low-water time of year (typically mid- to late-summer). 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 should remain at the existing streambed level to avoid creating a fish passage obstruction.

Restore disturbed streambanks using bioengineering bank stabilization methods and revegetate disturbed banks with native trees, shrubs and herbaceous plants. The following is a link to a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization:

http://directives.sc.egov.usda.gov/17553.wba (Choose Handbooks; Title 210 Engineering; National Engineering Handbook; Part 650 Engineering Field Handbook. Choose Chapter 16 from next window). Stream bank slopes after project completion should be restored to stable-slope steepness (not steeper than 2:1).

Fish, wildlife, and botanical resource losses as a result of this project can be minimized through implementation of the following measures.

1. *Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.*
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 roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.*
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 disturbed stream banks and slopes that are 3:1 or steeper with biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendation for installation); seed and apply mulch on all other disturbed areas.*
9. *Do not excavate or place fill in any riparian wetland.*

VIII. MITIGATION MEASURES

The city's PER lists the following mitigation measures:

A. *Implement appropriate temporary erosion control measures (straw bale barriers, silt fencing, etc.) to prevent soil runoff leaving the construction site.*

B. *Implement all applicable water pollution control measures specified in the Indiana State Highway Standard Specifications (latest version).*

C. *The appropriate measures will be taken to prevent siltation of nearby surface and underground water resources with dewatering flows or construction related runoff. This includes the need to*

control erosion and prevent debris from entering a cave, sinkhole, spring or underground stream. These measures shall include the requirement to ring and stake the area of activity with silt fencing and hay bales, per the "Environmental Protection provisions" associated with the land transfer agreement between River Ridge and the City of Jeffersonville.

D. *Minimize fugitive dust from construction activities by wetting the construction area periodically and constructing wind barriers or treating with chemical stabilizers if necessary.*

E. *The open burning of debris (i.e., trees and shrubs) shall not be allowed unless a permit is obtained from the Indiana State Air Pollution Control Division for such activities.*

F. *Cutback asphalt or asphalt emulsion containing more than seven percent oil distillable shall not be used during the months April through October pursuant to 326 IAC 805 Asphalt Paving Rule.*

G. *The contractor shall abide by the rules governing asbestos notification, handling, disposal and contractor licensing should such material be encountered.*

H. *Construction waste shall be disposed of by the contractor at an acceptable waste disposal landfill. If contaminated soils (including PCBs) are discovered during the project, they may be subject to disposal as either special or hazardous waste as determined by the* [IDEM] *Office of Solid and Hazardous Waste Management.*

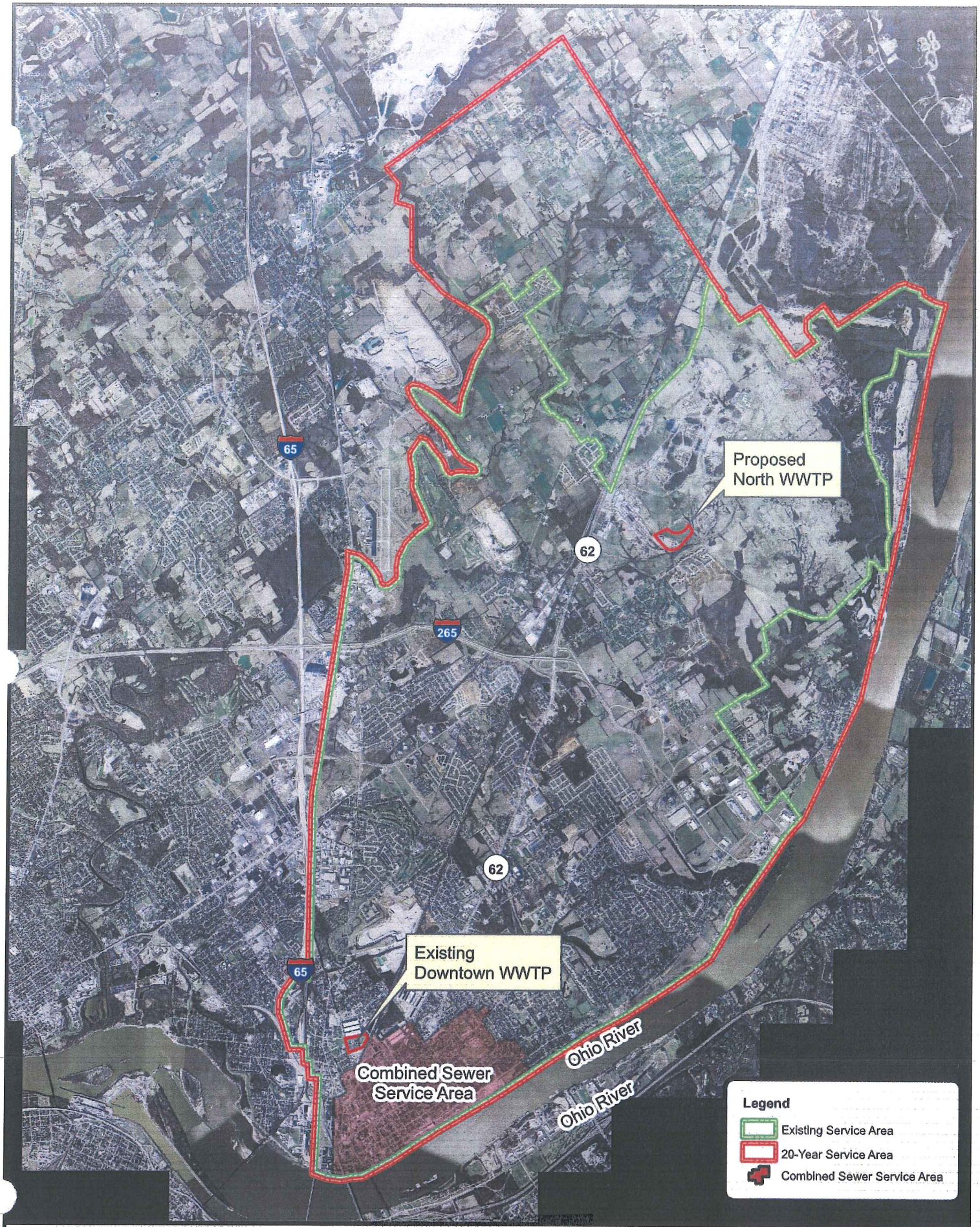
I. *Mitigation measures cited in comment letters from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.*

K. *The stockpile and borrow site areas will comply with Rule 5 for "Erosion Control Associated with Construction Activity".*

IX. Public Participation

A public hearing was held in the Mayor's Conference Room, at 7:30 P.M. on March 24, 2009 to discuss this project, as well as other wastewater projects proposed by the city. These projects are necessary for the city to comply with the Consent Decree with the Indiana Department of Environmental Management and the U.S. EPA. Members of the public did not attend.

In addition, a notice was published on October 21, 2010, in *The Evening News* to notify the public that the original PER was modified to provide separate PERs for each of the four proposed projects (i.e., Tenth Street Pump Station expansion, Downtown WWTP expansion, Mill Creek Effluent Line and future force main for Spring Street Pump Station and the new North WWTP). No comments were received in response to the public notice.



Preliminary Engineering Report
Additional Needs Projects
City Of Jeffersonville, Indiana

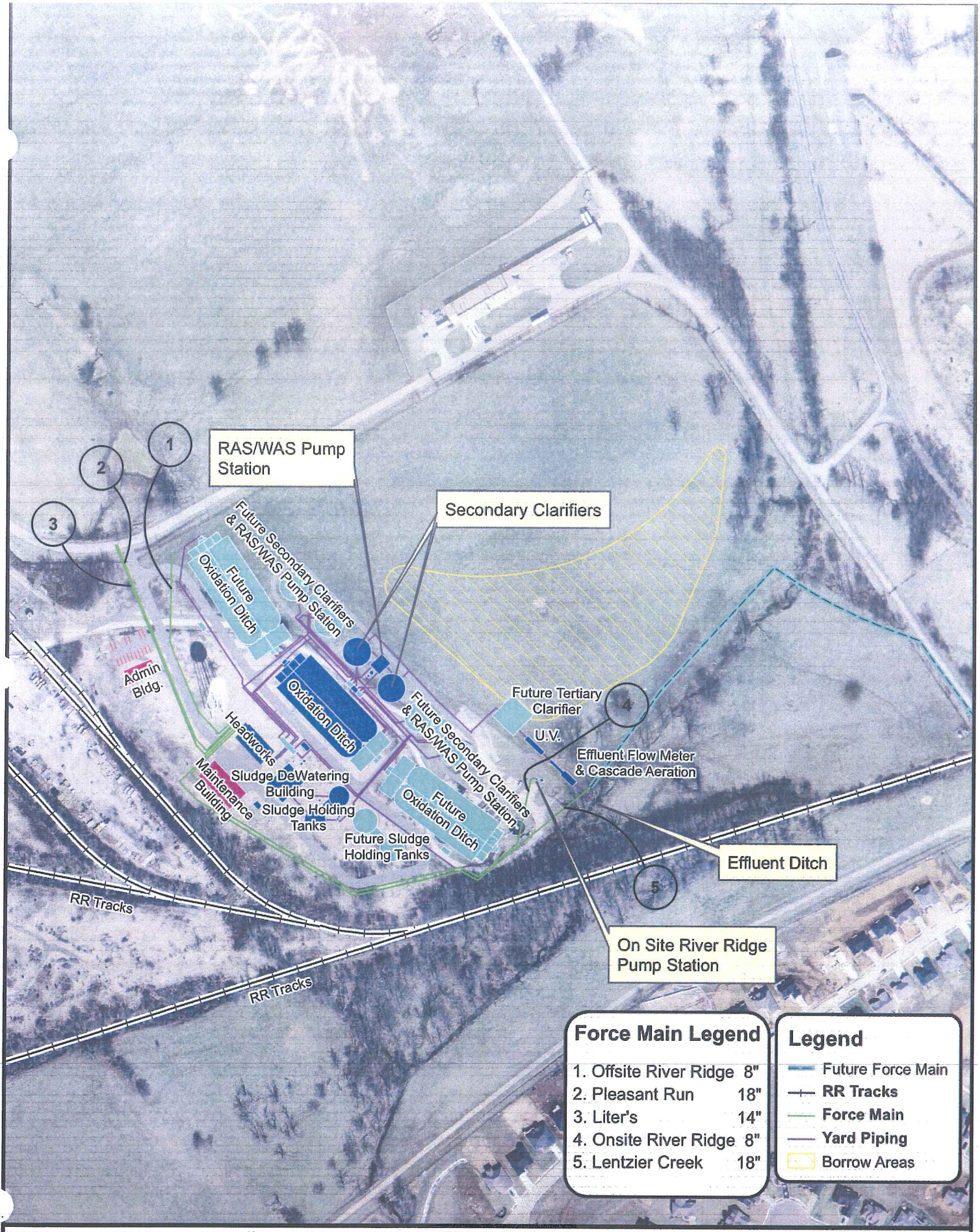
N
W E
S

0 4,350 8,700 17,400 Feet

Figure 1
Study Area and Project Site
Jeffersonville, Indiana

Revised 07/27/2011

BERNARDIN LOCHMUELLER & ASSOCIATES, INC.
3502 Woodview Trace, Suite 150
Indianapolis, IN 46268
Phone: (317) 222-3880



Preliminary Engineering Report
Additional Needs Projects
City Of Jeffersonville, Indiana

N W E S

0 160 320 640 Feet

Figure 2
WWTP Site Plan

Jeffersonville, Indiana

Revised 07/27/2011

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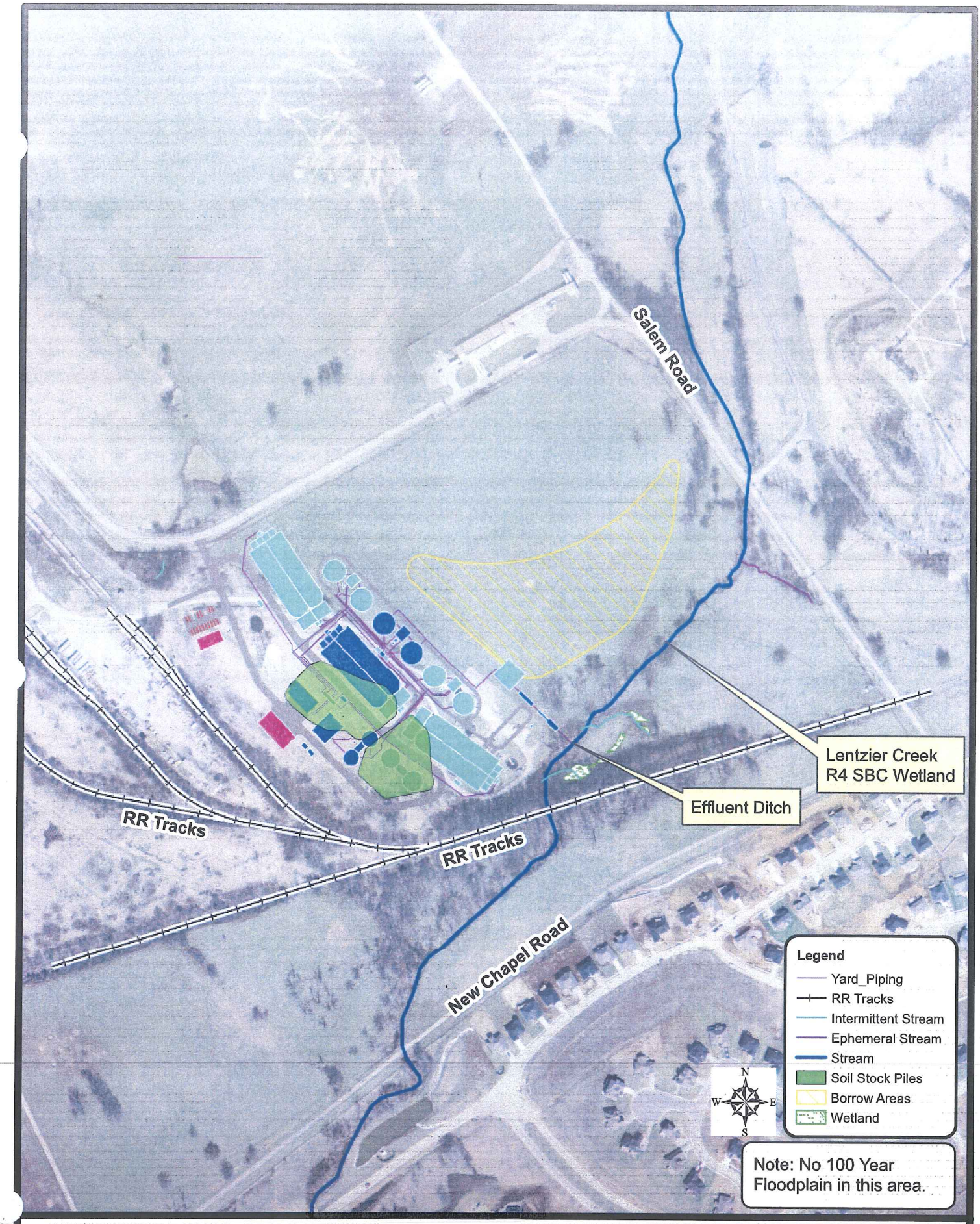

Preliminary Engineering Report
Additional Needs Projects
City of Jeffersonville, Indiana

0 200 400 800 Feet

Figure 3

Hydrology, Floodplain & Wetland Map

Jeffersonville, Indiana

Revised 07/27/2011

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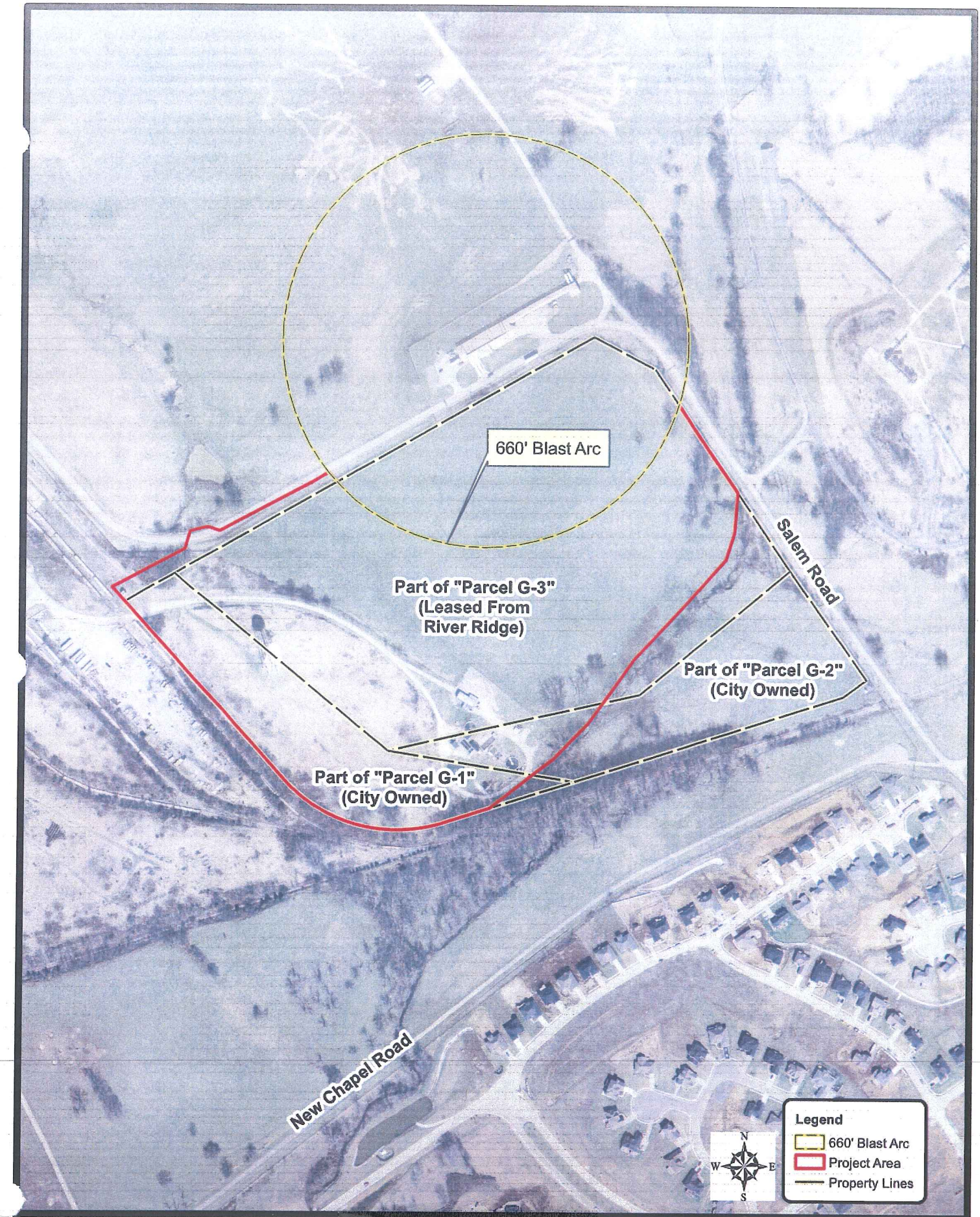

Preliminary Engineering Report
Additional Needs Projects
City of Jeffersonville, Indiana

0 200 400 800 Feet

Figure 4

Property Lines and Project Area
Jeffersonville, Indiana

Revised 07/27/2011

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Utica Township (45001-035)

Figure 5.3

Figure 5
from Clark County Interim Report
Indiana Historic Sites & Structures Inventory

Utica Township was formed from sections of Charlestown and Jeffersonville Townships and is bordered by both of the townships as well as the Ohio River. Utica Township presently has three small communities, a section of a military reserve and large tracts of farmland.

Utica Township was formally organized on November 7, 1831. It was named for the town of Utica, which had been in existence for just over fifteen years preceding the township's formation. People began settling in Utica Township shortly after the first ferries began operation across the Ohio River. There was a ferry operating in the town of Utica as early as 1794. As a result, many of the early settlers of the township first passed through the town.

One of the early pioneer families that settled in Utica Township was the Bottorffs. The Bottorff family first came to Utica Township in 1815 and soon settled throughout Clark County. Today, the Bottorff family is still well represented in Utica Township. Three of the family's farms (45006, 45008, 45009) remain in the township.

Pioneer families like the Bottorffs depended on roads to travel throughout the township. The Jeffersonville-Charlestown Road was first laid out in 1810 and passed through Utica Township. Soon, other roads followed. With the construction of new roads, villages and towns began to develop including Utica, Watson and Prather. Utica is the largest town in Utica Township and was also the first one to be formed. Founded at the site of an eighteenth-century ferry, Utica was laid out in 1816 and named for an early settler's hometown of Utica, New York.

The next town to be established within the boundaries of Utica Township was Watson. Watson started out as a company town for workers employed by the Louisville Cement Company. In 1871, the company built a cement