



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

PRELIMINARY DECISION OF CATEGORICAL EXCLUSION

TO ALL INTERESTED CITIZENS, ORGANIZATIONS AND GOVERNMENT AGENCIES:

**CITY OF FORT WAYNE
COMBINED SEWER PUMP STATION AT POND 1, FIRST FLUSH/BLEEDBACK LINE, HEADWORKS
CORROSION/ODOR CONTROL, CIPP SEWER LINING AND ADDTL. DIGESTER FUNDING
SRF # WW11 17 01 05**

Date: August 6, 2011

Pursuant to IC 4-4-11, the State Revolving Fund (SRF) Loan Program has determined that the project described here and in the city's Preliminary Engineering Report received by the SRF on May 24, 2011 will have no substantial negative environmental impact. Therefore, the SRF is issuing a preliminary decision of Categorical Exclusion from the requirements of substantive environmental review.

How were environmental issues considered?

The National Environmental Policy Act (NEPA) requires agencies disbursing Federal funds to include environmental factors in the decision making process. A summary of the project is attached for your review. The SRF's preliminary review has found that the proposed project does not require the preparation of either an EA or an EIS.

Why is additional environmental review not required?

Our environmental review has concluded that significant environmental impacts will not result from the proposed action.

How do I submit comments?

Comments can be submitted to:

Mr. Max Henschen, Senior Environmental Manager
SRF Programs
317-232-8623; mhensche at ifa.in.gov

CATEGORICAL EXCLUSION

I. PROJECT IDENTIFICATION

Project Name and Address: **Combined Sewer Pump Station at Pond 1, First Flush/Bleedback Line, Headworks Corrosion/Odor Control, Sewer Rehabilitation, & Addtl. Digester Funding**
City of Fort Wayne
Citizens Square
200 E. Berry St., Suite 250
Fort Wayne, IN 46802

SRF Project Number: WW11 17 01 05

Authorized Representative: Kumar Menon
Director of Public Works and Utilities

II. PROJECT LOCATION

Fort Wayne is located in central Allen County. The city is proposing four projects: (1) Combined Sewer Pump Station (CSPS) expansion project, (2) First Flush/Bleedback line project, (3) Headworks Odor and Corrosion Control project and (4) Sewer Rehabilitation project. The proposed CSPS expansion and first flush/bleedback line will be implemented at the previously disturbed combined sewer Pond 1 on the north side of the St. Joseph River. The headworks odor/corrosion control project will be confined to the previously disturbed WWTP site on the south side of the River. The proposed sewer rehabilitation project will be implemented within existing sewers as shown on Figure 1.

- 1) The CSPS work will occur in the Fort Wayne East USGS quadrangle, Adams and Wayne Townships, T30N, R13E, section 6;
- 2) The First Flush/Bleedback line work will occur in the Fort Wayne East USGS quadrangle, Wayne and Adams Townships, T30 N, R13E, Section 5;
- 3) The Headworks Odor and Corrosion Control work will occur in the Fort Wayne East USGS quadrangle, Adams Township, T30N, R13E, Section 6;
- 4) The Sewer Rehabilitation work will occur in the:
 - Huntertown USGS quadrangle, Washington Township, T31N, R12E, Sections 10, 17, and 24;
 - Fort Wayne West USGS quadrangle, Washington Township, T31N, R12E, Sections 20, 25, 33, 34, 35, and 36;
 - Fort Wayne West USGS quadrangle, Wayne Township, Sections 1, 10, 11, 12, 13, 14, 15, 21, 22, 23, 24, 25, 27, 28, and 33;
 - Cedarville USGS quadrangle, St. Joseph Township, T31N, R13E, Sections 16, 17, and 21; and

- Fort Wayne East USGS quadrangle, Adams Township, Sections 7, 8, 9, 17, 18, 19, and 20.

III. PROJECT NEED AND PURPOSE

Fort Wayne's collection system consists of approximately 1,290 miles of sanitary, combined and relief sewers ranging in size from 4-inches in diameter up to 10.5 feet in diameter.

Combined Sewer Pump Station Expansion: During high flow events, the wastewater treatment plant (WWTP) sometimes cannot accommodate all the incoming wastewater and stormwater flow. The flow that cannot be handled is pumped to terminal ponds Nos. 1 and 2 across the St. Joseph River from the WWTP for settling. Prior to being discharged to the Maumee River, the city chlorinates the discharge for odor control only, not for disinfection. When flows subside at the WWTP, combined sewage stored in the ponds is returned to the WWTP for treatment.

The existing CSPS comprises two pumps rated at 160 million gallons per day (MGD) each. The CSPS is a key element in the city's Long Term Control Plan (LTCP) as part of Control Measures #5, #11, and #12 and its improvement is also mentioned as a priority project in the city's Consent Decree (CD) with the USEPA and the Indiana Department of Environmental Management (IDEM). The proposed CSPS improvements will increase the firm pumping capacity from 160 MGD to 350 MGD to handle existing conditions. Based on the results of the 2010 hydraulic model for LTCP conditions, the overall facility will eventually be sized for a capacity of up to 770 MGD. The CD requires, through CSO Control Measure #13, to be implemented by 2025, the capture of most coarse solids and floatables which discharge from CSO outfalls to the Maumee River and to Pond 1 during a typical year, with a design target to remove one-half inch diameter and larger solids and floatables; the CSPS project screening facility has been designed to use screens to accomplish that criterion. The proposed project includes: modifying the wet well and adding two 95 MGD pumps and two 10 MGD pumps; reconditioning two of the 160 MGD pumps; constructing a new screen structure; constructing a new electrical building and a new storage building; and installing a line from the chlorine contact tank to the new screen structure (see Figure 2).

The "No Action" alternative for the CSPS expansion project was rejected by the city, since it would place the city in non-compliance with its LTCP, National Pollutant Discharge Elimination System (NPDES) permit and the Consent Decree.

The evaluated LTCP control measure alternatives included: constructing a storage tunnel; constructing satellite disinfection basins as CSO outfalls; conveying flows to the CSO ponds for storage at the ponds; conveying flow to the ponds with enhanced high rate treatment clarification/high rate treatment facilities at the ponds; partial sewer separation; and complete sewer separation.

The selected control alternative is conveying wastewater flows to the CSO ponds for storage. This alternative includes: expanding and upgrading the pumping station facility, constructing a new CSPS screening facility integrated with the existing CSPS discharge structure and the combined sewer discharge conduits that convey flow to Pond 1; constructing a new electrical building coordinated with improvements to the electrical substation; constructing a new CSPS storage building; and installing a line from the chlorine contact tank to the new screening facility as a backup for flushing, and testing the operation of the CSPS during low flow periods.

First Flush/Bleedback Project: In conjunction with combined sewer overflow Control Measure No. 5 in Table 4.2.4.1 of the LTCP, the city is proposing the installation of a first flush/ bleedback

line piping and controls project. The proposed first flush/bleedback project includes: constructing a “first flush” bay in Pond 1 to provide increased capture of the heavy materials that are commonly seen during the initial period of a storm event; constructing a new dewatering connection to the North Maumee interceptor at Pond 1; and constructing a bleedback line to provide the hydraulic control necessary for maximizing flows that would be returned to WWTP for full treatment (see Figure 2).

The “No Action” alternative for the first flush/bleedback line was rejected since the ponds would not be able to achieve compliance with the LTCP, the NPDES permit or the Consent Decree.

Alternatives considered for the first flush/bleedback facility included: siting the first flush tank, the bleedback inlet and discharge points, and the routing for the bleedback line. Alternatives evaluated for the discharge point included: the Baldwin interceptor, the North Maumee interceptor, and the St. Joseph interceptor.

The selected alternative for the first flush/bleedback facility includes: locating the first flush tank in the south end of Pond 1; locating the bleedback inlet in the southeast corner of the first flush tank; and routing the proposed bleedback line’s discharge point to the North Maumee interceptor via a junction box.

Headworks Corrosion & Odor Control: The headworks structure at the WWTP has odor, corrosion and safety issues that need to be addressed, due to hydrogen sulfide gas (H₂S). Corrosion needs to be mitigated to protect the infrastructure; odors need to be mitigated to address complaints from neighboring residents; and safety needs to be addressed to protect the plant personnel from the highly toxic gas. This project proposes the addition of a treatment process to withdraw and treat hydrogen sulfide gas emanating from the grit chambers.

The “No Action” alternative for the headworks odor and corrosion control facility was rejected, since the infrastructure would continue to corrode, causing the facility to become unusable and placing the WWTP in non-compliance; odors would still continue to emanate from the headworks.

Several liquid-based alternatives evaluated for treating odors and corrosion included: oxygenation and aeration, chemical oxidation, sulfur precipitation, nitrate addition, pH adjustment, and biological treatment. Several vapor treatment alternatives evaluated for treating odors and corrosion included: aeration basin treatment, wet scrubbers, carbon adsorption, thermal treatment, and biological systems (e.g., biofilter, biotrickling filter).

The selected alternative for odor and corrosion control is a biotrickling filter (see Figure 3). This treatment process will remove H₂S gas from the area around the grit tanks and raw pump discharge channel.

Sewer Rehabilitation: The city has a Sewer Repair and Replacement Program to develop, implement and monitor sewer repair/replacement strategies to identify problem areas in the collection system. The sewer and manhole repairs are prioritized based on citizens’ complaints, requests from the sewer maintenance department, and collection system televising reports. The city’s program complies with one of the “Nine Minimum Controls” established by EPA.

The “No Action” alternative for the sewer rehabilitation project was rejected, since the sewers would continue to deteriorate and the city would be in non-compliance with its NPDES permit or Consent Decree with the EPA and the IDEM.

The city rejected optimal operation of the existing sewer system as an alternative, since it would not prevent structural deterioration or comply with the Consent Decree.

The selected alternative for sewer rehabilitation is cured-in-place-pipe (CIPP) lining, a trenchless technology. This alternative includes: CIPP lining of approximately: 162 feet of 6-inch pipe; 21,057 feet of 8-inch pipe; 15,293 feet of 10-inch pipe; 24,908 feet of 12-inch pipe; 6,685 feet of 15-inch pipe; and reinstating 1,384 service laterals.

IV. ESTIMATED PROJECT COST AND FUNDING

Selected Plan Estimated Cost Summary

<u>Construction Components</u>	<u>Costs</u>
A. Combined Sewer Pump Station Improvements Project	
1. Mobilization/Demobilization	\$1,287,319
2. Site Work	2,307,994
3. Combined Sewer Pump Station	8,388,066
4. CSPA Screen Facility	5,829,160
5. CSPA Electrical Building	3,925,332
6. CSPA Storage Building	475,533
7. Bypass and Recirculation Facilities	696,059
8. Front End Loader	102,124
9. Electrical Transformers	408,497
Subtotal Estimated Construction Cost	\$23,420,084
Contingencies	2,342,009
Total Estimated Construction Cost	\$25,762,093
Non-Construction Costs **	\$ 2,318,606
Total	\$28,080,699

**includes legal, accounting, construction engineering and construction observation

B. First Flush/Bleedback Line Project	
1. Mobilization/Demobilization	\$ 60,000
2. Site Work	31,500
3. Control Structure	257,500
4. Weir Structure	273,500
5. Flow Meter Structure	125,000
6. Sampler Building & Equipment	48,000
7. 42-inch Ductile Iron Pipe (DIP) - 650 feet	338,000
8. 8-inch DIP – 5 feet	500
9. Supervisory Control & Data Acquisition & Electrical	60,000
10. Interceptor Cleaning	300,000
Subtotal Estimated Construction Cost	\$1,494,000
Contingencies	149,400
Total Estimated Construction Cost	\$1,643,400
Non-Construction Costs **	\$ 309,000
Total	\$1,952,400

**includes design engineering, construction observation, and financing

C. Headworks and Corrosion Control Project	
1. Mobilization/Demobilization	\$ 37,000
2. Site Work	30,000

3. Equipment	420,000
4. Duct Work	75,000
5. Plumbing	80,000
6. Electrical and Controls	40,000
Subtotal Estimated Construction Cost	\$ 682,000
Contingencies	68,200
Total Estimated Construction Cost	\$ 750,200
Non-Construction Costs **	\$ <u>167,650</u>
Total	\$ 917,850

**includes design engineering, construction observation, and financing

D. CIPP Sewer Rehabilitation Project	
1. Mobilization/Demobilization	\$ 66,000
2. 6-inch CIPP	4,050
3. 8-inch CIPP	526,425
4. 10-inch CIPP	412,911
5. 12-inch CIPP	772,148
6. 15-inch CIPP	280,770
7. Lateral Reinstatement	179,920
8. Traffic Management	22,000
Subtotal Estimated Construction Cost	\$2,264,224
Contingencies	14,991
Total Estimated Construction Cost	\$2,279,215
Non-Construction Costs**	\$ <u>192,600</u>
Total	\$2,471,815

**includes accounting, legal, construction engineering & inspection costs

E. Additional Digester Funding **\$1,000,000**

Total Projects' Estimated Construction Costs	\$31,434,908
Total Projects' Contingencies	2,574,600
Total Projects' Estimated Non-Construction Costs	<u>2,987,856</u>
Total Projects' Cost	\$36,997,364

The city will borrow approximately \$37,000,000 through a 20-year State Revolving Fund (SRF) Loan Program loan at an interest rate to be determined at loan closing. The city has adjusted, and will continue to adjust, its rates and charges in order to pay for this project and debt service. The requested digester funding will make up a shortfall in an SRF-approved digester project whose bids came in over budget by approximately \$1 million.

V. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

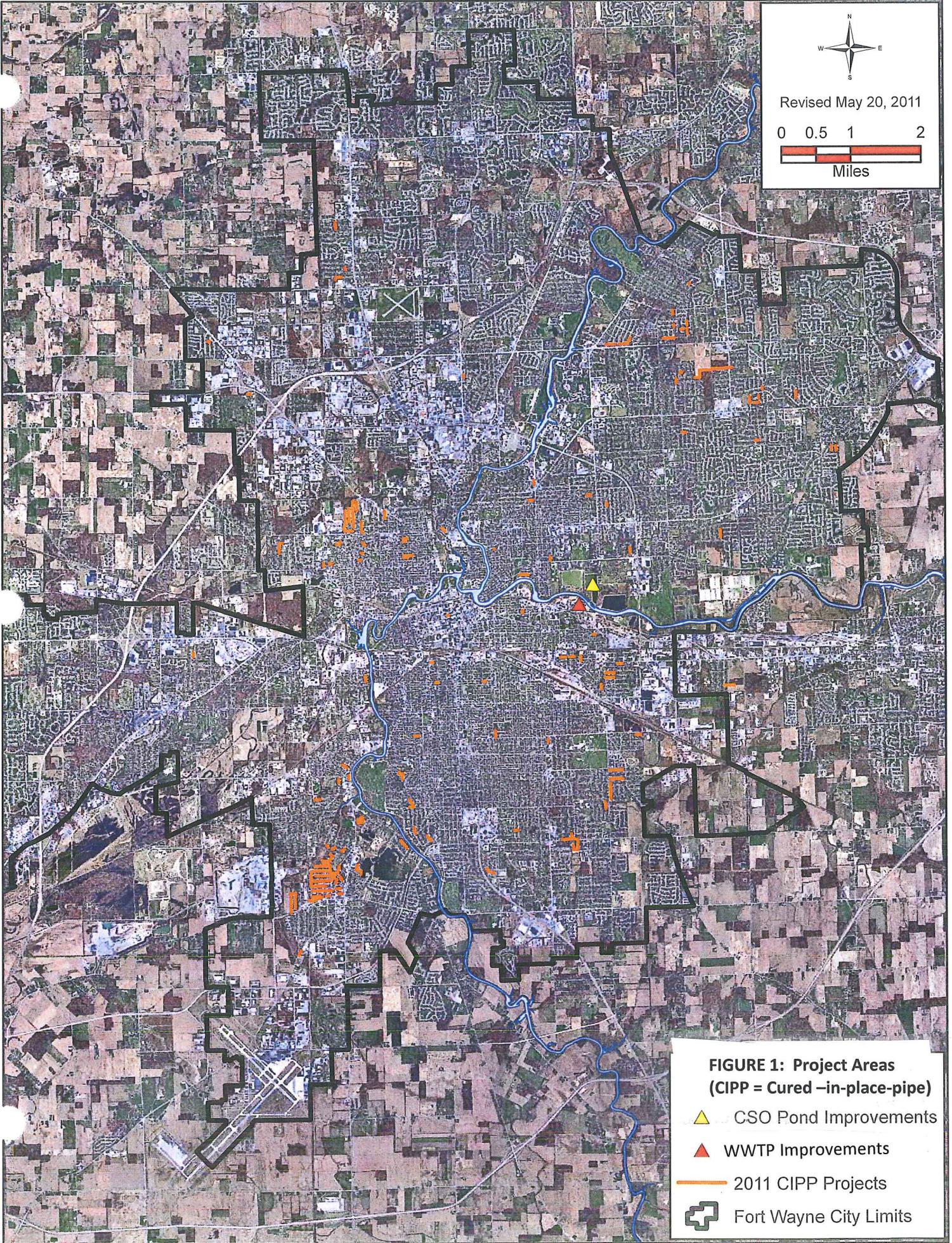
Pond 1 is identified as a wetland on the National Wetland Inventory map. The first flush/bleedback line will require construction in Pond 1; see Figure 4. The proposed projects at the pond site will be constructed within the 100-year floodplain. The CS Pump Station floor will be above the 100-year and 500-year flood levels; see Figure 4.

The projects will not affect endangered species, wooded areas, National Natural Landmarks, rivers, streams or prime farmland.

The Administration Building at the WWTP is identified as a Notable historic site in the Fort Wayne Interim Report, Indiana Historic Sites and Structures Inventory. However, no work will be done in that building and the structure will not be affected. The SRF's finding pursuant to Section 106 of the Historic Preservation Act is: "no historic properties affected." The Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology noted in correspondence dated July 25, 2011 that *...it has been determined that no historic structures or historic sites will be altered, demolished, or removed by the proposed project provided that all project activities remain within areas disturbed by previous construction...If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indian code 14-21-1-17 & 29) requires that the discovery must be reported to the Department of Natural Resources within two business days.*

VI. PUBLIC PARTICIPATION

Two properly noticed public hearings were held to discuss the projects. The first public hearing was held on April 6, 2011 at 10:00 a.m. at the City County Building, Omni Room, One East Main Street to discuss the CSPA improvements project. The second public hearing was held on June 1, 2011 at 10:00 a.m. in the Council Chambers, Room 035, Citizens Square, 200 East Main Street to discuss the other projects. The city did not receive written comments in the 5-day period following either of the hearings.



COMBINED SEWER PUMP STATION FIRST FLUSH/BLEEDBACK

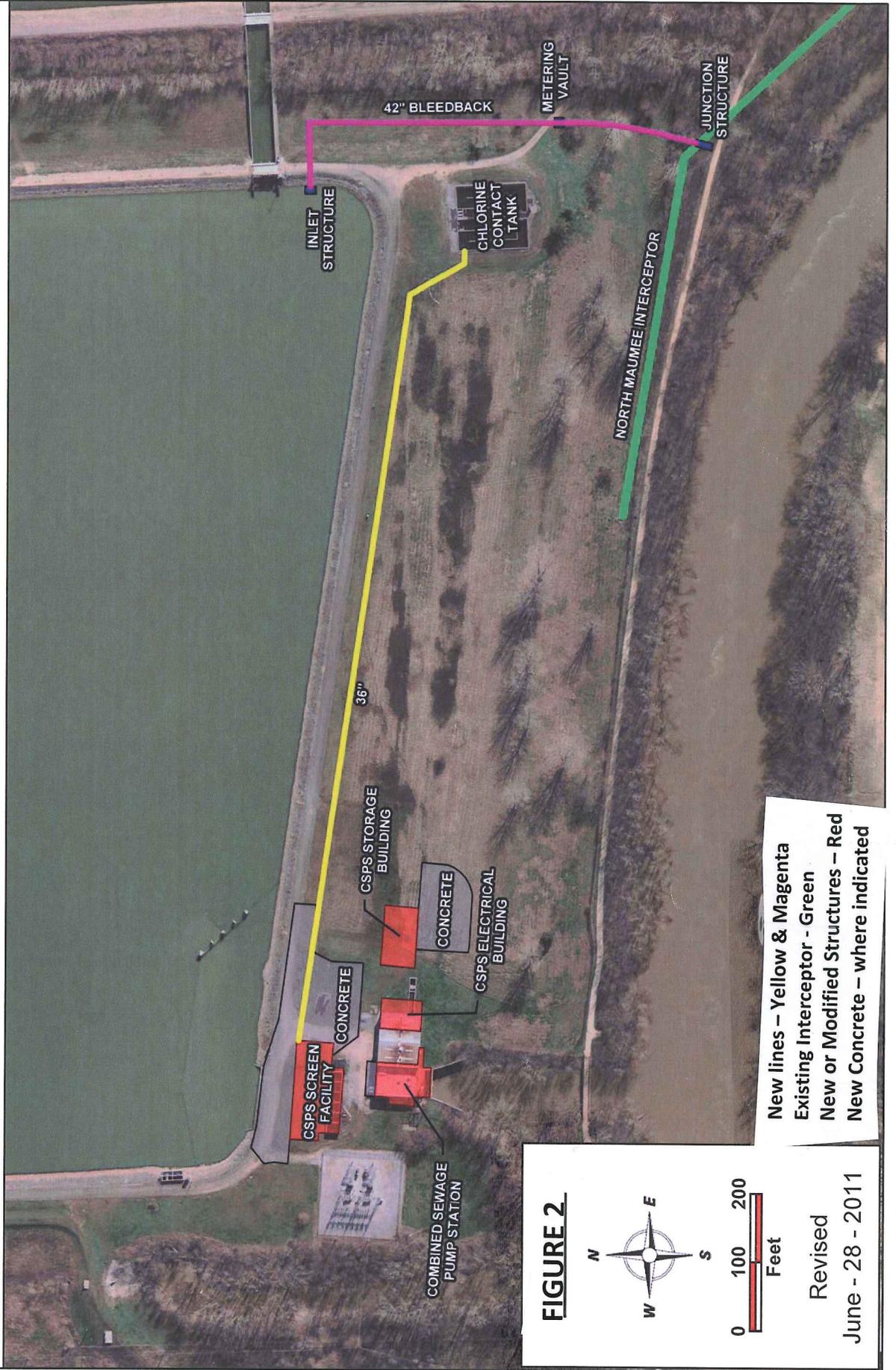
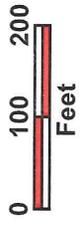


FIGURE 2



New lines – Yellow & Magenta
 Existing Interceptor - Green
 New or Modified Structures – Red
 New Concrete – where indicated

Revised
 June - 28 - 2011

HEADWORKS ODOR CONTROL

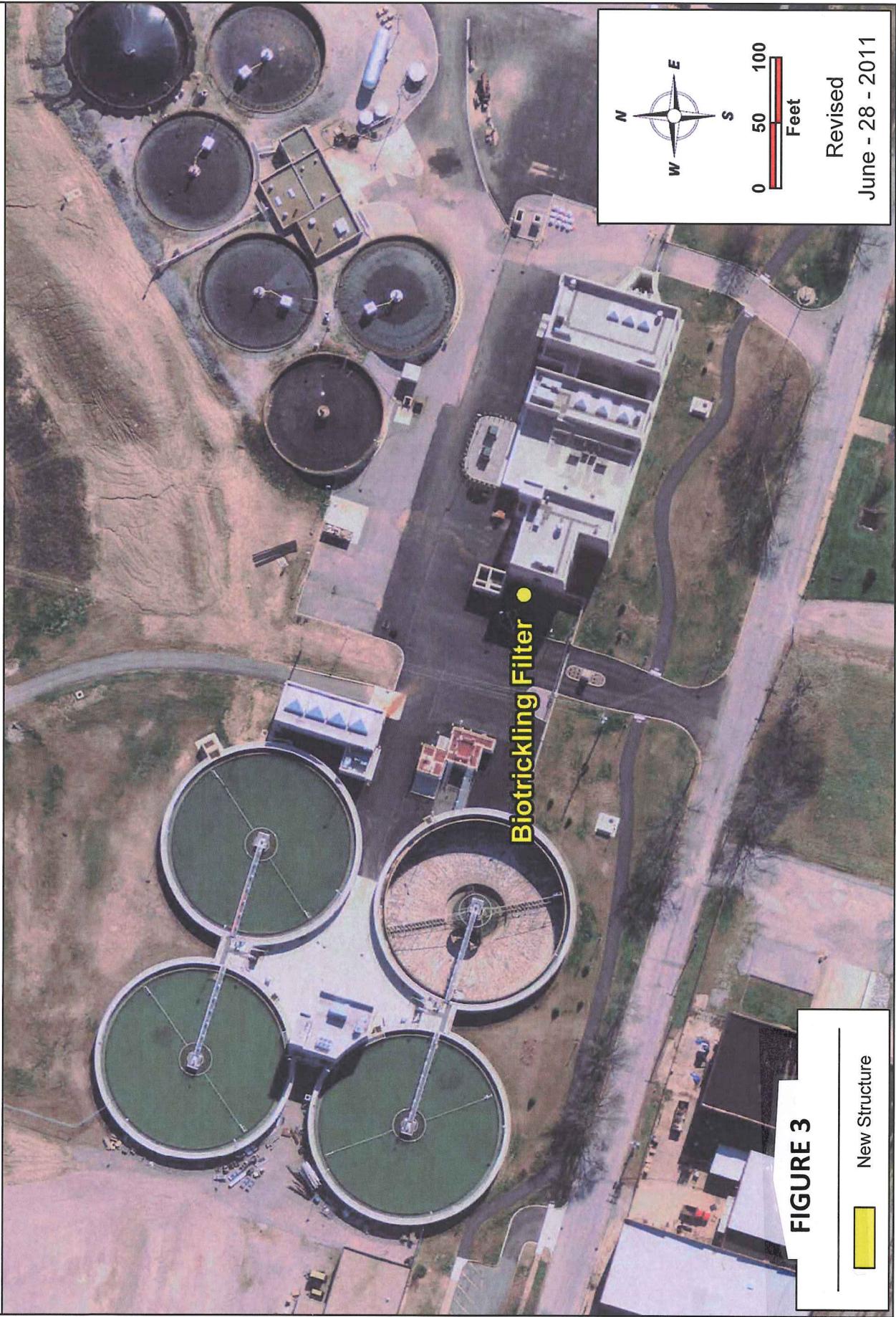


FIGURE 3

— New Structure

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COMBINED SEWER PUMP STATION

FIRST FLUSH/BLEEDBACK

