

Executive Summary

ES 1. Need for Project

The City of Monticello, located in White County, Indiana, is required by NPDES Permit No. IN0020176 (**Appendix A**) and Agreed Order Case No. 2008-18083-W (**Appendix B**) to implement a Combined Sewer Overflow (CSO) Long Term Control Plan (LTCP) for the purposes of controlling discharges from its Combined Sewer System (CSS) and improving the water quality of Tippecanoe River / Lake Freeman. All of Monticello's CSOs discharge to Tippecanoe River / Lake Freeman from the water body's intersection with Beach Drive, south to the Carroll County Road 1250 North / Tioga Bridge Road. The entire receiving stream has been designated as a full-body contact recreational water and is considered a sensitive area since it is used year-round for recreational purposes such as swimming, boating, water skiing, and fishing.

Exposure to polluted water from CSOs presents a significant risk to human health and the environment. Microbial pathogens including types of bacteria, viruses, and parasites and other toxins in CSOs can be present at levels that pose a risk to human health. Exposure to these can result in waterborne diseases, which often involve gastrointestinal illnesses. CSOs can also contaminate drinking water sources, cause beach closures and harmful algal blooms, and have harmful effects on aquatic life.

The City submitted its original CSO LTCP to the Indiana Department of Environmental Management (IDEM) Office of Water Quality (OWQ) in May 2002. A revised CSO LTCP was submitted in November 2009, which was approved by IDEM OWQ via correspondence on April 1, 2010. The revised plan included the selected alternative that will be designed in accordance with IDEM's Nonrule Policy Document (NPD) Water-016: CSO Treatment Facilities, whereby CSO discharges are required to be controlled for rainfall events up to and including the single event 10-year, 1-hour design storm.

The April 2018 CSO LTCP Update presented an analysis of the sewer system utilizing an updated hydraulic model and outlined alternatives in accordance with IDEM's Nonrule Policy Document (NPD) Water-016: CSO Treatment Facilities. The April 2018 CSO LTCP Update recommended alternative will result in compliance with IDEM's NPD Water-016: CSO Treatment Facilities and will provide the capture and required CSO treatment of the target single event 10-year, 1-hour design storm. The LTCP alternative solution is divided into three (3) phases: Project 4a – Bluewater Drive Interceptor, Project 4b – Maple Street Interceptor, and Project 5 – Wet Weather Storage and Treatment.

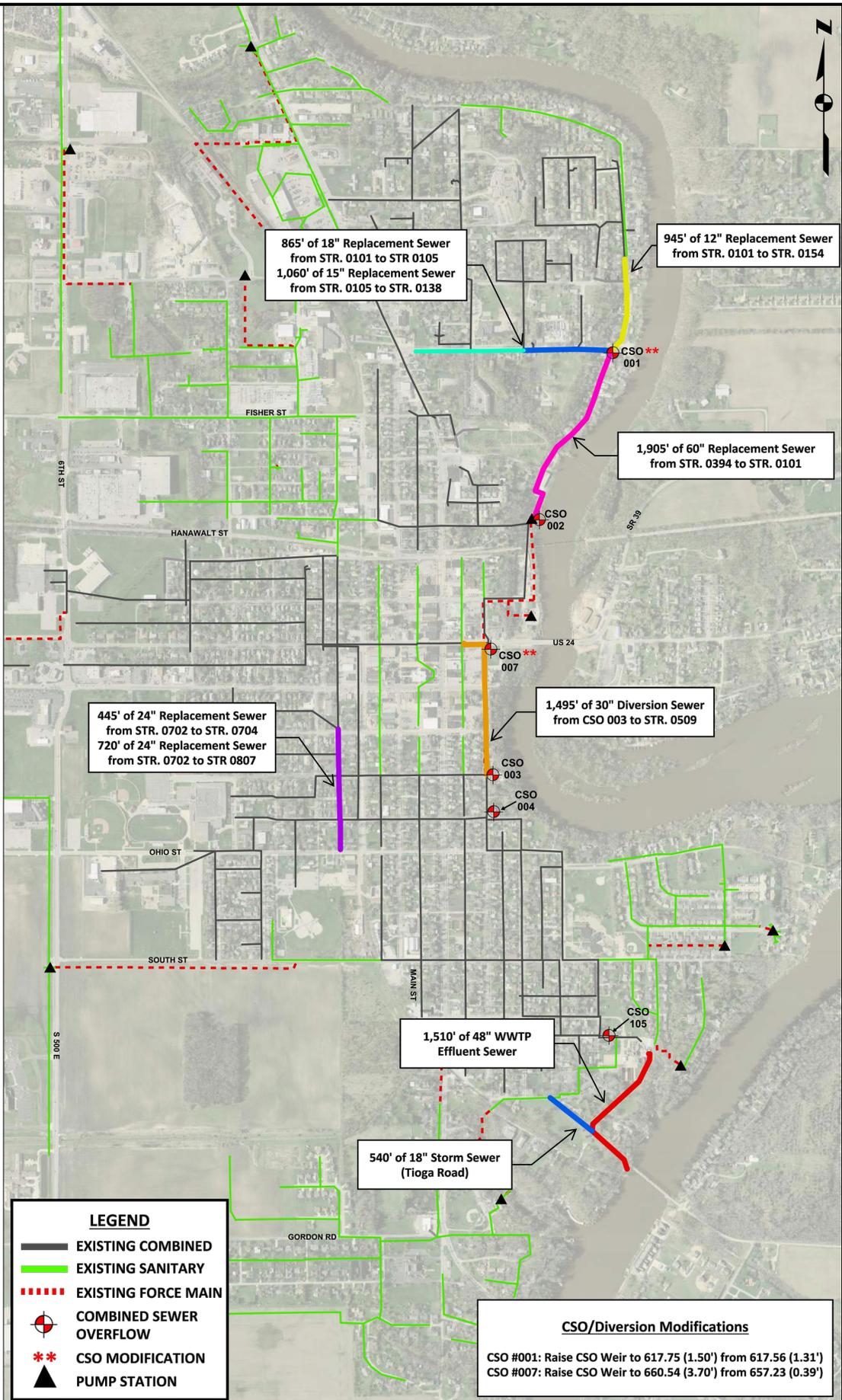
This report evaluates the potential alternatives to complete CSO LTCP Projects 4a – Bluewater Drive Interceptor, Project 4b – Maple Street Interceptor (**referred to as the Washington Street Diversion Sewer for the purposes of this Preliminary Engineering Report (PER)**) and Project 5 – Wastewater Treatment Plant (WWTP) Effluent Sewer Improvements. The remaining improvements included in Project 5 – Wet Weather Storage and Treatment will be evaluated at a future date after post construction monitoring for Projects 4a and 4b is complete.

ES 2. Proposed Project

The proposed improvements to the wastewater collection system are presented in **Table ES-1 and Figure ES-1**.

**Table ES-1
Recommended Project Components**

Item Description	LTCP Requirement
<p>Project 4a – Bluewater Drive Interceptor:</p> <ul style="list-style-type: none"> • Installation of 945-LF of 12” Dia. Sanitary Sewer • Installation of 1,060-LF of 15” Dia. Sanitary Sewer • Installation of 865-LF of 18” Dia. Sanitary Sewer • Installation of 1,905-LF of 60” Dia. Sanitary Sewer <ul style="list-style-type: none"> • CSO 001 Modifications 	YES
<p>Project 4b – Washington Street Diversion Sewer:</p> <ul style="list-style-type: none"> • Installation of 1,165-LF of 24” Dia. Sanitary Sewer • Installation of 1,495-LF of 30” Dia. Sanitary Sewer <ul style="list-style-type: none"> • CSO 007 Modifications 	YES
<p>Project 5:</p> <ul style="list-style-type: none"> • WWTP Effluent Sewer Improvements • Installation of 540-LF of 18” Dia. Sanitary Sewer 	YES



LEGEND

- EXISTING COMBINED
- EXISTING SANITARY
- EXISTING FORCE MAIN
- ⊙ COMBINED SEWER OVERFLOW
- ** CSO MODIFICATION
- ▲ PUMP STATION

CSO/Diversion Modifications

CSO #001: Raise CSO Weir to 617.75 (1.50') from 617.56 (1.31')

CSO #007: Raise CSO Weir to 660.54 (3.70') from 657.23 (0.39')



CITY OF MONTICELLO
 WHITE COUNTY, INDIANA
 PRELIMINARY ENGINEERING REPORT
 FIGURE ES-1: RECOMMENDED PROJECT

ES 3. Estimated Project Cost

Table ES-2 details the estimated costs associated with the recommended project. This preliminary estimate includes cost for construction, a 10% construction contingency, and an estimated 25% non-construction costs associated with engineering fees, legal fees, and administrative expenses. All construction costs are based on the 2020 dollars and reflect current market conditions within the construction industry.

**Table ES-2
Estimate of Recommended Project Total Cost**

Description	Total Cost (\$)
Mobilization/Demobilization (5%)	380,000
Contractor Construction Engineering (2%)	149,000
Misc. Utility Relocation Allowance	75,000
Maintenance & Protection of Traffic	100,000
Temporary Erosion Control	100,000
Bypass Pumping	300,000
18-inch Storm Sewer	162,000
12-inch Combined Sewer	344,925
15-inch Combined Sewer	429,300
18-inch Combined Sewer	384,925
24-inch Combined Sewer	605,800
30-inch Combined Sewer	897,000
48-inch WWTP Effluent Sewer	1,359,000
60-inch Combined Sewer	2,047,875
CSO Modifications	240,000
Tioga Road Multi-Purpose Trail Improvements	400,000
Subtotal Construction Cost (\$)	7,974,825
Contingency (10%) (\$)	797,483
Total Estimated Construction Costs (\$)	8,772,308
Non-Construction Costs (Estimated = 25%) (\$)	2,193,077
Total Estimated Project Costs (\$)	10,965,385

ES 4. Project Schedule

Table ES-3 shows the proposed schedule for the proposed improvements. For reference, **Table ES-4** presents the CSO LTCP Schedule Milestone Dates.

**Table ES-3
Proposed Project Schedule**

Item	Proposed Date
City Authorizes Preliminary Design	December 2018
City Authorizes Final Design	April 2019
Completion of Final Design	March 2020
PER Submittal	April 2020
City Applies for Construction Permit from IDEM	April 2020
City Obtains Construction Permit from IDEM	June 2020
Advertise for Bids	July 2020
Loan Closing	August 2020
Contract Award	August 2020
Initiation of Construction	September 2020
Substantial Completion	September 2022
Initiation of Operation	October 2022

**Table ES-4
LTCP Milestone Dates**

Activity	Completion Date*
Project 4a – Bluewater Drive Interceptor Design	2021
Project 4a – Bluewater Drive Interceptor Construction	2022
Project 4b – Washington Street Diversion Sewer Design	2023
Project 4b – Washington Street Diversion Sewer Construction	2024
Project 5 – WWTP Improvements	2029

**Note: Construction to begin on or before January 1st of corresponding year, and construction to be complete on or before December 31st of corresponding year.*