

EXECUTIVE SUMMARY

(Revised September 23, 2010)

INTRODUCTION

This update to Marion's Long Term Control Plan (LTCP) was prepared by Camp Dresser & McKee (CDM) and is an update to the original LTCP dated December 2002. This document is intended to be an all inclusive report to supersede the original 2002 report; however, several chapters, appendices, and exhibits are copies of the original. The new portions of this 2010 report include:

- Chapters 2, 4, 5, 6, 7, and 8
- Appendix C – Maximization of Flow at the WWTP (*Revised*)
- Appendix E – Correspondence
- Appendix F – Public Participation (*only participation since January 2006*)
- Appendix G – Financial Capability
- Appendix H - Rainfall Analysis

NEED FOR THE LONG TERM CONTROL PLAN

1. The City was required to enter into an Agreed Judgment with IDEM and the State Attorney General in order to comply with Long Term Control Plan requirements as a result of the US EPA Clean Water Act.
2. There are two driving criteria are intended to be met:
 - Achieve Water Quality Standards
 - Implementation does not cause substantial and widespread economic impact to the community
3. IDEM and EPA Guidelines define a process to determine the amount of work to take place that will achieve the highest level of water quality and not cause undue financial impact.

PROJECT SCHEDULE

The following schedule is outlined in the Agreed Judgment with the Attorney General of Indiana:

<u>Activity Description</u>	<u>Mile Stone Dates</u>
Verify and Update Characterization and Monitoring	May 2, 2008
Draft Financial Capability and Analysis	July 2, 2008
Alternative Analysis Evaluation (Ch. 4)	January 31, 2009
Financial Capability Analysis (Ch. 7)	March 2, 2009
Post Construction Monitoring Plan	July 1, 2009
Submit Revised LTCP to IDEM	September 30, 2009

OVERALL SELECTED PLAN

Representatives of Marion Utilities and CDM met with IDEM on May 19, 2010 and August 24, 2010 to discuss revisions to the Selected Plan. The selected plan includes the following projects with a total estimated cost of \$32.1 million.

<u>Project ID</u>	<u>CSOs Impacted</u>	<u>Description</u>	<u>Estimated Cost</u>
A	007, 006	Boots/Nebraska Drainage Area Improvements	\$6 million
B	002, 003, and 004	WWTP and Wet Weather Treatment Improvements - Phase 1	\$9.5 million
C	009	Southeast Marion Drainage Area Improvements	\$3.6 million
D	002, 003, 004, 006, 015	WWTP and Wet Weather Treatment Improvements - Phase 2	\$5.0 million
E	006	New end-of-pipe facility or storage at CSO 006	\$4.5 million
F	009	New end-of-pipe facility or storage at CSO 009	\$3.5 million

IMPLEMENTATION APPROACH

Due to the unique economic situation in the City of Marion, it is proposed to have eight (8) overflows based on the typical year rainfall with a total estimated cost of \$32.1 million. By following the guidelines set out by the IDEM and US EPA, it has been demonstrated that an investment in the magnitude of \$32.1 million will cause a significant financial burden on the City that is substantial and widespread.

1. Methodology
 - A comprehensive affordability analysis was performed.
 - It has been demonstrated that unique circumstances limit Marion's capability to implement a LTCP to meet the WQS.
 - Post construction monitoring will take place after construction of the partial sewer separation projects, A and C, to determine the performance of the improvements after implementation.
 - CSOs will be mitigated as shown in the table above.
 - It is proposed to construct one (1) headworks facility to receive both dry weather flows at the WWTP and wet weather flows at the wet weather treatment facility. Constructing two (2) headworks increases the construction cost by approximately \$1,500,000 and is considered to be cost prohibitive.
 - Marion Utilities will likely need to prepare a Use Attainability Analysis (UAA) in order to seek a temporary suspension of designated use in the Mississinewa River.

2. The Selected Plan utilizes the following approach concepts:
 - Mitigate overflows at CSO 007 to fewer than 8 events per year and transport flow through the Nebraska Street Interceptor to the Westside Interceptor with end-of-pipe treatment or storage at CSO 006;
 - Enable the WWTP to capture first flush by increasing the peak hourly capacity;
 - Minimize overflows at CSO 009;
 - Construct a wet weather treatment facility to treat with a maximum day capacity of 24 MGD and a peak hourly capacity of 36 MGD;
 - Mitigate overflows at CSO 002, 003, and 004 to fewer than 8 events by redirecting flow to the wet weather treatment facility; and
 - Construct end-of-pipe facilities to achieve primary equivalent treatment and disinfection at CSOs 006 and 009, or storage facilities at these CSO locations.

3. In choosing the selected projects, the LTCP takes into consideration the following factors:
 - Mitigating overflows frequency and duration.
 - Financial capability (necessary rate increase) of the community.
 - Grant and loan availability (not awarded ARRA/SRF loan and grant in 2009).
 - Previous and current sewer user fees and rate structures.

FINANCIAL CAPABILITY ANALYSIS

1. The financial capability analysis includes several factors that characterize the impact that the projects will have on the community. The driving indicator is the Wastewater Cost Per Household (WW_{CPHI}).
2. The WW_{CPHI} represents the annual cost per household to finance and operate the existing and proposed wastewater system based on EPA methodology, not a rate analysis using generally accepted accounting principles (GAAP).
3. If the WW_{CPHI} is great than 2% and the Socio-Economic Indicators Matrix (SEIM) value is 2.5, then IDEM considers there to be high economic impact. Currently, the WW_{CPHI} is calculated to be 2.02% with the Selected Plan. Much of this impact is a result of industry closings and further deterioration of public and private financial resources occurring in Marion over the past decade.
4. With a SEIM score or 2.5 and WW_{CPHI} of 2.02%, Marion is in the High Burden category, and the proposed implementation period is 15 years.
5. If the number of allowable overflows were reduced to less than eight (8) during the typical year, then additional facilities would need to be constructed at CSO 015 and the facilities at 006 and 009 would need to be increased in capacity. The estimated increase in project cost is \$6,200,000, which would increase the WW_{CPHI} to 2.22% and the annual cost per household would be \$656. This level of economic burden is prohibitive to the City of Marion, so the recommended level of control is eight (8) overflows per year.

SUMMARY AND PROPOSED PLAN

A completed accepted LTCP is required by the Agreed Judgment. Based on the evaluation, the Selected Plan can be summarized as follows:

<u>Criteria</u>	<u>Description</u>
Implementation of the Plan	Sewer separation in the Boots Creek Drainage Area and Southeast Marion, improve wet weather flow capacity at the WWTP, add a wet treatment facility for CSO 002 and upstream overflows, and construct end-of-pipe treatment or storage facilities at CSOs 006 and 009.
Implementation Period	15 years
Preliminary Estimated Cost	\$32,100,000
Post Construction Activity	Monitoring to quantify improvements
Re-Evaluation	Every 5 years as required by IDEM
Average WW _{CPH}	\$598/year
Average WW _{CPHI}	2.02% of MHI
Estimated # of overflows after construction	8 per year