CITY OF FORT WAYNE, IN

Use Attainability Analysis - 2020 Update

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Executive Summary

This document updates the 2010 UAA submitted to IDEM in May 2010 and, following IDEM approval, to EPA Region V. It also replaces the 2019 UAA Update submitted to IDEM in September 2019 and the 2020 UAA Update submitted to IDEM in March 2020. The 2010 UAA supports a revision to the current recreational use designation for waters impacted by CSO discharges from the City's combined sewer system to allow Indiana's CSO Wet Weather Limited Use subcategory to be applied only during the times the water quality is affected by the few annual storm events that cause CSO discharges following full implementation of the City's LTCP. The following bullet points summarize the contents of this Updated UAA.

- Section 1.1 provides background information concerning the City's CSO-Impacted Waters, the elements and associated costs of the City's LTCP, and the need for a UAA to support the short-term application of the CSO Wet Weather Limited Use subcategory, once LTCP implementation has been completed, in lieu of the current full-body contact recreation use during the few annual periods of wet weather when CSO discharges will contribute bacterial contamination to those waters.

- Section 2 describes the full-body contact recreation use designation that applies under current state water quality standard rules to the CSO-impacted Waters and the associated water quality criteria for bacteria required to support the recreational use.

- Section 3 summarizes federal regulatory requirements for UAAs to support removal or revision of a designated use and for the application of Indiana's alternative recreational use, the CSO Wet Weather Limited Use subcategory.

- Section 4 addresses the topic of "existing use" in relation to the proposed use of UAAs to remove or revise a designated use and provides specific information relating to the City's CSO-Impacted Waters to allow a determination of the existing use of those waters with respect to the current designated use for full-body contact recreation.

- Section 4.1.1 reviews a survey of recreational activities observed in or on the CSO-Impacted Waters.

- Section 4.1.2, as a general matter, presents a summary of bacterial quality data from the CSO-Impacted Waters from 1975 through 2018 and shows that the bacterial quality of those waters, including periods of dry weather and wet weather, has routinely exceeded water quality criteria specified for full-body contact recreation.

- Section 4.1.2.2 provides a summary of bacterial quality data collected from CSO-Impacted Waters within the City's urban area over the period of 1975 through 2006. Tabular information is provided on the percentage of samples from each of five sampling locations on the three major CSO-Impacted Waters that exceed bacteriological criteria for full-body contact recreation. Also, graphs are provided that summarize statistical analyses of the bacterial quality data for each of the five sampling locations for each decade since the mid-

1970s. The overall conclusions drawn from this data are that the bacterial quality of all three rivers has consistently failed, at high percentages of the database, to attain applicable water quality criteria required for full-body contact recreation. In addition, there has been little change in the characteristic bacterial quality of these rivers over the period from 1975 to 2006.

- Section 4.1.2.3 describes a review of bacterial quality data acquired by the City's river sampling program at two sampling locations each for the St. Joseph River and the St. Marys River for the recent period of 2016 through 2018. One sampling location for each river is immediately upstream of the City's urban area and one is near the downstream confluence of the two rivers. The conclusion drawn from this data review is that upstream bacterial contamination in both rivers is regularly present at levels that prevent the water quality of either river from meeting recreational water quality criteria, both upstream and downstream of CSO discharge points. This point is further reemphasized by the water quality modeling conducted by the City as recounted in Appendix B-2, which demonstrates that upstream bacterial contamination alone in the St. Joseph and St. Marys Rivers, with no bacterial input from CSOs or the stormwater sewer system, will result in nonattainment of recreational water quality criteria in the Maumee River, as well as the St. Joseph and St. Marys Rivers.

- Section 4.1.2.4 addresses the existing recreational use of the City's CSO-Impacted Waters and explains (1) the absence of full-body contact recreational activities in these waters, particularly during those infrequent wet weather conditions that will produce CSO discharges once LTCP implementation is complete; and (2) to the extent that any full-body contact recreation has occurred in these waters since 1975 during such wet weather conditions, it has occurred in waters with water quality that is characteristically impaired for recreational use.

- Section 4.2 explains that there are no existing recreational uses of the CSO-Impacted Waters that would be inconsistent with the requested revisions to the current recreational use designation of these waters since the water quality of these waters, at least since 1975, has not been sufficient to support recreational uses much of the time, and certainly not during wet weather conditions of the severity that will result in CSO discharges from the City's CSS following full implementation of its approved LTCP.

- Section 5.0, as a general matter, explains why attainment of the current recreational use designation for the CSO-Impacted Waters is not feasible during the rare wet weather conditions that will produce CSO discharges following full implementation of the City's LTCP.

- Section 5.1 lists the four UAA factors from 40 CFR 131.10(g) that are relied upon by the City to demonstrate the non-attainability of the current recreational use designation for the CSO-Impacted Waters during wet weather conditions that result in CSO discharges. These include: factor 1, naturally occurring contamination precludes attainment of the designated use; factor 2, natural, ephemeral, intermittent, or low-flow conditions or water levels prevent use attainment; factor 3, human-caused sources of contamination prevent attainment of the designated use and cannot be feasibly remediated; and factor 6, controls more stringent than

those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

- Section 5.2 discusses the highly probable contribution of naturally-occurring sources of bacterial contamination (i.e., avian and mammalian wildlife) to the instream water quality of the St. Marys River and the St. Joseph River upstream of the City's urban area, and also within the urban area, that routinely exceeds levels supportive of full-body contact recreation. Such naturally- occurring bacterial contamination is conveyed downstream through the CSO-impacted segments of these waters and the Maumee River, which results from their confluence.

- Section 5.3 explains that high flow conditions expected in the CSO-Impacted Waters during and after the infrequent post-LTCP CSO activations will make the waters unsafe for recreational activity, independent of water quality conditions. These conclusions are based on both historical records from USGS field programs and projections from the City's calibrated model.

- Section 5.4 discusses the highly probable contribution of human-caused sources of bacterial contamination (e.g., livestock and domesticated pets) to the instream water quality of the St. Marys River and St. Joseph River upstream of the City's urban area, and also within the urban area, that routinely exceeds levels supportive of full-body contact recreation. This section also explains that urban development as a human-caused condition and in particular increased imperviousness contribute to bacterial contamination, by increasing stormwater runoff rates to the local rivers. As with naturally-occurring bacterial contamination, the bacterial contamination from human-caused sources is conveyed downstream through the CSO-impacted segments of these waters and the Maumee River. It is observed in Sections 5.2 and 5.4 that it is practically infeasible to separate the relative impacts of naturally-occurring sources of bacterial contamination and human-caused sources of bacterial contamination to the St. Marys River, the St. Joseph River, and the Maumee River.

- Section 5.4.2 briefly recounts the human-caused sources of bacterial contamination associated with the City's urbanized area. The infeasibility of sufficiently remediating human-caused sources of bacterial pollution is discussed in Section 5.4.3.

- Section 5.5.1.2 reviews the calculation of the indicator used to assess whether the costs of CSO controls are likely to impose a substantial economic burden on the City pursuant to EPA guidance. This indicator – sometimes referred to as the Municipal Preliminary Screener and elsewhere as the Residential Indicator - when applied to the projected costs of complete elimination of CSO discharges from the City, clearly shows that a markedly substantial economic burden would be incurred by the City's utility ratepayers if such measures were required. Application of this indicator to the costs of the City's approved LTCP, particularly when focused on the City's most populous township (which also has the highest percentage of households below the federal poverty level) or when LTCP costs are supplemented with costs of implementation of the City's separate stormwater management program, shows a substantial economic impact.

- Section 5.5.2 addresses the application of the "secondary test" prescribed by EPA guidance to assess the City's general socioeconomic health, given that the Municipal Preliminary Screener indicates that the costs of CSO controls more stringent than those posed by the LTCP would result in a substantial economic burden. The secondary test produces scores in the mid-range level. Sections 5.5.2.3 and 5.5.2.4 review additional financial information concerning the City that strongly suggests that the secondary test scores referenced above are overly optimistic as a general indicator of the City's economic status.

- Section 5.5.3 displays the Substantial Impacts Matrix based on the Municipal Preliminary Screener values for various alternative scenarios considered and the Secondary Test scores. A high, or substantial, economic burden is indicated by the Matrix if the City were required to implement more stringent CSO controls than prescribed by the approved LTCP. Section 5.5.5 provides the City's rationale for its substantial economic impact being considered widespread as well. As a result, it is concluded that the imposition of costs of controls more stringent than those required by the LTCP would result in a substantial and widespread economic and social impact. The extent of this burdensome impact would be markedly greater if the City were to be required to eliminate all CSO discharges under all wet weather conditions.

1 Introduction

The City of Fort Wayne, Indiana (the "City") submits this Updated Use Attainability Analysis (the "Updated UAA") to supplement the *City of Fort Wayne, Indiana, Use Attainability Analysis: Recreational Use – St. Marys, River, St. Joseph River, and Maumee River*, previously approved by IDEM in 2010 (the "2010 UAA") and further support a revision of the recreational use designation for waters impacted by combined sewer overflow ("CSO") discharges from the City's combined sewer system ("CSS").[1] The requested revision would have a limited effect since it would apply Indiana's CSO Wet Weather Limited Use subcategory to CSO-impacted waters only during the times of impact from those few CSO activation events that remain following implementation of the City's approved Long-Term Control Plan (LTCP).

As contemplated by the IDEM and EPA-approved LTCP[2] and the Consent Decree,[3] the City developed the 2010 UAA in accordance with 40 CFR 131.10(g) and formally submitted it to IDEM in May 2010 requesting the above-referenced water quality standards revision. Based on positions previously expressed by EPA Region V, that submission was predicated only on subdivision (6) of 40 CFR 131.10(g) ("Factor 6"), which relies upon the substantial and widespread economic and social impact that would be incurred by the City and its utility ratepayers if more stringent CSO controls were required. Following substantial consultation with EPA Region V's Water Division staff, IDEM approved the 2010 UAA on August 30, 2010[4] and proceeded, at EPA Region V's request, to draft a proposed rule to reflect the revision requested by the City. Unfortunately, little to no further progress on the City's request has since been made. This Updated UAA is provided to facilitate final agency action on the City's now longstanding request.

Included within this Updated UAA is updated economic impact data informed by nearly twelve years' of LTCP implementation in continued support of the 2010 UAA's approval on the basis of Factor 6. Also included in the Updated UAA are substantial information and data which support the requested water quality standard revision on the basis of 40 CFR 131.10(g)(1), (2) and (3) (respectively, "Factor 1," "Factor 2,"and "Factor 3"). Factor 1 is based on naturally occurring pollution, Factor 2 concerns flow conditions or water levels preventing attainment of the use, and Factor 3 relates to human caused pollution sources that cannot be remediated. For the reasons stated in this Updated UAA, the City believes that approval of request is independently appropriate under Factor 1, Factor 2, and Factor 3, and that continued approval is appropriate under Factor 6.

[1] Use attainability analyses ("UAAs") are generally explained in Section 3.1 of this Updated UAA. Briefly, a UAA is a compilation of information prescribed by federal regulation that justifies the elimination of a designated use, such as recreational use, for a particular body of water through a demonstration that attainment of the designated use is infeasible.
[2] See, e.g. LTCP Sections 1.4.4, 1.4.7, and 5.0-5.4.
[3] See, e.g., Consent Decree paragraph 84(a). The Consent Decree is identified and briefly described in Section 1.1 of this Updated UAA.
[4] The IDEM approval letter is attached as Appendix O.

As IDEM and EPA review the Updated UAA, it may be useful to consider the following brief history of the City's efforts to facilitate completion of the requested revision of water quality standards:

- Consent Decree and LTCP negotiations among IDEM, EPA,[5] DOJ [6] and the City were expressly premised, in part, upon the City's pursuit of a use attainability analysis ("UAA") under 40 CFR 131.10(g) based on the substantial and widespread socioeconomic impact of Factor 6. This underlying premise dates to the beginning of those negotiations in 2001.

- Consistent with this premise of the Consent Decree and LTCP, the City's work on development of the 2010 UAA began even before the Consent Decree's entry on April 1, 2008. Indeed, an initial draft of the 2010 UAA was provided to IDEM and EPA Region V for comment in March 2008. The initial draft contemplated Factors 1 and 3, as well as Factor 6, but the City subsequently deleted the Factors 1 and 3 components from the draft after being advised by EPA Region V that agency policy would not favor approval on such grounds.

- Multiple conferences with EPA Region V Water Division staff regarding the draft UAA resulted in many revisions being made to the draft to address EPA comments

- In July 2009, EPA Region V's Water Division staff, following favorable input from EPA Headquarters staff, notified the City to proceed with submittal of the final version of the draft UAA to IDEM to begin the formal review and approval process.

- Following public meetings conducted at IDEM's request, the City submitted a final version of the 2010 UAA to IDEM in May 2010. IDEM formally approved the UAA on August 30, 2010 and advised the City that IDEM would prepare a proposed rule to revise the recreational use designation for the City's affected waters that would be submitted to the State's rulemaking board by the end of the year. IDEM proceeded to draft a proposed rule.

- On or about October 20, 2010, the City received an email from EPA Region V expressing concern with the 2010 UAA, as approved by IDEM. Over the ensuing years, the City met numerous times with EPA staff in an attempt to work through and resolve agency concerns while preserving the City's objective of achieving finality for its ratepayers with respect to CSO controls. These meetings revealed, in part, that EPA Region V believed that a UAA should not be approved until the LTCP implementation was complete so as to eliminate uncertainties in cost projections for construction of CSO controls. EPA Region V also indicated a belief that, during each future triennial review, a full redetermination of the 2010 UAA would be required in which any debts associated with LTCP implementation that have been retired since the previous triennial review would no longer be considered in assessing whether a substantial economic burden was still posed by any CSO control requirements more stringent than those prescribed by the LTCP.

[5] The U.S. Environmental Protection Agency.
[6] U.S. Department of Justice.

In sum, new positions expressed by EPA Region V staff beginning in late 2010 effectively precluded subsequent progress in gaining federal approval of the UAA, and the reasonable certainty sought by the City and its ratepayers. In an effort to achieve such reasonable certainty, which the City considers to be imperative, the City has prepared this Updated UAA. While the City respectfully disagrees with the above-mentioned position of EPA Region V that a UAA should not be approved until LTCP implementation is complete, the advanced state of implementation of the City's LTCP achieved during the nearly 9-year period following IDEM's 2010 UAA approval provides what should be more than adequate certainty concerning CSO control costs to be incurred by the City. Accordingly, the City renews its request for a revision of the recreational use designation for waters impacted by CSO discharges from the City's combined sewer system to apply Indiana's CSO Wet Weather Limited Use subcategory to the City's CSO-impacted waters (the "CSO-Impacted Waters")[7] during the times of impact from those few wet weather events that produce CSO discharges.

1.1 Purpose and Objectives

Several waters within and downstream of the City are impacted under wet weather conditions by overflows from the century-old combined sewer system that serves the older part of the City. The waters, the CSO-Impacted Waters, include segments more specifically identified below of the Maumee River, the St. Joseph River, the St. Marys River, Baldwin Ditch, Harvester Drain, Spy Run Creek, and Natural Drain #4.

The City has been working to reduce its combined sewer overflows since the late 1990s. A LTCP to address the water quality impacts of the City's CSOs was submitted to IDEM and was approved by the agency in December 2007.[8] The key elements of the approved LTCP have been made obligations of the Consent Decree which was approved by order of the U.S. District Court for the Northern District of Indiana entered in Case No. 2:07-cv-00445-PPS-APR on or about April 1, 2008.

In the years prior to the start of its formal LTCP implementation in 2008, the City constructed over $46M in early action sewer separation projects. As other early action projects, the City completed construction of a new Wastewater Treatment Plant ("WWTP") Headworks facility and had construction underway on a new, expanded primary treatment facility for its WWTP. Those two projects represented a combined investment of approximately $63M and were foundational to the City's ability to increase its WWTP capacity as part of its LTCP.

As originally approved, the City's LTCP provided for CSO Control Measures that will achieve a high level of control for the remaining CSOs in the City's combined sewer system at a capital cost of over $305 Million[9] and the expenditure of many more millions of dollars in additional

[7] Specific waters which constitute CSO-Impacted Waters are identified within Section 1.1 below.
[8] EPA concurrence with the City's LTCP, as approved by IDEM, was stated in the Consent Decree at the time of its lodging with the federal district court in late December 2007.
[9] This figure, denominated in 2005 dollars, includes the capital cost component of recent improvements to the headworks and primary treatment units of the WWTP, which will facilitate improved capability to handle higher wet weather flow rates. As a result of final design of control measures, including but not limited to those reflecting the two modifications to the Consent Decree, the final cost of implementation will be higher, as discussed below.

annual operations and maintenance expenses and debt service costs. The scope of the City's approved LTCP is summarized as 15 control measure project groups which are shown below in Table 1.1-1.[10]

When fully implemented, the LTCP will reduce the number of overflow events for the City's CSO outfalls from as high as 20 to 71 annual events[11] in the "typical year" to a maximum of 4 annual overflow events for which it will not be feasible to treat excess CSO flows to meet currently applicable water quality criteria for full body contact recreation. Moreover, CSO discharges to the St. Joseph River, the City's highest quality waterway, will be markedly reduced under the LTCP such that only a single annual overflow event in the "typical year" will occur for which it will not be feasible to treat excess CSO flows to meet water quality criteria for full body contact recreation. This represents an exemplary level of control for previously uncontrolled wet weather discharges of combined sewage to the City's CSO-Impacted Waters.[12]

Since the initial approval of the Consent Decree, Fort Wayne has received approval for two modifications to the Consent Decree that provide improved performance and/or accelerated completion dates for LTCP control measures.

- Modification #1 was approved on January 26, 2015 in U.S. District Court for the Northern District of Indiana. This modification eliminated the original LTCP concept of satellite disinfection and storage for the St. Joseph River CSOs and revised the LTCP scope to provide for conveying those flows to the WWTP for full treatment.

- Modification #2 was approved on May 23, 2019 in U.S. District Court for the Northern District of Indiana. This modification allows for the elimination of all remaining satellite disinfection facilities from the LTCP and their replacement by relief sewers or storage facilities. More significantly, this modification also provides for the replacement of the original Wayne Street and St. Marys parallel interceptor projects with a deep rock tunnel and relief sewer.

Table 1.1-1 also provides a summary of the status of the City's implementation of its LTCP and demonstrates the City's commitment to complete the agreed upon LTCP and achieve the prescribed level of control as described above. Highlights of the LTCP implementation to date:

- All work for the CSOs along the St. Joseph River was completed by 2014 and those outfalls are now in compliance with the LTCP's level of control. Compliance for the St. Joseph River projects was achieved four years earlier than the original LTCP deadline.

[10] The description of the LTCP's control measures in Table 1.1-1 reflect the effect of two modifications to the Consent Decree that are briefly described in following text.
[11] The 19 CSO regulators with highest activation rates in the City's combined sewer system range from 20 to 71 annual overflow events in the "typical year". The "typical year" is an artificial construct that is intended to represent those annual precipitation events that have the highest probability of occurrence in any year, based on statistical evaluation of 48 years of precipitation records for the Fort Wayne area. Appendix A to this UAA provides a detailed description of the derivation of the "typical year" for purposes of LTCP development by the City.
[12] A brief description of the CSO control measures selected in the LTCP will be provided in a later section.

- The City has improved its WWTP, Wet Weather Storage Ponds and Wet Weather Pump Station to capacities greater than what was originally targeted in the LTCP.
- The deep rock tunnel (called the 3RPORT Tunnel) is the largest project in the LTCP and is currently under construction. The project consists of a 16' diameter tunnel, approximately five miles in length and 200-250 feet below the surface. The pump station to dewater the tunnel and the sewers that will connect the tunnel to the existing collection system are in various phases of design and construction as well.

Table 1.1-1 Status Summary of LTCP Implementation (as of December 2019)

CSOCM No.	Control Measure	AFO Deadline per CD*	Planning & Design Status	Construction Status	Commissioning Status
1	Plant Phase II – Primaries	2008	100%	100%	100%
2	Plant Phase III – Increase Peak Flow	2015	100%	100%	100%
3	Early Floatable Control	2010	100%	100%	100%
4	CSSCIP – Phase I	2013	100%	100%	100%
5	WW Pond Storage & Dewatering	2013	100%	100%	100%
6	CSSCIP – Phase II	2018	100%	100%	100%
7 & 8	St. Joe River Relief Sewers	2015	100%	100%	100%
9	CSO 61 & 62 Relief Sewer	2018	100%	100%	100%
	CSO 54 Satellite Storage	2020	95%	0%	0%
10	Morton Street to WW Ponds	2019	100%	100%	100%
11	3RPORT Tunnel	2023	100%	60%	0%
	3RPORT Consolidation Sewers	2023	70%	10%	0%
	3RPORT Dewatering Pump Station	2023	85%	0%	0%
12	Foster Park Relief Sewer	2025	35%	0%	0%
13	Late Floatable Control	2025	70%	40%	40%
14	CSO 64 Satellite Storage	2025	5%	0%	0%
15	WW Pond High Rate Treatment	TBD	n/a	n/a	n/a

**Achievement of Full Operation – dates revised as per CD Modifications No1. and CD Modifications No. 2*

To achieve the LTCP progress identified in Table 1.1-1, the City has invested significantly in its infrastructure. In the years 2008 - 2018, the City has already made capital investments of over $187M in LTCP projects and is currently projecting a total capital investment of approximately $340M to complete the LTCP.[13] The current proposed LTCP capital cost estimate is shown in Table 1.1-2.

[13] All monetary values appearing in this Updated UAA are stated in 2005 Dollars unless otherwise expressly indicated.

Table 1.1-2 Current Proposed LTCP Capital Cost Estimate

CSOCM No.	Control Measure		Capital Cost (2005 $ Value)
1	Plant Phase II – Primaries	$	-
2	Plant Phase III – Increase Peak Flow	$	17,430,300
3	Early Floatable Control	$	1,780,000
4	CSSCIP – Phase I	$	8,050,000
5	WW Pond Storage & Dewatering	$	34,030,000
6	CSSCIP – Phase II	$	25,770,000
7 & 8	St. Joe River Relief Sewers	$	5,140,000
9	CSO 61 & 62 Relief Sewer, CSO 54 Storage	$	6,380,000
10	Morton Street to WW Ponds	$	10,270,000
11	3RPORT Tunnel, Sewers, Pump Station	$	219,350,00
12	Foster Park Relief Sewer	$	10,630,000
13	Late Floatable Control	$	410,000
14	CSO 64 Satellite Storage	$	690,000
15	WW Pond High Rate Treatment	$	-
	Total Capital Cost	**$**	**339,930,000**

Notwithstanding the impressive control levels to be provided by the LTCP, which go beyond the point of diminishing returns from a cost-effectiveness perspective, the CSO Control Measures specified by the LTCP will not, as alluded to above, achieve compliance with Indiana's water quality standards for full-body contact recreation under the relatively severe wet weather conditions occurring up to four times in a "typical" year for the St. Marys River and Maumee River and once in a typical year on the St. Joseph River. The City submits, as documented in its LTCP and as further documented in this Updated UAA, that further improvements in water quality of its CSO-Impacted Waters cannot be achieved without the expenditure of funds beyond that which is affordable by the City. Thus, although the LTCP will achieve much at high cost to the City and its ratepayers, the City will not be able to comply at all times during a "typical year" with the Clean Water Act's water quality requirements unless the current recreational use designation for the City's CSO-Impacted Waters can be revised on a site-specific basis to reflect the capabilities of the approved LTCP.

Consequently, a revision to the full body contact recreation use designation set by Indiana water quality standards for the CSO-Impacted Waters is requested by the City such that the CSO wet weather limited use subcategory that is conditionally available under Indiana law may be applied. More specifically, the CSO wet weather limited use subcategory would apply to the relevant waters only during the few times, annually, of impact from CSO discharges. The requested revision to the recreational use designation of the impacted waters is predicated upon the following independent grounds: (i) the substantial and widespread economic and social impact (Factor 6) that would be incurred by the community of Fort Wayne if compliance with the water quality criteria associated with the full body-contact recreational use designation were required at all times; (ii) the fact that attainment of the current recreational use during those few post-LTCP CSO activation events will be prevented by unsafe flow conditions (Factor 2); and (iii) the fact that attainment of the current

recreational use during those few post-LTCP CSO activation events will be prevented by the irremediable bacteria levels arising from a combination of naturally occurring and human caused sources (Factors 1 and 3).

The City's LTCP is predicated, in part, upon a proposed revision in the designated recreational use for the City's urban waters to Indiana's CSO wet weather limited use subcategory to be applied to periods of CSO discharges. To obtain approval for this revision in designated recreational use for the City's CSO-Impacted Waters, it is necessary for the City to establish eligibility for and perform a use attainability analysis that justifies the revision consistent with relevant federal and state law.

This document describes federal and state requirements associated with a UAA, updates the City's 2010 UAA for further consideration by state and federal agencies, and requests approval by those agencies of a revision to the recreational designated use for CSO-Impacted Waters to the Indiana CSO Wet Weather Limited Use. The CSO-Impacted Waters specifically include the following:[14]

- St. Marys River (from its junction with Natural Drain #4 near Tillman Road, to the confluence with St. Joseph River)

- Natural Drain #4 (from CSO Outfall 054 near the intersection of Hollis Lane and Mercer Avenue, to its junction with the St. Marys River)

- St. Joseph River (from CSO Outfall 052, located immediately south of Coliseum Blvd., near N. Anthony Boulevard, to the confluence with St. Marys River)

- Spy Run Creek (from CSO Outfall 036, located north of W. State Street along Eastbrook /Westbrook Drive, to its junction with the St. Marys River south of 4th Street)

- Baldwin Ditch (from CSO Outfalls 061 and 062 near the intersection of E. State Street and Barnhart Avenue, to its junction with the Maumee River near CSO Ponds 1 and 2)

- Harvester Drain (from CSO Outfall 064 to its junction with the Maumee River)

- Maumee River (from its origin at the confluence of the St. Marys River and St. Joseph River in the City to the boundary between the states of Indiana and Ohio).

For clarity of further reference to these waterbodies, the parenthetically identified reaches represent those portions of the waterbodies which are projected to be impacted by *E. coli* in excess of the bacteriological criteria to protect full-body recreational use as a result of the few uncontrolled CSO discharges which statistically would occur in the "typical year" consistent with approved performance criteria after full implementation of the City's LTCP.[15] These few CSO

[14] See Figure1.1-1 for a map depicting the City's CSO-Impacted Waters.

[15] Given the manner in which Indiana NPDES regulations apply the bacteriological criteria for recreational use directly as end-of-pipe limits so that no mixing zone is allowed, essentially every untreated CSO discharge will result in exceedances of the recreation-based water quality criteria for *E. coli*. The areal extent and duration of the *E. coli*

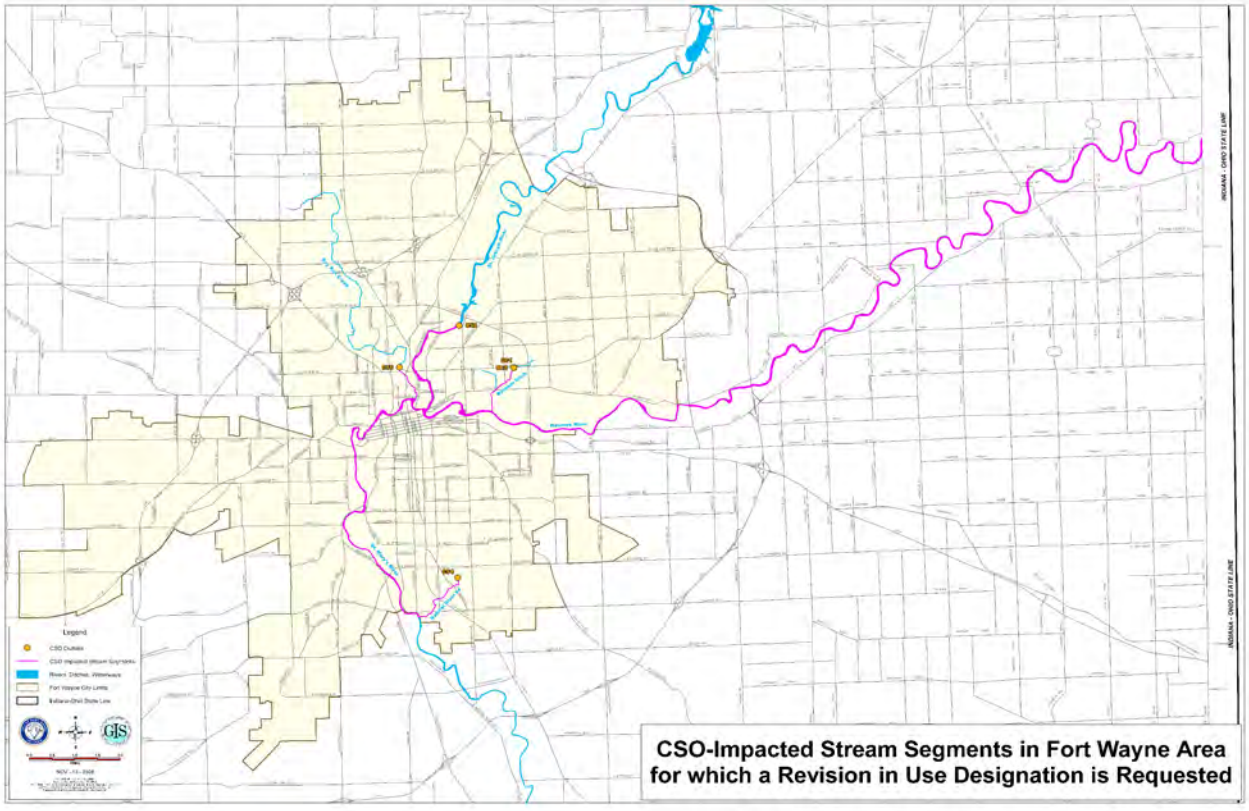
impacts of limited duration are typically overshadowed by the well-documented impacts of other sources of *E. coli* to these waterbodies. Therefore, these same reaches are proposed to be addressed by a rulemaking of the Indiana Environmental Rules Board to apply the CSO Wet Weather Limited Use designation in lieu of the current full-body contact recreation designation during those particular wet weather conditions under which CSO discharges occur. The extent of the reaches identified above that are projected to be impacted by CSO discharges after implementation of the LTCP is determined for all waterbodies except the Maumee River as follows: the upstream point of beginning is marked by the location of the first CSO that will remain after LTCP implementation. The downstream endpoint for each reach is the point of confluence with a larger waterbody still within the area of the City's combined sewer system.[16] For the Maumee River, which begins within the area of the combined sewer system, the downstream endpoint has been determined by a one-dimensional water quality model described in Appendix B-1.

It also is critical to emphasize that, while the few CSO discharges remaining following LTCP implementation would have a discernible short-term impact on the bacterial concentrations of these "CSO-Impacted Waters" if other sources of contamination were absent, all of these identified reaches, as well as their corresponding upstream reaches, would already exceed water quality criteria associated with full body-contact recreational use designation due to bacterial contamination entering these reaches from sources other than CSOs. This conclusion is widely supported by decades of water quality data as presented in detail in Section 2 below, and further demonstrated through application of the City's detailed water quality model as described in Appendix B-2. Model results indicate that even with all urban sources within the City (CSOs, stormwater sewers, and nonpoint sources) eliminated or treated to a hypothetical zero bacteria concentration, recreational use criteria would be regularly and consistently violated in the identified reaches due to upstream sources.

exceedance resulting from a CSO discharge event will vary with a number of factors, including the severity of a specific storm event, the near-term history of precipitation activity preceding that event, the typical volume/flow rate of discharge from a particular CSO for such conditions, and the receiving stream flow corresponding to such conditions. While recognizing this variability, the description of the CSO-Impacted Waters provided above in Section 1.1 provides a reasonable worst-case description of the extent of substandard bacterial quality in these waters during wet weather conditions of a typical year.

[16] Available data collected by the City shows these waterbodies to exhibit substandard *E. coli* values throughout their respective segments under many conditions including most wet weather events, with or without concurrent CSO discharges.

Figure 1.1-1 Map Depicting City's CSO-Impacted Waters



As will be explained and supported, the request of this Updated UAA rests upon the following independent bases:

- Naturally occurring pollutant concentrations prevent attainment of the full-body contact recreational use (Factor 1);
- Natural, ephemeral, intermittent, or low-flow conditions or water levels [that] prevent the attainment of the use (Factor 2);
- Human-caused sources of pollution prevent attainment of the full-body contact recreational use and cannot be feasibly remedied (Factor 3);
- Substantial and widespread social and economic impacts would be caused by a requirement to implement controls beyond those contained in the City's LTCP as approved by IDEM and EPA (Factor 6).

The conclusion of this Updated UAA is that the currently designated recreational use is not attainable and is not an existing use in the City's CSO-Impacted Waters during and for a short period of time following wet weather events that exceed the high level of CSO control provided for in the LTCP. The remainder of this Updated UAA provides the specific rationale and summarizes the factual support for this conclusion.

2 Indiana's Recreational Water Quality Standards That Currently Apply to the CSO-Impacted Waters

All surface waters within Indiana's portion of the Great Lakes drainage basin, including the receiving waters for the City's CSOs, are designated for full-body contact recreation by the water quality standards rule for such waters adopted by the former Indiana Water Pollution Control Board. 327 IAC 2-1.5-5(a)(1). Indeed, with rare exceptions for temporary alternate uses, all Indiana surface waters are designated for full-body contact recreation. The following numeric water quality criteria for *E. coli* are established by these water quality standards to support the designated recreational use during the annual recreational season of April through October:

- Geometric mean of 125 colony-forming units per 100 milliliters (cfu/100 mL) based upon five equally spaced samples taken in a one-month period.
- Single sample maximum of 235 cfu/100 mL.

327 IAC 2-1.5-8(e)(2).

These bacteriological water quality criteria are intended to protect full-body immersion contact (such as occurs during swimming and some other water recreational activities) from unreasonable risk of disease. The water quality standards apply these criteria to all waters, whether or not they are officially designated as public swimming areas and whether or not any particular water body is reasonably suited for full-body contact recreation. While appropriate for some waters during certain periods, this designation clearly is not attainable in all waters, under all conditions.

Many Indiana water bodies have not and do not currently meet the *E. coli* criteria specified for full-body contact recreation swimming all the time – especially during and following wet weather events. For example, in its 2018 Integrated Water Quality Monitoring and Assessment Report, IDEM identifies 2,759 miles (77.50%) of evaluated stream miles in the Great Lakes Basin alone as not attaining the recreational use due to excessive bacteria levels.[17] Those portions of the St. Mary's River, St. Joseph River and Maumee River affected by the City's CSOs are included in this list of non-attaining waters.

3 Federal and State Law Pertaining to UAAs as a Prerequisite to Certain Changes to the Designated Use of a Waterbody

3.1 General Regulatory Requirements for UAAs

Federal water quality regulations[18] describe the purpose of a UAA to be as follows: a UAA provides the informational base upon which a State may demonstrate that removing a designated use for a specific waterbody or establishing subcategories of the use which require less stringent

[17] These data tend to be consistent with EPA's statement, "The bacteria standard is one of the most commonly violated water quality standards in terms of both the number of water bodies and stream miles impaired." See *National Management Measures to Control Nonpoint Source Pollution from Urban Areas.* (U.S. EPA 2005.)
[18] *See* 40 CFR 131.10(g) and 40 CFR 131.10(j)(2).

water quality criteria is justified because attaining the designated use is not feasible. The specific grounds on which the infeasibility of attaining a designated use may be demonstrated include:

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
(2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
(4) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in attainment of the use; or
(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
(6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

40 CFR § 131.10 (g).

A UAA is defined by federal regulations as "a structured scientific assessment of the factors affecting the attainment of the use, which may include physical, chemical, biological, and economic factors as described in § 131.10(g)."[19]

3.2 EPA and Indiana Policies Support the Coordination of LTCP Development with Review of the Potential Appropriateness of Water Quality Standard Revisions

3.2.1 EPA Policy and Guidance

EPA's *Combined Sewer Overflow (CSO) Control Policy*[20] states that one of its key elements is the "development of the long-term plan …[in coordination] with the review and appropriate revision of water quality standards and implementation procedures on CSO-Impacted Waters to ensure that the long-term controls will be sufficient to meet water quality standards." As part of the analysis, "States should evaluate whether the designated use could be attained if CSO control were implemented."[21] In 2002, the EPA published further national guidance on coordinating the development of CSO long-term control plans with water quality standards reviews.[22] This guidance recognizes the unique relationship between CSOs, designated uses and water quality standards in CSO-impacted water bodies. In this document, EPA calls for a water quality standards review to be conducted in conjunction with LTCP development and specifies that appropriate and attainable standards should be established for CSO-Impacted Waters.

[19] 40 CFR 131.3(g).
[20] 59 *Federal Register* 18688, April 19, 1994
[21] *Id*., at III.B, paragraph 2
[22] Guidance: Coordinating CSO Long Term Control Planning with Water Quality Standards Reviews; EPA Document #833R01002, July 2001.

3.2.2 State Policy for Application of the CSO Wet Weather Limited Use Subcategory

Indiana law is reflective of EPA's regulation and guidance. During its 2005 session, the Indiana legislature enacted P.L. 54-2005, also known as Senate Enrolled Act (SEA) 620. Among other provisions, this legislation establishes:

- A CSO Wet Weather Limited Use subcategory of recreational use for CSO impacted waters with an approved long-term control plan; and
- A requirement for the Indiana Environmental Rules Board to adopt rules to implement the new recreational use subcategory.

Under the state rule implementing SEA 620, 327 IAC 2-1-3.1, the CSO wet weather limited use subcategory may be applied to the CSO-impacted waters of a CSO community if the following actions occur:

(i) the proposed revision to the designated use, as supported by an approved UAA, is approved by IDEM and adopted as a rule amendment by the Indiana Environmental Rules Board;
(ii) EPA approves the state rulemaking, on the basis of the UAA supporting the change in use designation, in accordance with 40 CFR 131.10, 4 CFR 131.20, and 40 CFR 131.21; and
(iii) a CSO LTCP based on the adoption of the CSO wet weather limited use has been approved by IDEM and incorporated into the community's NPDES permit. The water quality-based requirements for the CSO wet-weather limited use subcategory's application to a particular waterbody are determined through the approved CSO LTCP.

4 Determination of Existing Use

As stated above, the City's LTCP is predicated on the revision of the currently applicable use designation of full body contact recreation for the City's CSO-Impacted Waters to allow application of Indiana's CSO Wet Weather Limited Use Subcategory during wet weather conditions in which CSO discharges occur after full implementation of the CSO controls to be provided through implementation of the LTCP.

Under federal regulations at 40 CFR 131.10(g), a water body's designated use cannot be removed (or revised to a less protective level) if it is an "existing use." An "existing use" is defined at 40 CFR 131.3(e) as a "use *actually attained* in the water body on or after November 28, 1975, whether or not they are included in the water quality standards." (Emphasis added.)

For reasons summarized in this section, the City has concluded, in accordance with IDEM guidance on existing use determinations,[23] that no existing recreational uses in the City's CSO-Impacted Waters will be removed by the application of the CSO Wet Weather Limited Use Subcategory to those waters.

[23] *Application of Existing Use Concept in Conducting Use Attainability Analyses for Long Term Control Plan Communities for Primary Contact Recreational Uses*, IDEM Nonrule Policy Document No. Water-014, April 11, 2008 ("*IDEM Existing Use Guidance*").

4.1 Identification of Existing Uses

The proposed CSO Wet Weather Limited Use Subcategory, if approved, will only be applicable to the City's CSO-Impacted Waters during those wet weather conditions which result in CSO discharges after full implementation of the CSO controls provided for in the LTCP.[24] Consequently, the existing use determination by the City focuses only on the nature of existing uses in the pertinent waters during such wet weather conditions. To identify existing recreational uses during such wet weather conditions, the *IDEM Existing Use Guidance* prescribes that CSO communities "should describe the kind(s) and extent of recreation that has typically occurred during periods of CSO-impact to the waterbody and the water quality associated with the recreation during such periods."[25] [*Emphasis added*.] This guidance document goes on to state that:

> "In situations where CSO impacts affect the bacteriological quality of the waterbody such that the criteria supporting the designated recreational use have not been attained, then the existing use of that waterbody will consist of such representative recreational activities occurring under impacted water quality conditions. Such conditions fall short of attainment of the designated recreational use of full-body contact recreation . . . ." [26]

4.1.1 Recreational Activities

A review was conducted by the City of its CSO-Impacted Waters during the 2005 recreational season to document recreational activities. The results of its review, as summarized in the Recreational Uses component of its Sensitive Areas Report provided to IDEM and EPA in July 2005,[27] indicated that recreational activities involving or approaching full-body contact with area rivers within CSO-impacted reaches have been virtually non-existent. No information was obtained during this review or from surveys taken of City residents indicating any occurrence of such activities in the CSO-Impacted Waters during or soon after storm events.[28] The following table summarizes observations by City Water Resources staff during weekly inspections along each of the three main waters during the spring, summer and early fall of 2005.

[24] Thus, the CSO Wet Weather Limited Use Subcategory would be in effect only rarely, given that the City is obligated by its approved LTCP to allow untreated CSO discharges to the St. Marys River and/or the Maumee River for only 4 storm events in a typical year and to the St. Joseph River for only 1 storm event in a typical year.
[25] *IDEM Existing Use Guidance, op. cit*., p. 4.
[26] *Ibid*., p. 6.
[27] *See* Appendix C-1, *Recreational Use Report*, City of Fort Wayne Utilities, July 7, 2005.
[28] Given that sunny, dry weather is more conducive to recreational activity, the lack of primary contact recreation on the impacted rivers during favorable conditions supports the likelihood that such recreational activities do not occur during or following storm events.

Table 4.1-1 Observed Recreational Uses of CSO-Impacted Waters May – October 2005

St. Joseph River				
	Activity	**Frequency Observed**	**Number of Users**	**Weather**
	Fishing from side of river	3	11	Sunny, warm
	Children playing along streambank	1	3	Sunny, warm
	Jet skiing	1	2	Sunny
St. Marys River				
	Fishing – mostly from bank	6*	11	Sunny to partly cloudy
	Boating	Weekly at two locations	4	Sunny to varied conditions
	Canoeing	1	1	Sunny
	Children playing along streambank	Weekly at 3 locations	2-4 on each occasion	Varying conditions
Maumee River				
	Fishing from bank or bridge at 3 locations	Various times over summer	1-4 at 2 locations 1-10 at 1 location	Varied conditions Warm and dry
	Fishing from bank at Anthony St.	1	4	Sunny
	Boating at 2 locations	1	2 at each location	Sunny

* Fishing at one location by 2 to 4 individuals was observed once per week.

To assess the continued accuracy of the above-described survey, the City solicited additional survey information in January 2020 from organizations with known high interest in the river and well-positioned to know of river activities: the St Joseph River Watershed Initiative ("SJRWI"),[29] the Upper Maumee Watershed Partnership ("UMWP"),[30] the Tri-State Watershed Alliance ("TSWA"),[31] and the Fort Wayne Parks Department ("FWPD").[32] Specifically, the City asked these organizations to report how often they observed (a) the CSO-impacted segments of St. Joseph River, St. Marys River, and two segments of the Maumee River[33] during the recreational season (April through October) and (b) recreational uses of those segments during the recreational season. The survey asked the organizations to report their observations (1) during dry weather or low river conditions ("Favorable River Conditions") and (2) during or within 48 hours of a large rain event

[29] See sjrwi.org.
[30] See uppermaumeewatershed.com.
[31] See omirivers.org. This organization was formerly known as the Maumee Watershed Alliance.
[32] See fortwayneparks.org. Area outfitters were also asked to complete the survey but did not respond. A copy of the survey form is attached as Appendix C-2.
[33] The survey defined the upstream segment of the Maumee River to run from the confluence to the Hosey Dam and the downstream segment to run from the Hosey Dam to the Allen County border.

or high river conditions ("Unfavorable River Conditions"). Results of the survey are presented in Tables 4.1-2 and 4.1-3[34] below.

Table 4.1-2 Use Observations of Active River Organizations During Favorable River Conditions

River Activity	Activity Observed Almost Every Day	Activity Observed Multiple Times a Month	Activity Observed a Few Times a Month	Activity Observed Only a Few Times	Activity Not Observed at All
St. Joseph River (St. Joe Dam south to Maumee River confluence). This segment is observed weekly by the SJRWI, TWWA, and FWPD and multiple times a month by the UMWP.					
Fishing	2		1		1
Boating	2	1		1	
Water Skiing, Paddle Boarding		2	1	1	
Swimming/Wading				1	3
St Mary's River (Tillman Road north to Maumee River confluence). This segment is observed daily during the work week by the FWPD, weekly by the TSWA, and monthly by the SJRWI. The UMWP observes this segment less frequently than monthly.					
Fishing	2		1		1
Boating	3				1
Water Skiing, Paddle Boarding	1	1	1		1
Swimming/Wading				1	3
Maumee River (St Joseph River to Anthony Blvd / Hosey Dam). This segment is observed weekly by the TSWA and FWPD weekly, multiple times a month by the UMWP and monthly by the SJRWI.					
Fishing	2			1	1
Boating	2			2	
Water Skiing, Paddle Boarding			2	1	1
Swimming/Wading					4
Maumee River (Hosey Dam east to County line). This segment is observed weekly by the UMWP and monthly by the SJRWI and the TSWA. FWPD does not observe this segment.					
Fishing	1		1	1	
Boating	1			2	
Water Skiing, Paddle Boarding				1	2
Swimming/Wading					3

[34] Some organizations completed multiple surveys reflecting the observations of different members or groups of members. Whenever a response differed among the same organization, Tables 4.1-2 and 3 reflect the highest frequency. For example, if different organization members respectively reported observing an activity daily and monthly, the daily observation was used.

Table 4.1-3 Use Observations of Active River Organizations During Unfavorable River Conditions

River Activity	Activity Observed Almost Every Day	Activity Observed Multiple Times a Month	Activity Observed a Few Times a Month	Activity Observed Only a Few Times	Activity Not Observed at All
St. Joseph River (St. Joe Dam south to Maumee River confluence). This segment is observed weekly by the SJRWI, TWWA, and FWPD and multiple times a month by the UMWP.					
Fishing			1	1	2
Boating					4
Water Skiing, Paddle Boarding					4
Swimming/Wading					4
St Mary's River (Tillman Road north to Maumee River confluence). This segment is observed daily during the workweek by the FWPD, weekly by the TSWA, and monthly by the SJRWI. The UMWP observes this segment less frequently than monthly.					
Fishing				1	3
Boating				1	3
Water Skiing, Paddle Boarding					4
Swimming/Wading					4
Maumee River (St Joseph River to Anthony Blvd / Hosey Dam). This segment is observed weekly by the TSWA and FWPD weekly, multiple times a month by the UMWP and monthly by the SJRWI.					
Fishing				1	3
Boating					4
Water Skiing, Paddle Boarding					4
Swimming/Wading					4
Maumee River (Hosey Dam east to County line). This segment is observed weekly by the UMWP and monthly by the SJRWI and TSWA. The FWPD does not observe this segment.					
Fishing			1		2
Boating					3
Water Skiing, Paddle Boarding					3
Swimming/Wading					3

These results are consistent with those of the City's 2005 survey. Full body contact (swimming and wading) is rare during Favorable River Conditions and non-existent during Unfavorable River Conditions. Similarly, water skiing and paddle boarding does not occur during Unfavorable River Conditions. Fishing and boating (including kayaking) – recreational activities somewhat common in some segments during Favorable River Conditions – were observed at low frequencies in some segments during Unfavorable River Conditions. However, fishing observed during Unfavorable River Conditions was always from the shore, and the single boating observation during Unfavorable River Conditions was in the form of scheduled power boat tours (i.e. no kayaking).

Likewise, with the exception of occasional fishing and kayaking during Favorable River Conditions, no recreational uses have been observed for the CSO-impacted segment of Spy Run

Creek, the only tributary of the City's CSO-Impacted Waters of even modest size.[35] And no recreational uses have been observed for the CSO-impacted segments of remaining three small local tributaries - the Baldwin Ditch, Natural Drain #4 and Harvester Drain.[36] The absence of recreational uses for these tributary segments is consistent with the lack of any public access points, their small size and intermittent flows, and many existing culverts.[37] The City is the dominant property owner along all of these tributary segments except Harvester Drain which lies entirely within an industrial area.[38]

4.1.2 Water Quality of CSO-Impacted Waters

The following subsections summarize water quality characterizations of CSO-Impacted Waters using sampling data ranging from 1975 to 2018. As will be shown by these detailed presentations, the City's CSO-Impacted Waters are characteristically impaired for full-body contact recreational use during and after those wet weather conditions are associated with the few projected CSO discharge events to occur after full implementation of the LTCP. That is, the water quality of CSO-Impacted Waters are impaired by fecal coliform and/or E. coli levels substantially exceeding applicable criteria for full-body contact recreation. That impairment is due to a multitude of sources, including but certainly not limited to, CSO discharges. The bacteriological water quality criteria would not have been attained under conditions representative of post-LTCP activation events.

4.1.2.1 LTCP's Summarization of Water Quality of CSO-Impacted Waters.

A characterization of the water quality of the City's CSO-Impacted Waters is summarized in Chapter 2 of the 2007 LTCP. The bacteriological quality during wet weather, as shown by the collected data, indicates that the St. Marys River, St. Joseph River, and Maumee River consistently fail to meet applicable water quality standards for full-body contact recreation during wet weather events. Wet weather sampling data collected by Malcolm Pirnie in 1996 and summarized on Table 2.5.3.3 of the LTCP indicates that during the four sampled rain events every grab sample collected for analysis exceeded the full-body contact recreation single sample *E. coli* limit of 235 cfu/100 ml. In addition, wet weather sampling data collected by the City in 2005 and summarized in Section 2.5.3.1 of the LTCP indicates that average *E. coli* concentrations for two rain events far exceeded the full-body contact recreation single sample *E. coli* limit. *E. coli* concentration averages for the two rain events ranged from 1,116 cfu/100 ml to 70,608 cfu/100 ml. While the averaged *E. coli* concentrations cannot be directly compared to the single sample maximum or geometric mean *E. coli* standards, the high averages obtained during the 2005 wet weather

[35] The CSO-impacted segment of Spy Run Creek extends approximately 0.9 miles to the confluence of the St. Marys River through and along flood control levees and mostly City-owned property. The occasional fishing and kayaking of this Spy Run segment occurs within approximately 1000 feet of the confluence (i.e. the St. Mary's River backwater). Any further recreational uses are effectively precluded by two small flow control dams and an absence of public access points. Use observations were made by FWPD officials most familiar with the City parks and trails along the segment.
[36] See Appendix C-3 for mapping and photographs of all four tributary segments.
[37] The lengths of the CSO-impacted segments are approximately 0.9 mile for Spy Run Creek, 1.1 mile for Baldwin Ditch, 1.5 mile for Natural Drain #4, and 0.5 mile for Harvester Drain.
[38] Use observations for the Baldwin Ditch and Natural Drain #4 were made by FWPD officials most familiar with these segments and their intersections with river greenway trails.

sampling indicate that a significant number of samples contained *E. coli* concentrations exceeding the single sample limit of 235 cfu/100 ml.

4.1.2.2 Evaluation of 1975-2006 Bacteriological Data from the CSO-Impacted Waters.

To more fully evaluate the attainment status of the City's CSO-Impacted Waters, the 2010 UAA approved by IDEM evaluated fecal coliform and *E. coli* data from the period of 1975 through 2006 that were obtained from fixed-station sampling activities conducted on these water bodies. Surface water grab samples from segments of the St. Mary's River, the St. Joseph River, and the Maumee River in and near the City have been analyzed by the IDEM and its predecessor agency for concentrations of indicator bacteria on an approximately monthly or bi-monthly basis from 1975 through the present; the 2010 UAA analyzed these data for the period up through 2006. Bacterial concentration data for the three rivers in and near the City resulting from this stream sampling activity was obtained from the following sources: 1975 through 1990, from the Legacy STORET Database, United States Environmental Protection Agency, *http://www.epa.gov/storpubl/legacy*; 1991 through 2000, from the IDEM's Assessment Information Management System (AIMS) Database; and 2001 through 2006, from the City's river sampling program. The raw data for bacterial indicator organisms collated from each of these sources are provided in Appendices D, E, and F.

The data obtained from the fixed-station sampling events were limited for several reasons. First, because the fixed-station sampling data was not collected with the frequency required to derive monthly geometric means, the data was compared to full-body contact recreation single sample criteria. Samples collected from 1975 through 1988 were analyzed by the agency for fecal coliform and compared to the full-body contact recreation maximum limit of 400 cfu/100 ml. 330 IAC 1-1-6(e) (1988 Ed.). Samples collected from 1988 through 2006 were analyzed for *E. coli* and compared to the full-body contact recreation single sample limit for *E. coli* of 235 cfu/100 ml. Second, data from sampling stations upstream of the City's CSOs were not included in this analysis and presentation. Third, variations in the available data due to conditions such as rainfall events or low river flow volumes could not be addressed because the data did not provide any information regarding the meteorological conditions or river flows during sampling events.[39]

Finally, the locations of sampling stations were not consistent in all cases from 1975 through 2006. Stations were added and removed during this time period for the Maumee River so that precise locational comparison of data from the same sampling points in that river is not possible over the entire period. These limitations, however, do not preclude useful qualitative conclusions from being drawn concerning attainment status of these rivers over the pertinent timeframe, as discussed below.

Due to the limitations of the fixed-station sampling data, the general attainment status of the rivers from 1975 through 2006 was determined through comparison of the number of samples exceeding applicable full-body contact recreation single sample limits to the total number of samples collected from each of five sampling stations on the three principal waters. It would be expected

[39] It may be reasonably inferred that the individual samples with low bacterial content correspond to dry weather conditions while samples with high concentrations of indicator bacteria correspond to wet weather conditions. However, it has not been possible to readily correlate the water quality data with meteorological conditions.

that, if the water quality in the St. Mary's River, St. Joseph River, and Maumee River were increasingly impaired over time, the percentage of samples collected exceeding the applicable full-body contact single sample limit would correspondingly show a trending increase over the time period from 1975 through 2006. Such a hypothetical trending increase is not reflected in the data, however. If anything, the data, particularly the data from 2001 to 2006, show a trending to lower bacterial concentrations. In order to minimize the impact of years with small sample sizes or atypical meteorological conditions, as well as to provide greater assurance that the data for each time segment would contain precipitation-related results, data from each river sampling station was combined into data sets corresponding to decade periods consisting of the latter half of the 1970's, the 1980's, the 1990's, and 2001-2006. The percentages of samples with bacterial content exceeding applicable recreational criteria for each river sampling station are summarized in Table 4.1-4.

Table 4.1-4 Exceedances of Applicable Bacteriological Standards for Full Body Contact Recreation from 1975 to 2006

Percent of Samples Exceeding Applicable Maximum Criterion				
	1975-80 Fecal coliform	1981-1990 Fecal Coliform	1991-2000 *E. coli*	2001-2006 *E. coli*
St. Joseph River @ Tennessee Avenue	32.4% (37)*	38.8% (85)	43.1% (102)	30.0% (183)
St. Marys River @ Spy Run	ND	77.8% (27)	75.5% (102)	65.4% (182)
Maumee River @ Anthony Blvd.	65.4% (55)	71.4% (56)	ND	54.4% (180)
Maumee River @Landin Road	ND	ND	59.7% (77)	59.0% (183)
Maumee River @ State Road 101	62.0% (50)	54.1% (85)	60.2% (108)	ND

ND – no data
*Parenthetical figure states the number of samples in the data set
Fecal coliform exceedances estimated by comparison to a maximum value of 400 cfu/100 ml
E. coli exceedances based on a maximum value of 235 cfu/100 ml

As indicated by Table 4.1-4, all three rivers produced a significant percentage of samples exceeding applicable full-body contact recreation single sample limits for each time interval. In addition, though not discernible from the above table, the data for each sampling station rather consistently showed exceedances of the bacterial criteria from year to year. The river sampling data obtained from 1975 through 2006 indicate that all three rivers (and all sampling stations) have consistently failed to meet the full-body contact recreation criteria in significant numbers of samples. Some variations are shown to have occurred among the three waters in the percentage of bacterial exceedances, as may be expected based on differences in the number of CSOs discharging, and the relative volumes of combined sewage discharged, to each waterway. Based on this information, it can be generally concluded that the water quality in those portions of the St. Marys River, St. Joseph River, and Maumee River routinely impacted by Fort Wayne's CSO discharges has consistently failed to attain bacteriological criteria for full-body contact

recreational use since at least 1975 and that there has been no significant change in water quality related to recreational use from 1975 through 2006, other than slight improvements in this decade.

From the foregoing information, it may be further concluded, as a general matter, that the existing recreational use for these CSO-Impacted Waters during wet weather conditions can be characterized as "rare-to-no full-body (primary) contact recreation occurring in waters that do not attain water quality criteria supporting full-body contact recreational use."

A different conceptual approach for displaying the bacterial quality of the CSO-Impacted Waters over time is illustrated in Figures 4.1-1 through 4.1-5. These figures display the results of a statistical analysis of the data for indicator bacteria concentration for each waterway for each decade since the mid-1970's. These figures provide the 5th, 25th, 50th, 75th, and 95th percentiles and the mean of the data set for indicator bacteria concentrations for each sampling station for each waterway for each decade period.[40] Thus, this method of data depiction, known as a "box and whiskers" format, provides a visual display of the spread, as well as the concentration, of the data set. The raw data set for each graph displayed in these figures are provided in Appendices G through K.

The sampling locations from which the bacterial data are derived are each within the CSO-impacted segments of the waters. One sampling station is located within each of the CSO-impacted segments of the St. Marys River and St. Joseph River. Three sampling stations are located on the Maumee River. It bears mention that the data sets for these figures include bacterial concentrations corresponding to all weather conditions; it was not feasible to attempt to segregate data deriving from wet weather from data associated with dry weather.[41] However, the overall data set for each sampling location will include data from wet weather conditions such that the impacts of CSO discharges on bacterial quality of the waters will be reflected in the full data set. Since each data set displayed in a box and whiskers graph in these figures represents a decade (or a substantial fraction), the data set can be assumed to include representative influences of CSO discharges.

Turning to a consideration of the substance of the figures (which appear on succeeding pages), the following overall observations can be made. As a general matter, the instream bacterial concentrations at each sampling location have remained relatively constant over the entire period of evaluation, spanning the mid-1970's to 2006. This is particularly evident when focusing on the darker box of each graph, representing the 25th through 75th percentiles of the data. The constancy of the data is most pronounced for the St. Joseph River and the State Road 101 sampling station for the Maumee River, but the trend characterizes each sampling location's

[40] For each graphic display for a particular sampling station and time period, the minimum bacterial concentration is indicated by the left endpoint or "tail" of the graph, while the maximum concentration is found at the right endpoint. The left leading edge of the light gray box represents the 5th percentile of the data, the left leading edge of the smaller dark gray box displays the 25th percentile, the line running through the dark gray box indicates the median of the data, the right leading edge of the dark gray box provides the 75th percentile, and finally, the right leading edge of the light grey box is the 95th percentile for the data set.

[41] There were no readily accessible records available to the City of contemporaneous meteorological records from which weather conditions could be correlated to the sampling results for each of the sampling locations on a particular day of water quality sampling.

data. Secondly, the data consistently show, for each sampling location, that the most recent decade is slightly lower in bacterial concentrations than earlier decades. This corroborates that bacterial quality of the CSO-Impacted Waters relating to recreational use has remained relatively consistent since the mid-1970's and appears to have improved slightly, as might be expected, with increasing attention over time to measures intended to produce water quality improvement.

Figure 4.1-1 Box-Whisker Plots for Historical Bacteria Data by Decade – St. Marys River (at Spy Run)

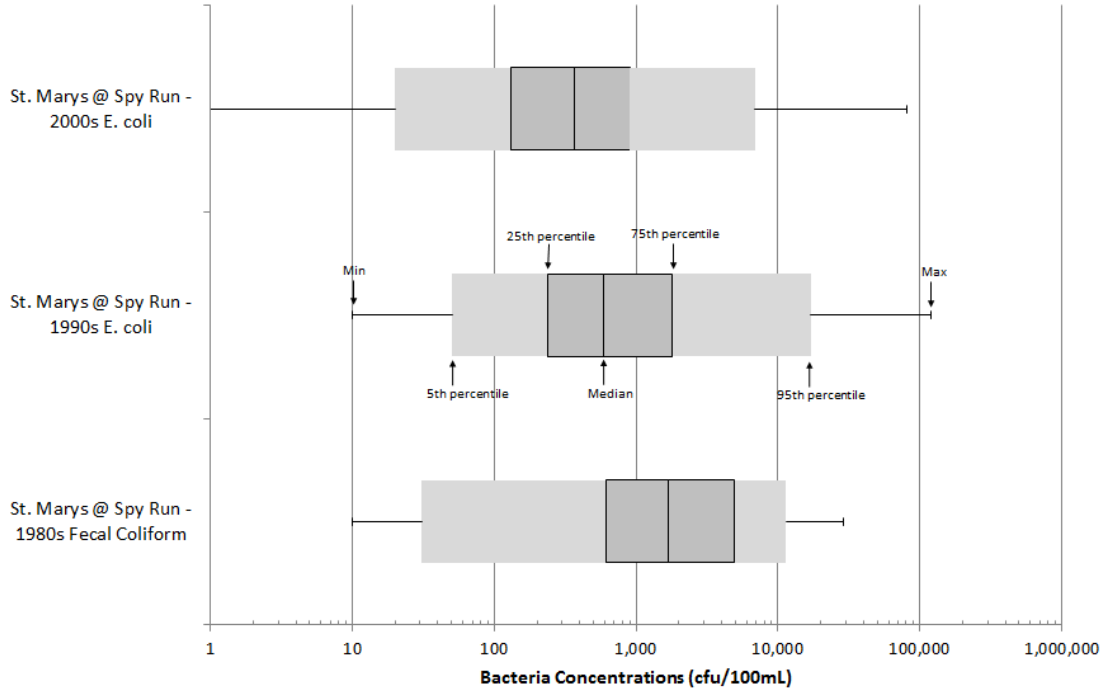


Figure 4.1-2 Box-Whisker Plots for Historical Bacteria Data by Decade – St. Joseph River (at Tennessee Avenue)

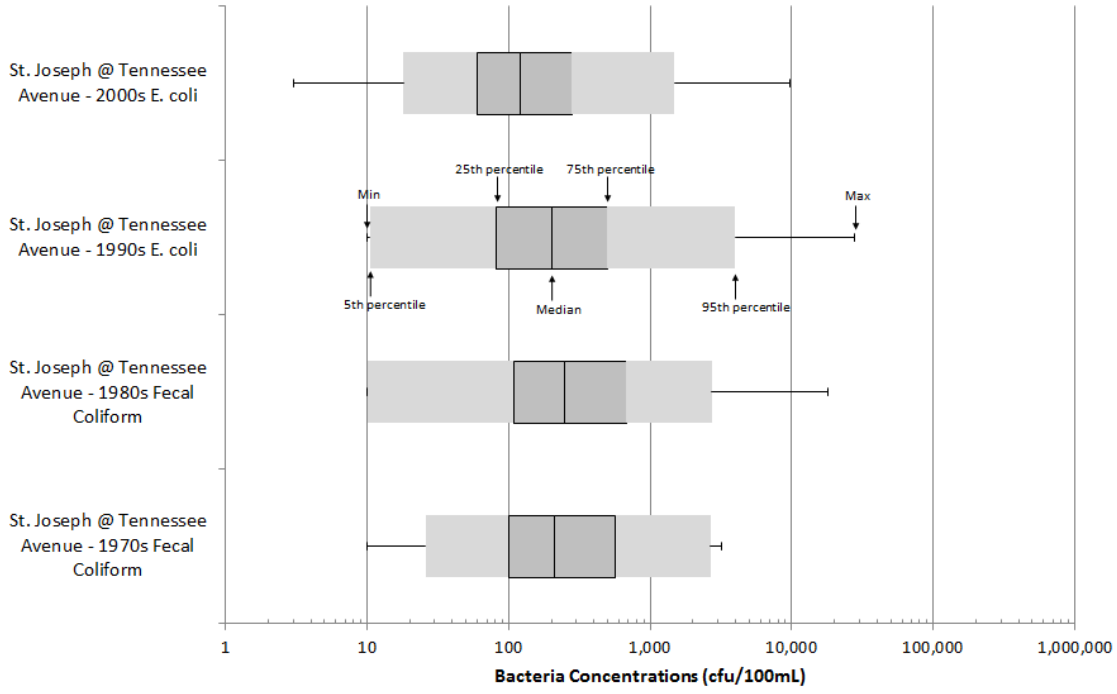


Figure 4.1-3 Box-Whisker Plots for Historical Bacteria Data by Decade – Maumee River (at Anthony Boulevard)

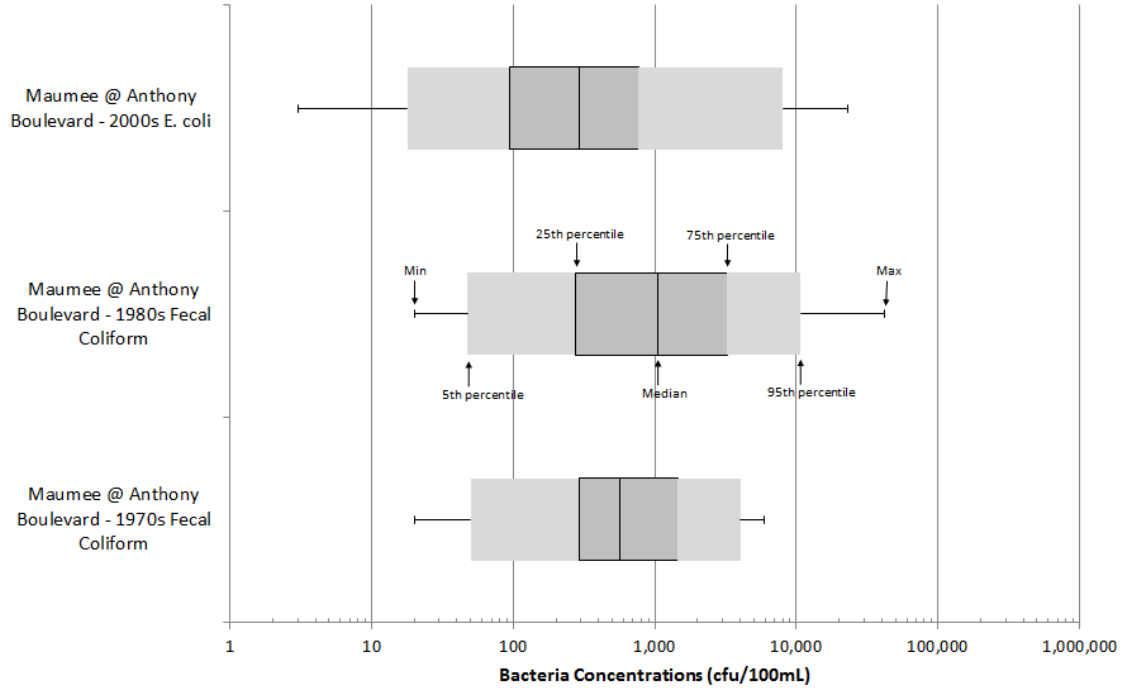


Figure 4.1-4 Box-Whisker Plots for Historical Bacteria Data by Decade – Maumee River (at Landin Road)

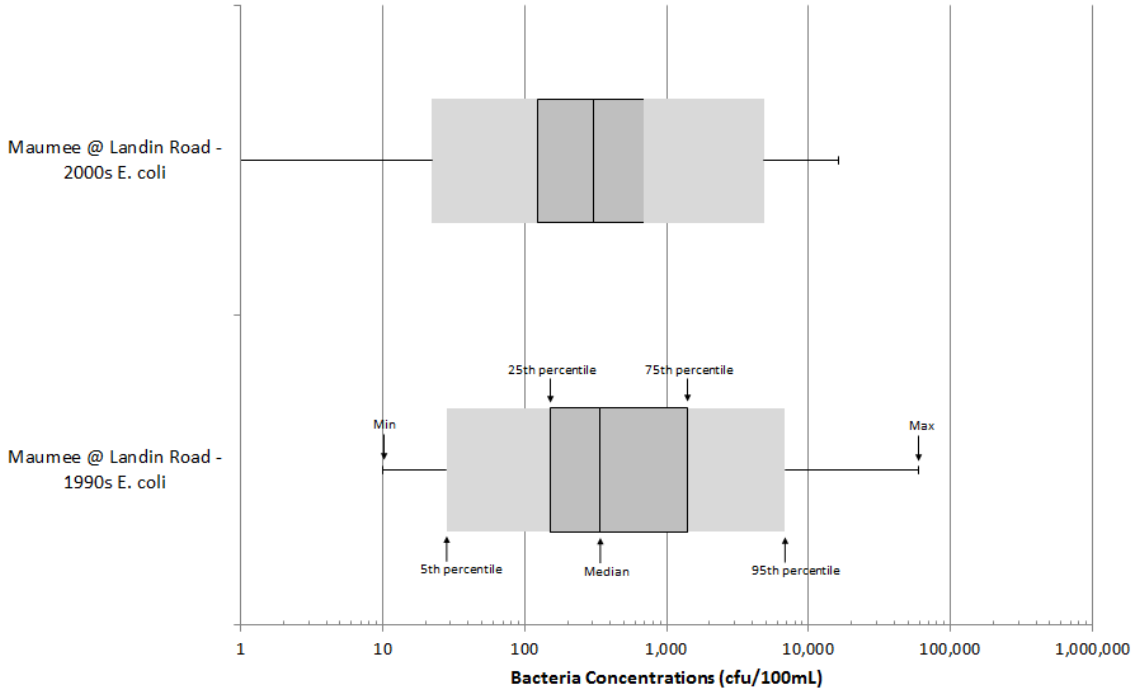
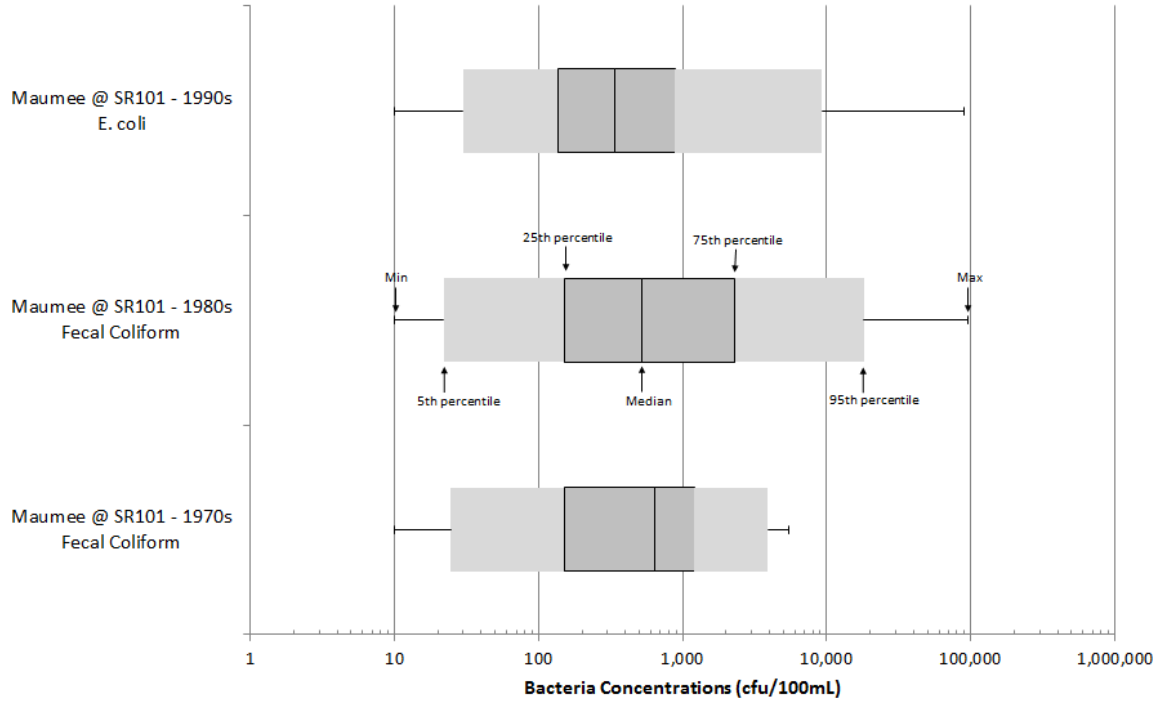


Figure 4.1-5 Box-Whisker Plots for Historical Bacteria Data by Decade – Maumee River (at SR101)



The conclusions drawn from the review of fixed station monitoring data are consistent with what would be expected from the facts relating to the City's combined sewer system. Historical records indicate that the combined sewer system dates to the early part of the 20th century. The service area of the combined sewer system – the central portion of the City – has been built out since long before the 1970s and the basic configuration, sizing and extent of the combined sewer system has been unchanged since well before the 1970s as well. With a stable residential customer base and a stable sewer infrastructure, it would be expected that the frequency and volume of CSO discharges would be consistent over time, taking into account the various factors discussed above which create short term variations. From this, it is reasonable to conclude that the average nature and extent of the impairment of bacteriological water quality would remain rather invariant over time.

4.1.2.3 Evaluation of 2016-2018 Stream Monitoring Data from Upstream of the CSO-Impacted Waters

The St. Joseph River and the St. Marys River are the two largest CSO-Impacted Waters that originate from outside City territory and enter the area served by the City's combined sewer system. Waters of these two rivers, in areas upstream of any potential CSO impacts as well as in areas already identified as CSO-Impacted Waters, regularly exhibit water quality that does not meet the bacterial criteria set by Indiana law for protection of full-body recreational use. This fact has been established through the City's long-term river quality monitoring program that was

initiated in 2001, and is demonstrated quantitatively as follows using the City's most recent three years of data (2016-2018):

- Figure 4.1-6 (St. Marys River) and Figure 4.1-7 (St. Joseph River) show measured *E. coli* levels at two locations on each river, one at the upstream City boundary and one downstream of the local CSO area. As can be seen, measured *E. coli* levels regularly exceed 235 cfu/100ml at the upstream boundary location on each river, before the rivers are impacted by City CSOs.
- The data underlying Figure 4.1-6 also demonstrate that the upstream boundary location for the St. Marys River had higher *E. coli* levels than the downstream location on 38 of the 103 sample days in 2016-2018. (Note that this sampling period precedes implementation of most CSO controls related to the St. Marys River.) For the St. Joseph River, Figure 4.1-7 data demonstrate that the upstream boundary location had higher *E. Coli* levels than the downstream location on 61 of 107 sample days in 2016-2018. (Note that implementation of CSO controls affecting the St. Joseph River were completed in September 2015, prior to this sampling period.)
- Figure 4.1-8 (St. Marys River) and Figure 4.1-9 (St. Joseph River) show the frequency distributions of *E. coli* data from the upstream and downstream sampling sites, based on the full set of samples collected from 2016-2018. On the St. Marys River, the upstream City boundary samples exceed 235 cfu/100ml approximately 43% of the time, while the downstream location samples exceed 235 cfu/100ml approximately 52% of the time. On the St. Joseph River, the upstream City boundary samples exceed 235 cfu/100ml approximately 35% of the time, while the downstream location samples exceed 235 cfu/100ml approximately 40% of the time. The frequency distribution graphs for the upstream and downstream sampling locations on the St. Joseph River track each other so closely as to be nearly congruent, implying that downstream bacterial quality is dominated by the upstream bacterial quality.

Figure 4.1-6 E. coli Sampling Results 2016-2018 – St. Marys River

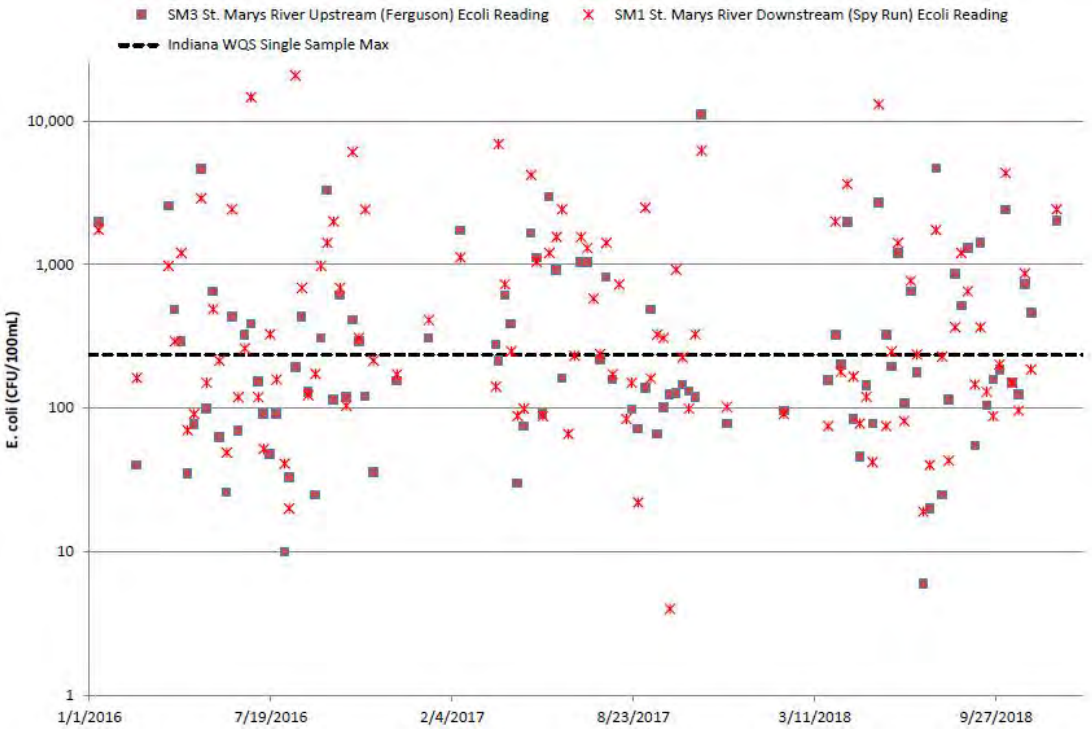


Figure 4.1-7 E. coli Sampling Results 2016-2018 – St. Joseph River

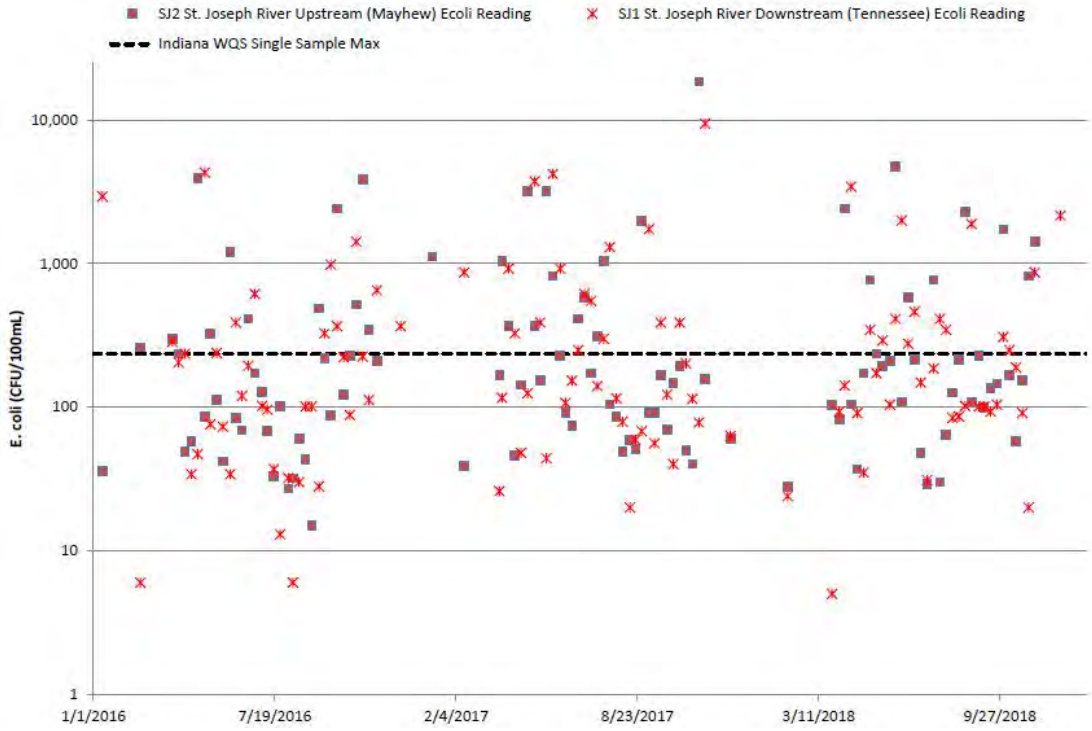


Figure 4.1-8 E. coli Frequency Distributions – St. Marys River

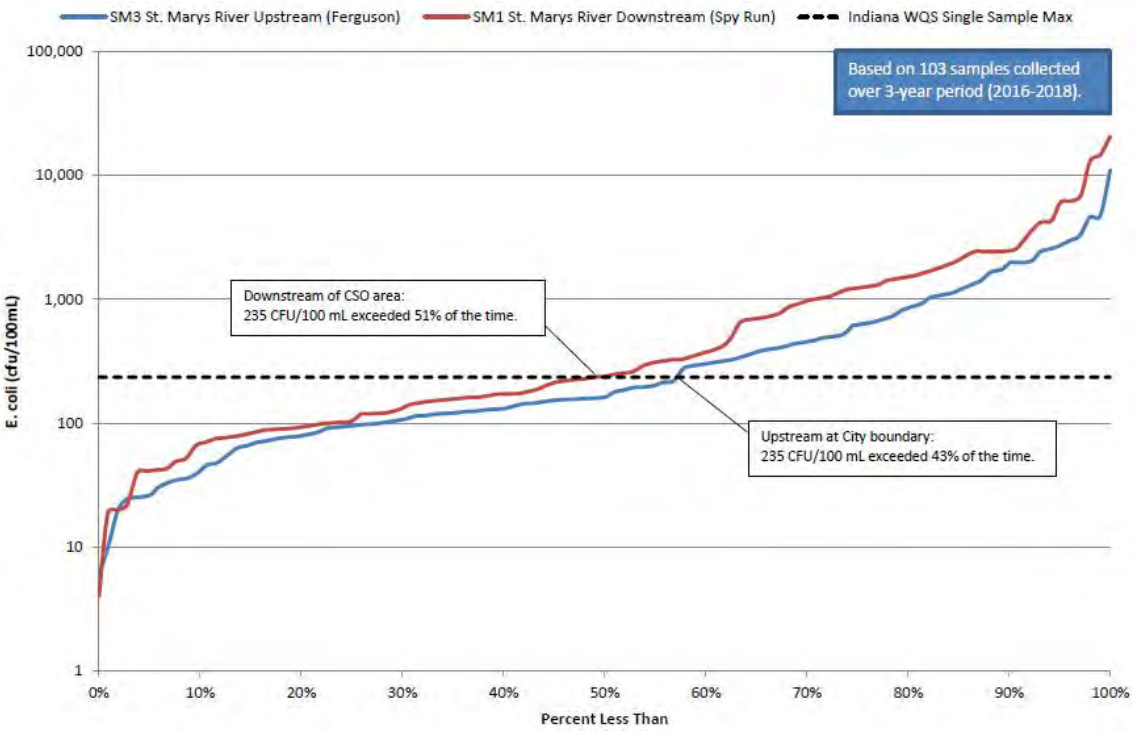
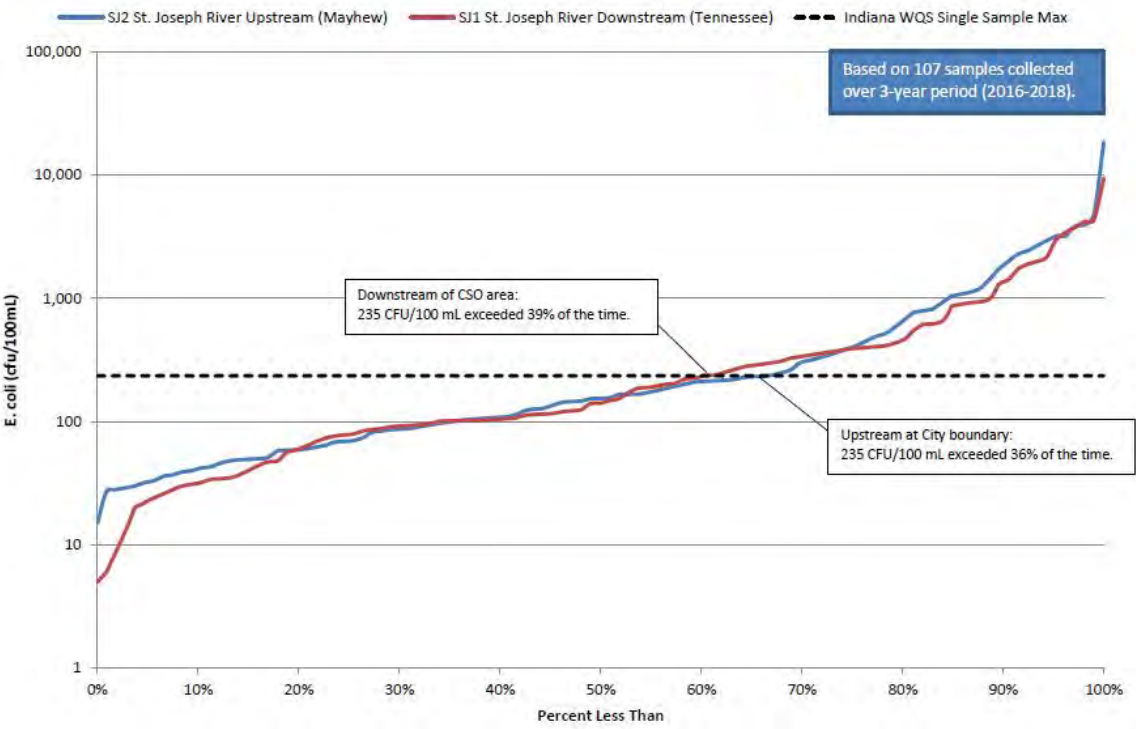


Figure 4.1-9 E. coli Frequency Distributions – St. Joseph River



Clearly, upstream contamination of both the St. Marys and St. Joseph River is regularly present to such a degree that it prevents the water quality of either river from meeting recreational water quality criteria, both upstream of and internal to the CSO-impacted zones.

Additional illustrative river monitoring data for the St. Joseph River is available in the City's St. Joseph River Milestone Report ("*Milestone Report*"), dated August 9, 2017, which was submitted to EPA and IDEM to document post-construction monitoring of the efficacy of CSO controls relating to that waterway.[42] Of particular note is that the *Milestone Report* shows that the St. Joseph River, at its downstream terminus, fails to demonstrate bacterial quality consistent with the State recreational criteria even though the CSO controls installed for CSOs that discharge to that waterbody meet the Performance Criteria required under the federal Consent Decree.[43] Consistent with the results discussed above for the 2016-2018 sampling period, this failure is predominantly attributable to the poor upstream bacterial quality of the river.

4.1.3 Existing Use Conclusions

From the foregoing information, the following overall conclusion is readily apparent. The existing recreational use of the City's CSO-Impacted Waters associated with wet weather conditions involves the following two elements: one, there is an almost total absence of full-body contact recreational activities in the CSO-impacted waters, especially during those wet weather conditions that are associated with the few projected CSO discharge events to occur after full implementation of the LTCP; and, two, to the extent any full-body contact recreation has occurred in these waters, it has occurred in waters whose quality characteristically is impaired for recreational use under such wet weather conditions, with fecal coliform or, more recently, *E. coli* levels substantially exceeding bacteriological criteria for full-body contact recreation.

It should also be recognized that 2016 – 2018 water quality monitoring of the St. Joseph River and the St. Marys River at points immediately upstream of the urban area of the City shows the bacterial quality of waters at these locations to be routinely in excess of the applicable water quality criteria for full-body contact recreation. Further, the frequency distribution graphs for the upstream and downstream sampling locations of the St. Joseph River for the 2016 – 2018 period, Figure 4.1-9, are nearly congruent, indicating that the downstream bacterial quality of this waterbody is dominated by its upstream water quality. For both rivers, it is evident that the poor downstream quality is primarily attributable to substandard quality upstream of the City's urban areas.

In a further extrapolation of this theme, Appendix B-2 provides a discussion of results of the City's recently updated water quality model for the CSO-Impacted Waters. When inputs of all bacteria sources to the St. Joseph River, St. Marys River and Maumee River are set to zero except for upstream inputs, the model indicates that the entire modeled length of the Maumee River (from its upstream end to SR101, see Appendix B-2) would experience *E. coli* levels in excess of the recreational water quality criteria more than 50% of the recreation season during 1995, which is representative of the typical year's precipitation levels.

[42] This Milestone Report is attached to this UAA as Appendix P.
[43] *Milestone Report*, pp. 10-11.

4.2 Revision of the Recreational Use Designation for the City's CSO-Impacted Waters Will Not Remove Existing Uses

As previously referenced, federal water quality regulations do not allow the revision of a designated use through the UAA process to the extent that the revision would remove an existing use.[44]

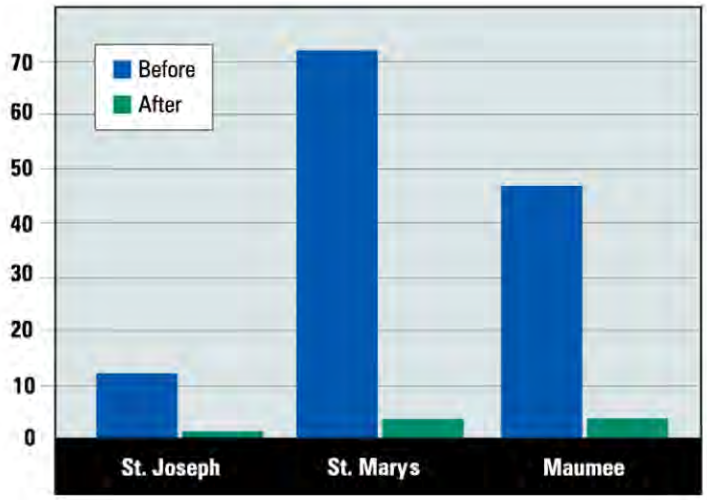
The *IDEM Existing Use Guidance* provides that, for a CSO community in which the existing use of a CSO-impacted waterbody during wet weather is determined to be certain recreational activities that have occurred under impacted, or substandard, water quality conditions (relative to full-body contact recreational use), the reclassification of the waterbody to the CSO wet weather limited use subcategory would not be expected to remove the existing use. This conclusion derives from the following points. One, full-body contact recreational use has not been attained in such waters due to the characteristic substandard water quality, regardless of what limited recreational activity may have occurred under such conditions. Two, the water quality of the impacted waterbodies during the periods in which the CSO wet weather limited use subcategory would apply is that which results from full implementation of the community's LTCP, which will represent some degree of improvement over historical conditions due to a reduction in CSO discharges. The *Guidance's* conclusion is pertinent to Fort Wayne's CSO-Impacted Waters since the existing recreational use of each of these waterbodies has been identified as limited recreational activities occurring under impaired bacteriological water quality.

That the conclusion indicated by the Guidance is valid in Fort Wayne's case is evident from the information provided in this Updated UAA. First, historical water quality data for the City's CSO-Impacted Waters show consistent noncompliance with minimum water quality criteria required to support full-body contact recreation. Second, virtually no recreational activities have been observed in or on the CSO-Impacted Waters during wet weather events. Third, the City's full implementation of the CSO control measures specified in the City's LTCP will markedly reduce historical levels of CSO discharges to the impacted waters and the aggregate time in which these waters will incur CSO impacts. For the 19 CSO regulators with highest activation rates, full implementation of the LTCP will reduce the number of overflow events from a range of 20 to 71 annual events to a maximum of one annual overflow event per typical year for the 6 CSOs discharging to the St. Joseph River and a maximum of 4 annual events per typical year with respect to CSOs discharging to the other impacted waters.[45] The reduction in overflow frequency for each of the three major CSO-Impacted Waters to be realized from LTCP implementation is graphically shown in Figure 4.2-1 below.

[44] 40 CFR 131.10(h)(1).

[45] Determining whether an actual CSO event that occurs after implementation of the LTCP would be expected, consistent with the installed CSO controls, will not be a simple matter. It is problematic to attempt to evaluate individual CSO events in isolation; events must be considered within the context of the typical year to determine whether the event would be among the predicted few annual overflow events. As explained in the Post-Construction Monitoring Plan (Section 4.6.4.1) for the LTCP, the City has developed a model-based method to assess the performance of their control program following implementation of the LTCP. Under this assessment approach, the City will use its hydraulic sewer system model to run a continuous simulation for a representative five-year period agreed to with IDEM and U.S. EPA to determine whether the City has achieved the Performance Criteria for the LTCP. This analytical approach will provide a basis for determining the types of wet-weather conditions that are expected to cause a CSO event after LTCP implementation.

Figure 4.2-1 Annual Overflow Frequency in a Typical Year



Clearly, the existing use corresponding to the impacts of 20 to 71 annual overflow events will not be removed or restricted by a reduction to 4 annual overflow events (or even one) under similar precipitation conditions. Much to the contrary, the existing use will be enhanced given that the volumes of combined sewage discharged and number of annual hours in which the CSO discharges produce substandard bacterial quality under typical year conditions will be markedly reduced through performance of the LTCP. Model projections indicate that the LTCP improvements will reduce hours of CSO discharges from approximately 500 hours per typical year under existing CSS conditions to 30 hours per year (and only 6 hours per year on the St. Joseph River) after LTCP implementation (a reduction in annual CSO discharge hours of 94%). Thus, rather clearly, any existing uses of the City's CSO-Impacted Waters will be improved upon, rather than removed, concurrently with application of the CSO Wet Weather Limited Use subcategory.

In summary, the existing recreational uses of the City's CSO-Impacted Waters during wet weather conditions that produce CSO discharges are seen to be, at most, limited recreational activities occurring in substandard water quality.[46] Moreover, these existing uses will not be removed or adversely affected by the proposed revision of the designated use by which the CSO wet weather limited use subcategory would be applied during four annual periods per typical year of wet weather impact and substandard *E. coli* quality.

Consequently, the existing uses of the City's impacted waters corresponding to wet weather conditions do not pose an obstacle to consideration of this Updated UAA.

[46] Technically, under the definition of "existing use" provided in 40 CFR 131.1, it does not appear that there would be any existing recreational use in the CSO-impacted waters during wet weather conditions that result in CSO discharges in view of the characteristic substandard bacterial quality of these waters under such conditions. The use, including water quality consistent with the applicable water quality criteria, has not been attained.

5 Attaining the Current Recreational Designated Use Is Not Feasible During Wet Weather Conditions

This section explains why attainment of the current designated use of full-body contact recreation is not feasible in the City's CSO-Impacted Waters during certain wet weather conditions. More specifically, this designated use cannot be feasibly attained during those wet weather conditions which exceed the capability of the CSO control measures being installed by the City under its approved LTCP due to ambient river conditions and without causing substantial and widespread economic and social impact. As a consequence, relief from the current designated use and the accompanying *E. coli* water quality criteria is warranted during such wet weather conditions. The City proposes, as a result, that the CSO wet weather limited use subcategory provided under Indiana law be approved under federal and state law for application to the City's CSO-Impacted Waters as the highest attainable use during periods of impact by CSO discharges following full implementation of the approved LTCP.[47]

5.1 Reasons for Infeasibility of Attainment of Full-body Contact Recreation During Wet Weather Conditions

Revision of the recreational use for the City's CSO-Impacted Waters during the referenced wet weather conditions and application of the CSO wet weather limited use subcategory is supported based upon four of the six factors provided in 40 CFR Sec. 131.10(g):

- Naturally-occurring pollutant concentrations prevent the attainment of the use.
- Natural, ephemeral, intermittent, or low-flow conditions or water levels prevent the attainment of the use.
- Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.
- Controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

Each of these factors is discussed in more detail below.

5.2 Factor 1: Naturally Occurring Pollutant Concentrations

There can be no real doubt that naturally-occurring *E. coli* contamination contributes to the prevailing noncompliant bacterial quality in waters of the St. Marys River and St. Joseph River upstream of the City's CSOs as well as in the segments impacted by the CSOs. Mammalian and avian wildlife exist throughout the upstream rural watersheds of both rivers, and increasingly, many wildlife species venture into suburban and even urban areas. This reality is recognized in,

[47] As explained above, Indiana has not established a full time recreational designated use other than full-body contact recreation. The temporary use posited by this Updated UAA represents the highest attainable use during rare wet weather events that result in CSO discharges while otherwise preserving the current designed use. Moreover, there is no alternative lesser full time recreational designated use which Indiana could establish and which could be attained during the rare wet weather conditions at issue herein.

for example, the St. Marys River Total Maximum Daily Load for *E. coli* (*St. Marys TMDL*) document,[48] as follows:

> "Wildlife is a known source of *E. coli* impairments in waterbodies. Many animals spend time in or around waterbodies. Deer, geese, ducks, raccoons, turkeys, and other animals all create potential sources of *E. coli*. Wildlife contributes to the potential impact of contaminated runoff from animal habitats, such as urban park areas, forest, and cropland."

The rather ubiquitous presence of wildlife invariably results in their fecal droppings being a source of *E coli* that is mobilized by storm runoff so as to impact area waters throughout their upstream reaches.[49] No reasonable basis exists on which wildlife could be ruled out as a significant source of *E. coli* contamination throughout the lengths of the St. Marys River and the St. Joseph River.

A complicating factor for the assessment of naturally-occurring *E. coli* is that the extensive anthropogenic impacts in upstream watersheds result in overlapping ranges of habitation of wildlife and domesticated animals, making it increasingly difficult to distinguish the *E. coli* impacts of wildlife to waters within the watershed from similar impacts of animals associated with human activity, *i.e.*, livestock and pets. This is true in both the St. Marys and St. Joseph River watersheds, where upstream land use is primarily rural agricultural. However, in both watersheds, there are wildlife corridors providing access to the rivers, and the forested fringe shrouding most of the rivers' lengths provides wildlife habitat until the rivers reach the urbanized areas of the City. While there may be sophisticated scientific investigative methods available to identify and distinguish *E. coli* of wildlife origin from *E. coli* deriving from domesticated animals, such methods would be of little practical import.

While it is not practicable to separate *E. coli* impacts of wildlife to the St. Marys River and St. Joseph River from similar impacts of livestock and pets, it is beyond argument that such natural impacts exist in both watersheds. The practical inseparability of the bacterial impacts of wildlife and domesticated animals should be no bar to the recognition of the wildlife contributions of *E. coli* as a naturally occurring pollutant impact on the bacterial quality of the St. Marys River and St. Joseph River.

5.3 Factor 2: Intermittent High Flow Conditions

Factor 2 posits consideration of "natural, ephemeral, intermittent, or low-flow conditions or water levels [that] prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met." This factor recognizes that flow conditions can preclude recreational use in a river or stream, independent of water quality conditions. In

[48] "Total Maximum Daily Load For *E. coli* Impairment in the St. Marys River Watershed and Maumee River Adams and Allen Counties," 2006, IDEM Office of Water Quality, p. 9.
[49] Although there are smaller municipalities with combined sewer systems in the St. Joseph and St. Marys River watersheds upstream of the City of Fort Wayne, there are excessive levels of *E. coli* even upstream of the smaller municipalities for which wildlife, as well as domesticated animals, are probable sources. See: *St. Marys TMDL*, Attachment A; and St. Joseph River Watershed TMDLs (Draft), Appendix F, Table F-6.

Fort Wayne's case, the conditions of interest are the intermittently high flow conditions that accompany large storm events exceeding the LTCP level of control contemplated by the LTCP for a typical year. Factor 2 is directly applicable to the City's CSO-Impacted Waters under these high flow conditions, due to flow, depth, and/or velocity making the rivers and streams unsafe for recreational use. This conclusion is supported by a combination of historical evidence and future projections, as follows:

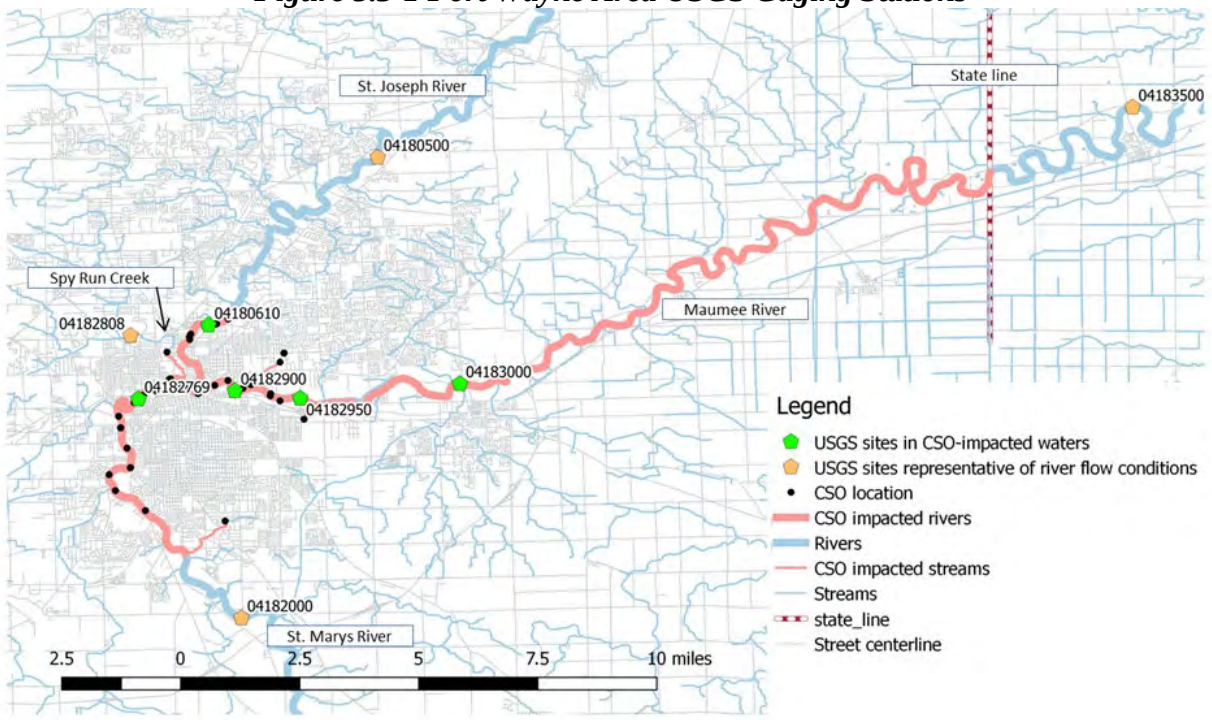
- First, USGS records from the past 5 to 30 years document that field staff have historically chosen not to enter the City's CSO-Impacted Waters under similar high flow conditions, typically for safety reasons.
- Second, projections from the City's calibrated model show that flow conditions during post-LTCP CSO activation events will exceed USGS safety guidelines.

5.3.1 Background on USGS Field Program and Safety Guidelines

The USGS conducts a regular field measurement program in support of their network of river gaging sites. In particular, each site is visited approximately once per month to manually measure and record flow depth and flow velocity in order to maintain calibration of the stage-discharge relationship at the site. As part of each measurement, local staff record whether they collect the data by wading into the river (preferred due to increased accuracy), or collect the data using a non-wading method (typically from a bridge location). The decision to wade versus not wading is typically made based on safety considerations, at least at locations where wading is a regular option.

The USGS maintains 9 active gaging stations in the Fort Wayne area that are within or proximate to the City's CSO-Impacted Waters, as shown in Figure 5.3-1. Five of these sites are within the impacted waters, and four of the sites are in relevant locations upstream or downstream of the impacted waters.

Figure 5.3-1 Fort Wayne Area USGS Gaging Stations



In support of their field programs, the USGS has also developed an objective criterion for determining when wading can be considered safe in a stream. The USGS wading criterion holds that wading is unsafe when a stream's depth multiplied by its velocity meets or exceeds 10 ft^2/s[50]. This metric, known as the safety factor, recognizes that no single measure is an absolute indicator of risk; rather, a combination of depth and velocity (and associated flow) needs to be considered to assess potentially unsafe river conditions.

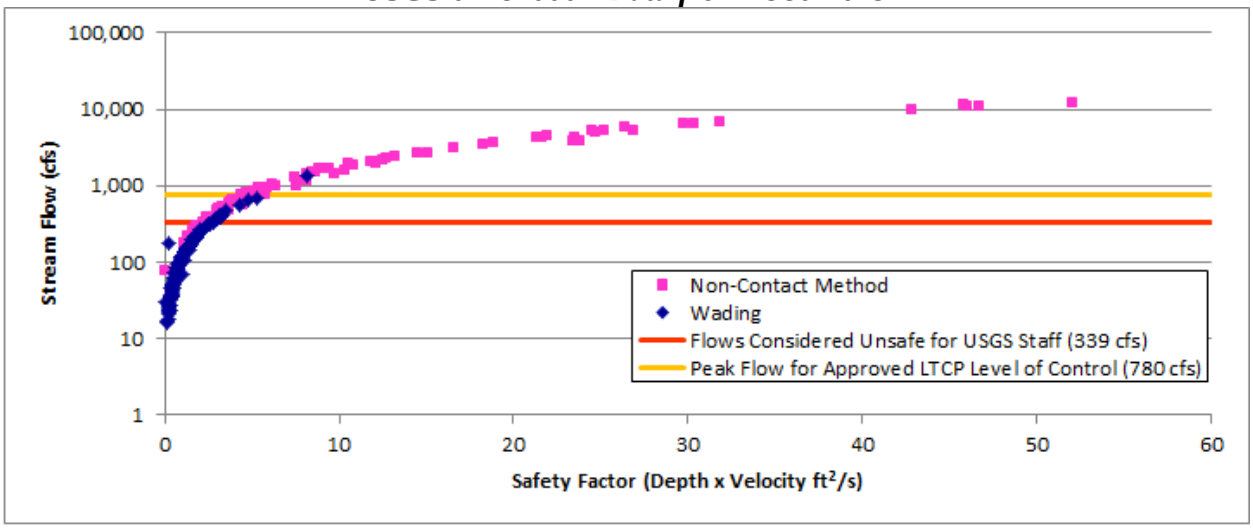
5.3.2 Reviewing Historical Safety Decisions by USGS Field Staff

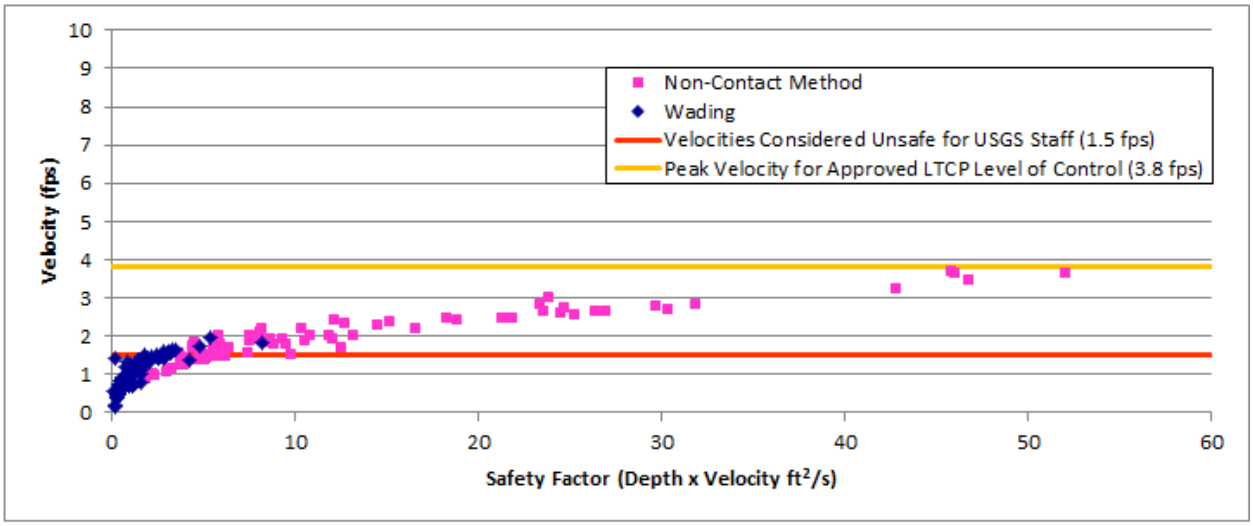
As noted above, every field visit to a USGS site results in a data record representing conditions on a given day that includes documentation of whether the river was accessed via wading or by a non-wading method. These data records were retrieved from the USGS website[51] for every gaging station shown in Figure 5.3-1. Substantial wading data are available for 7 of the 9 USGS gaging stations. This information was used to develop Figures 5.3-2 through 5.3-8 below, which present measured flow, velocity, and depth data at each site, along with the value considered unsafe for USGS staff and the projected peak value during smaller post-LTCP activation events under the approved LTCP. The data are plotted against the USGS safety factor (depth x velocity) in order to provide a consistent comparison across metrics and across sites.

[50] "National Field Manual for the Collection of Water-Quality Data," compiled 2015, United States Geological Survey, Chapter A9 p. 22
[51] https://waterdata.usgs.gov/

Of particular note on these figures is the value considered unsafe for USGS staff. This value has been developed based on the documented decision by USGS staff to wade, or not to wade, on a given data collection day, and can be considered the local threshold deemed unsafe by the USGS for entering the river at each site. As the figures illustrate, these local safety thresholds are always exceeded by projected conditions during post-LTCP activation events, at every USGS site – from upstream of the impacted waters, through the impacted waters, to downstream of the impacted waters. Data and comparisons from these figures are also summarized in Table 5.3-1, following the figures.

Figure 5.3-2 USGS Field Measurements St. Marys at Ferguson Road
USGS 04182000 - Data from 1980-2019





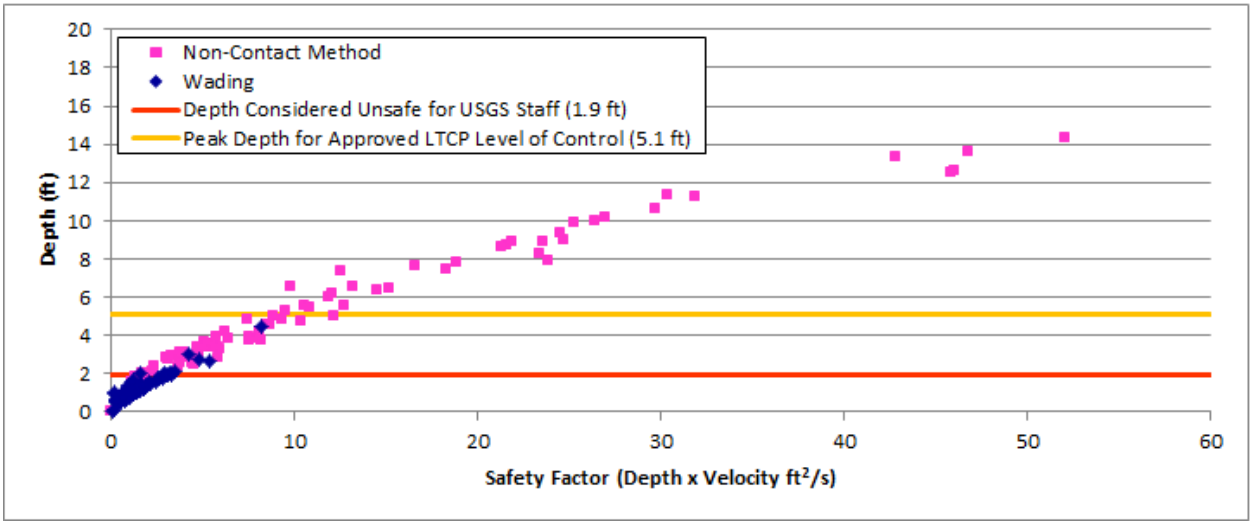
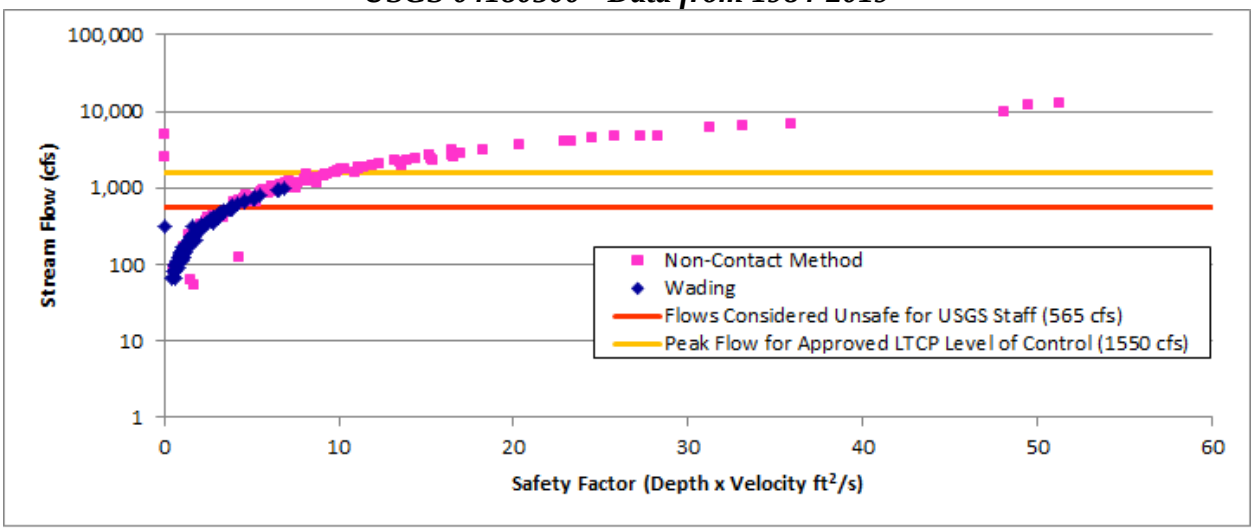
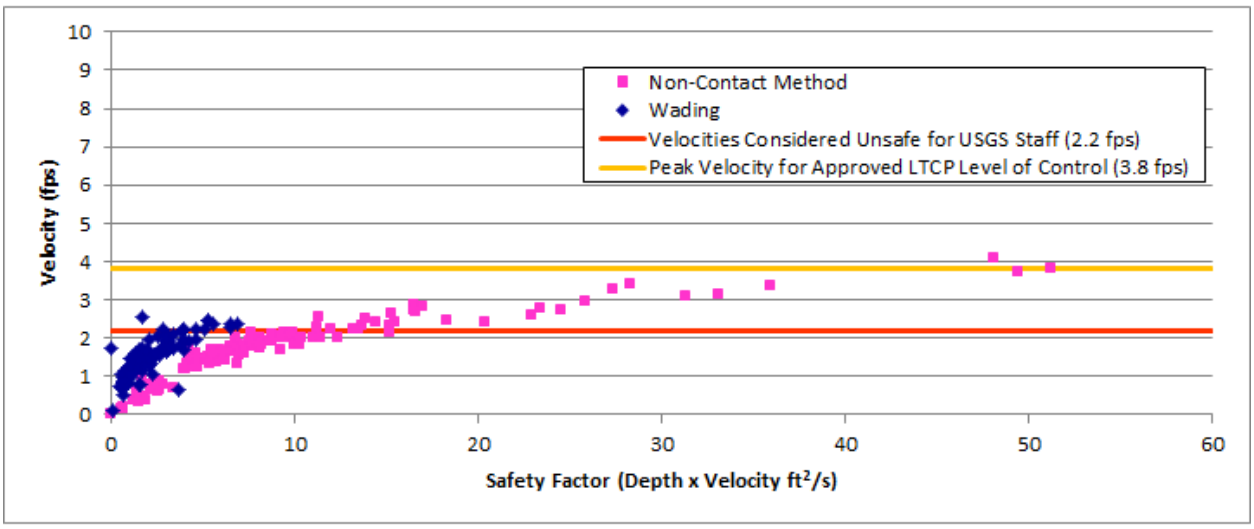


Figure 5.3-3 USGS Field Measurements St. Joe at Mayhew Road
USGS 04180500 - Data from 1984-2019





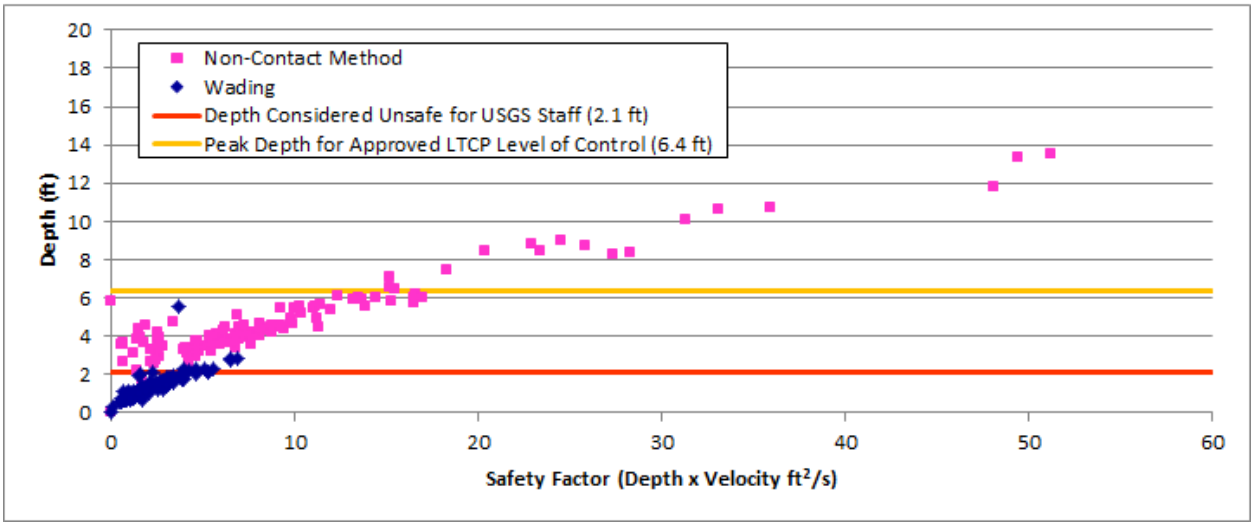
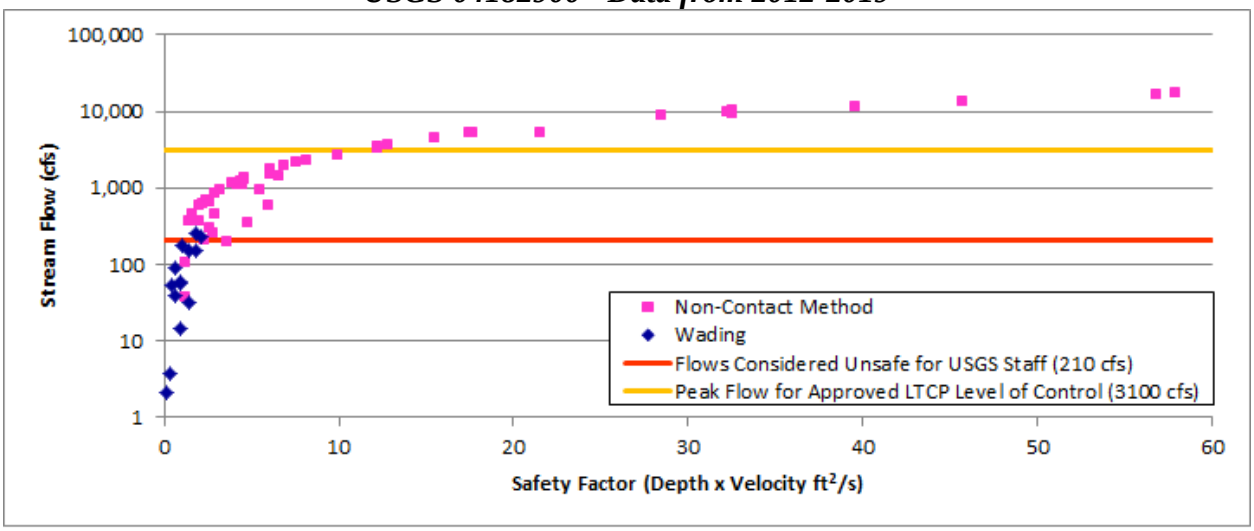
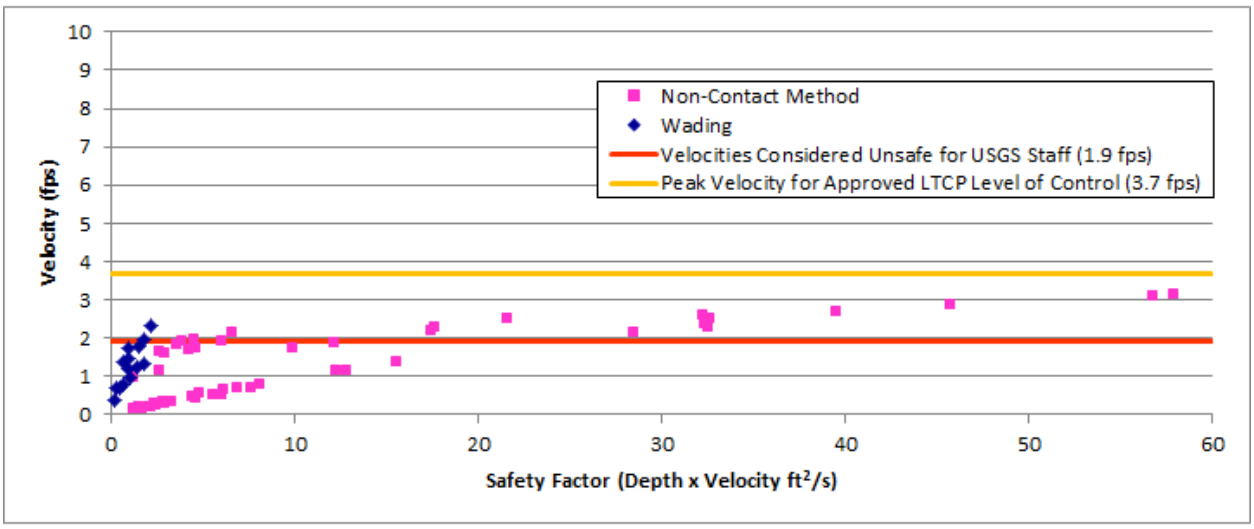


Figure 5.3-4 USGS Field Measurements Maumee at Anthony Boulevard
USGS 04182900 - Data from 2012-2019





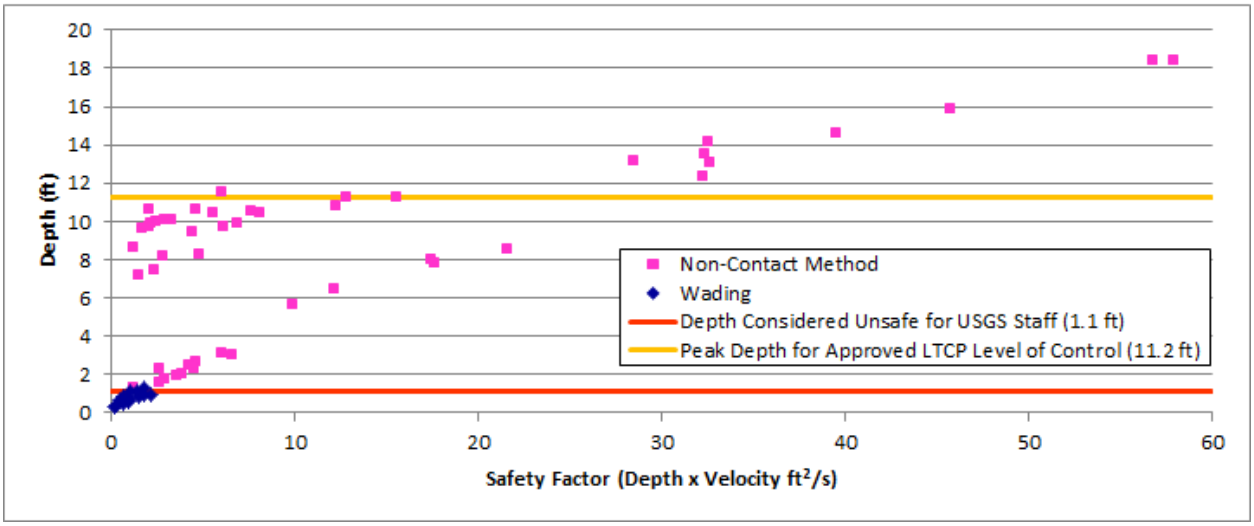
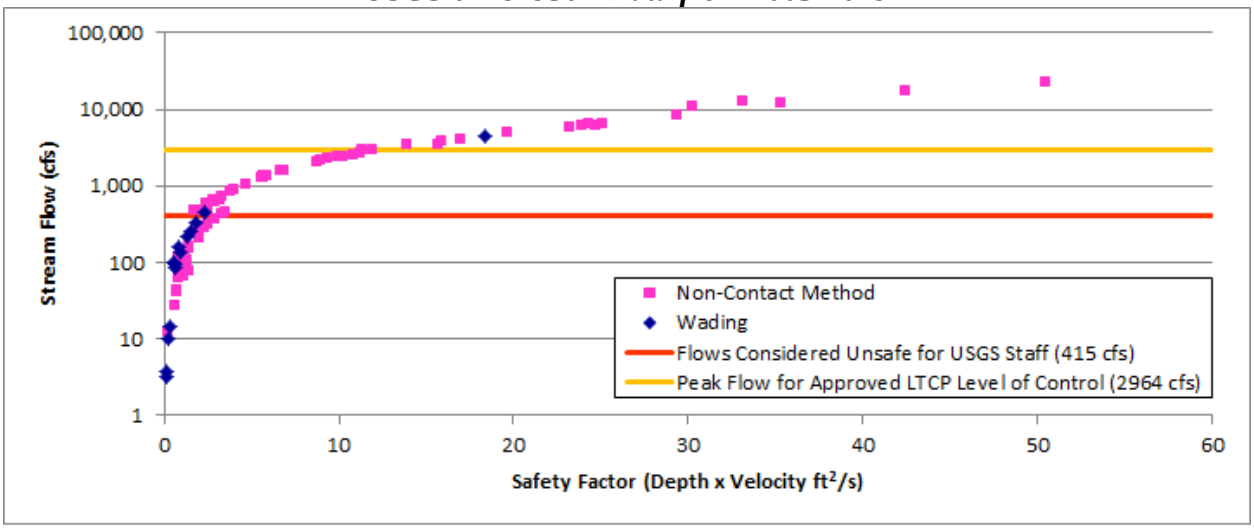
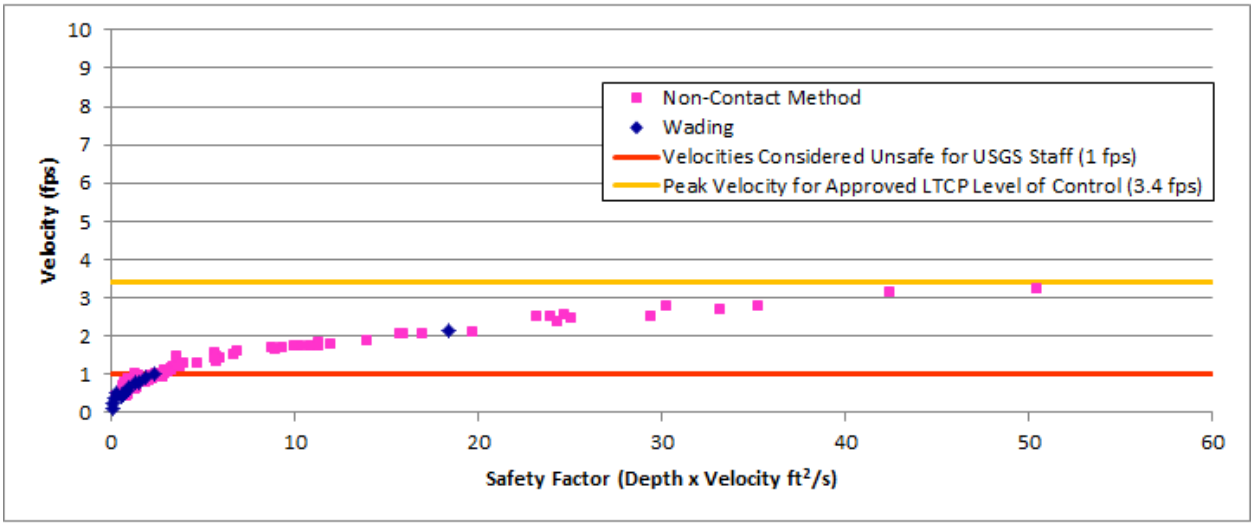


Figure 5.3-5 USGS Field Measurements Maumee at Coliseum Boulevard
USGS 04182950 - Data from 2003-2019





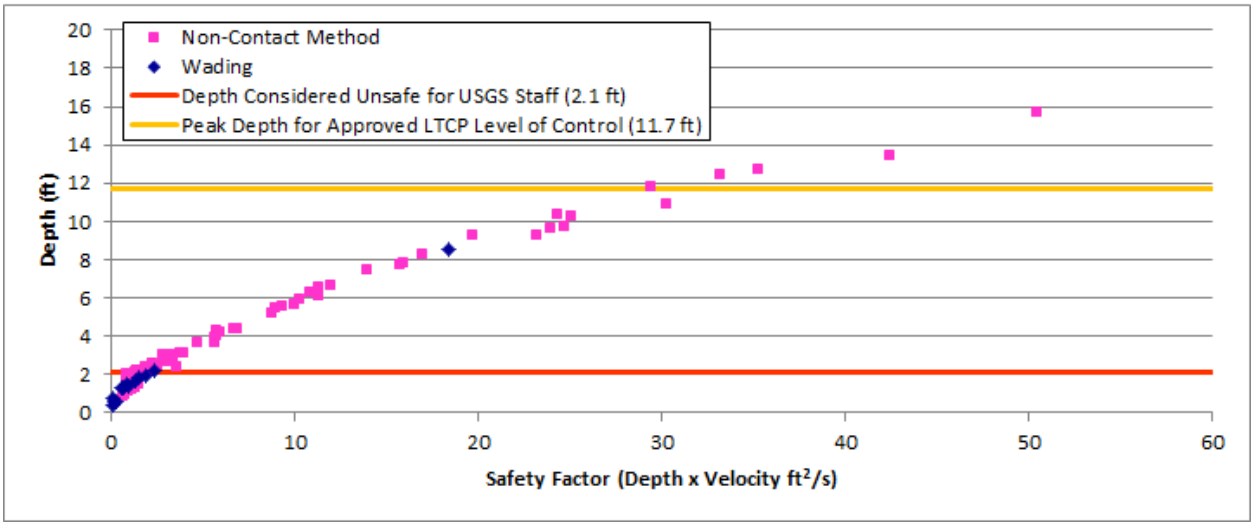
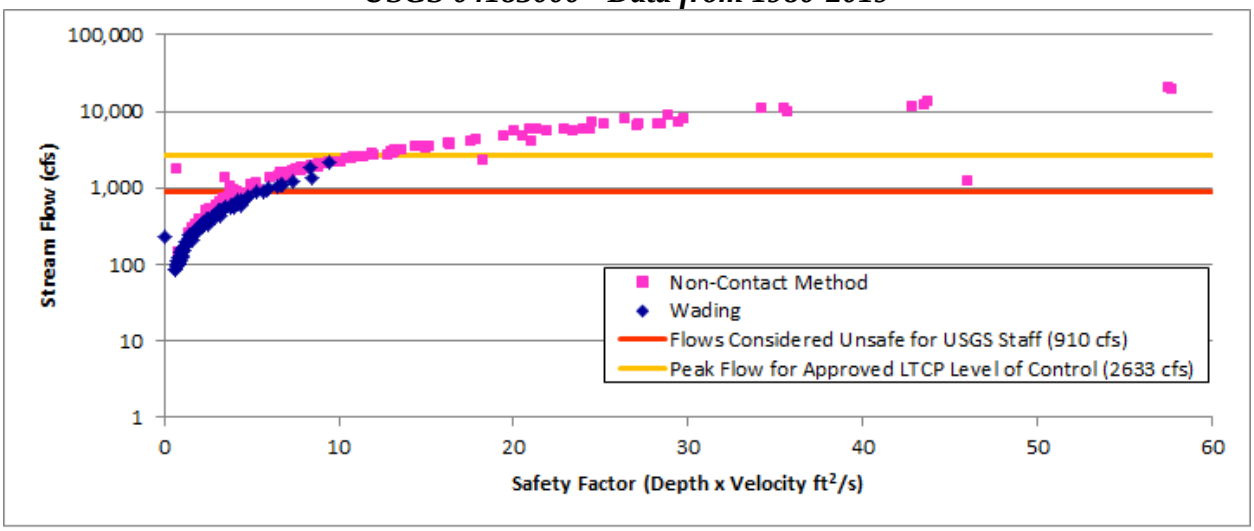
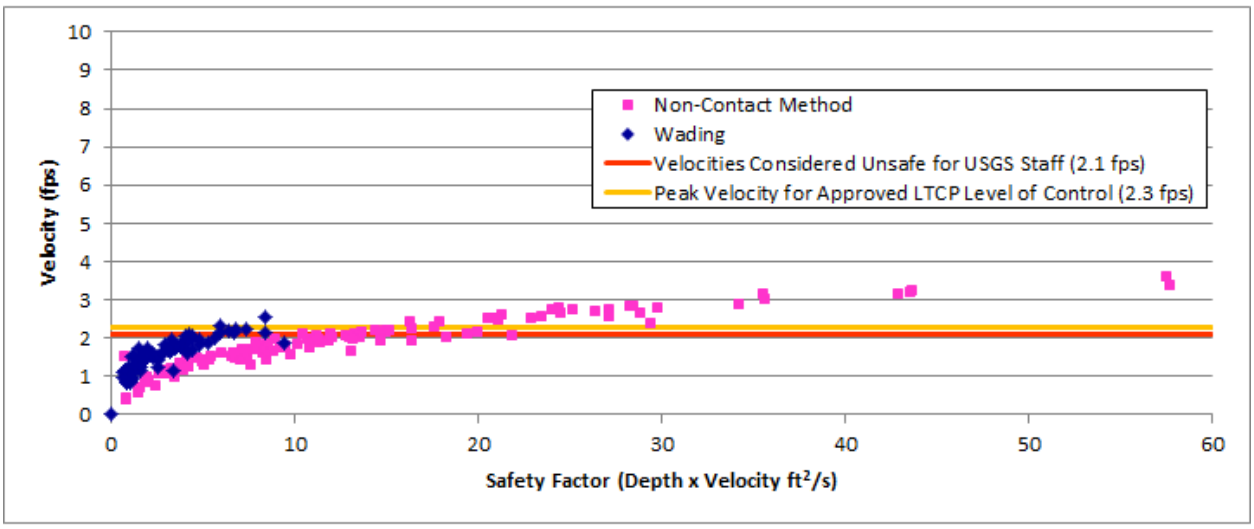


Figure 5.3-6 USGS Field Measurements Maumee at Landin Road
USGS 04183000 - Data from 1980-2019





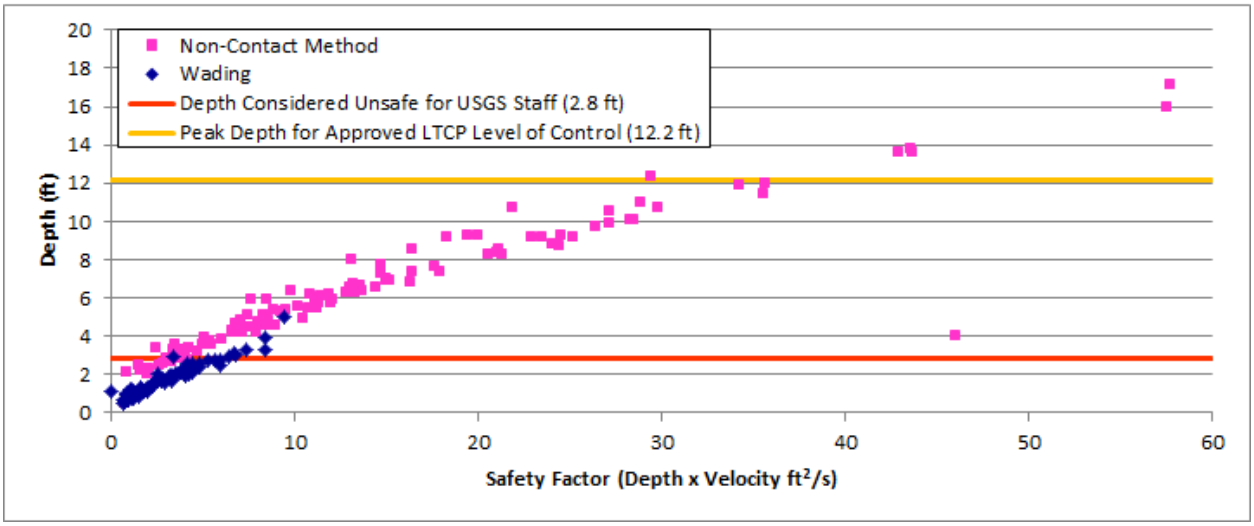
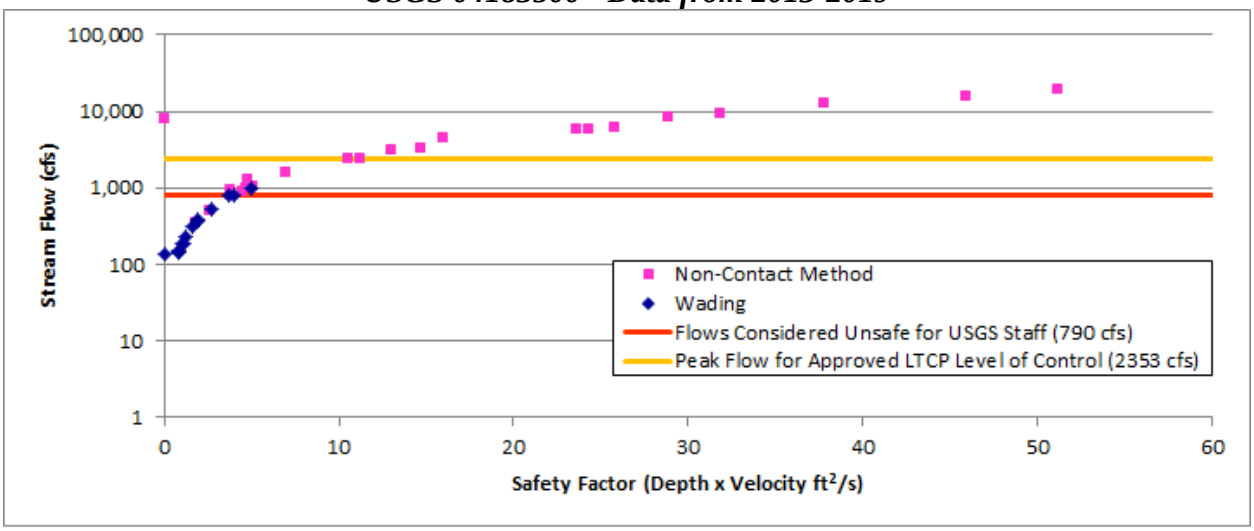
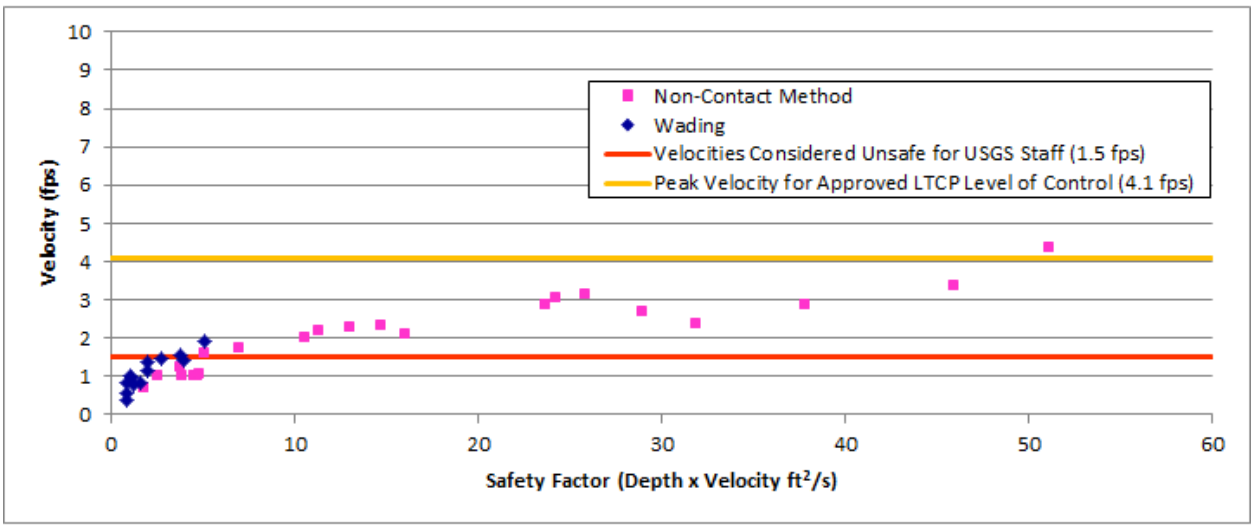


Figure 5.3-7 USGS Field Measurements Maumee at Antwerp Ohio
USGS 04183500 - Data from 2013-2019





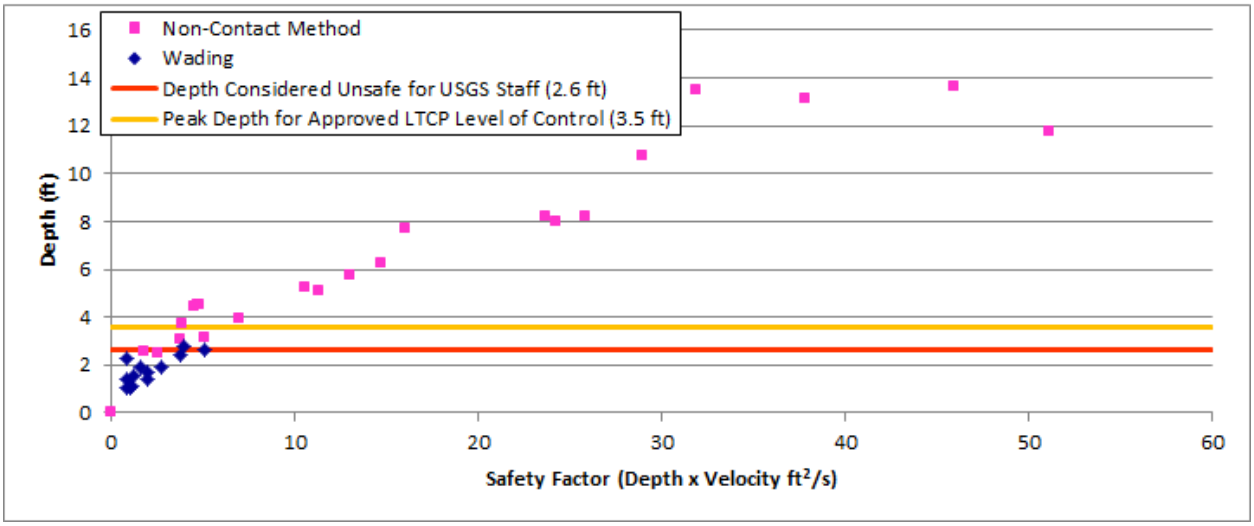
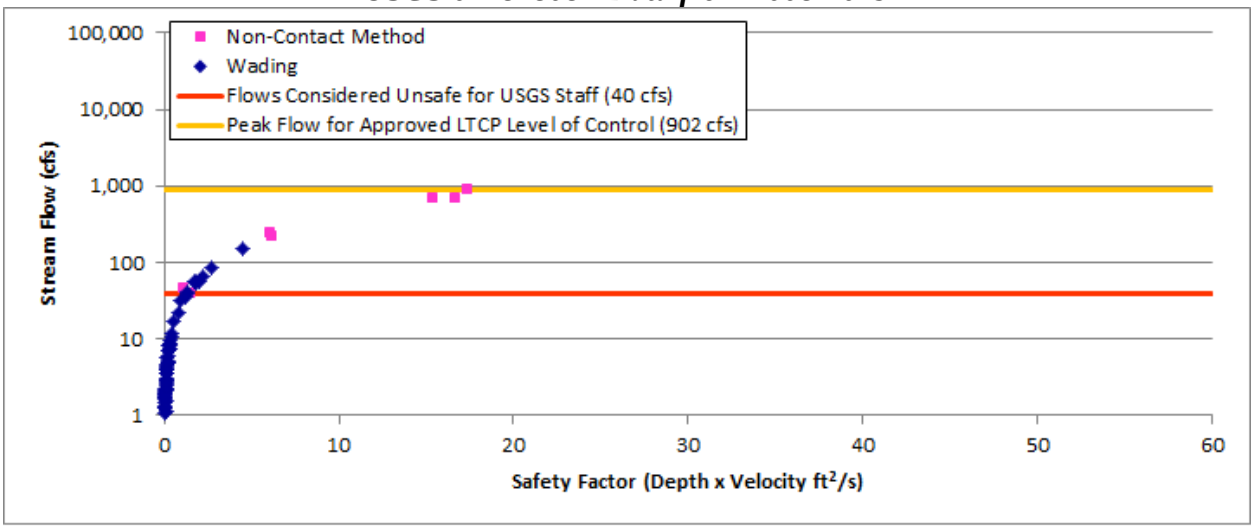
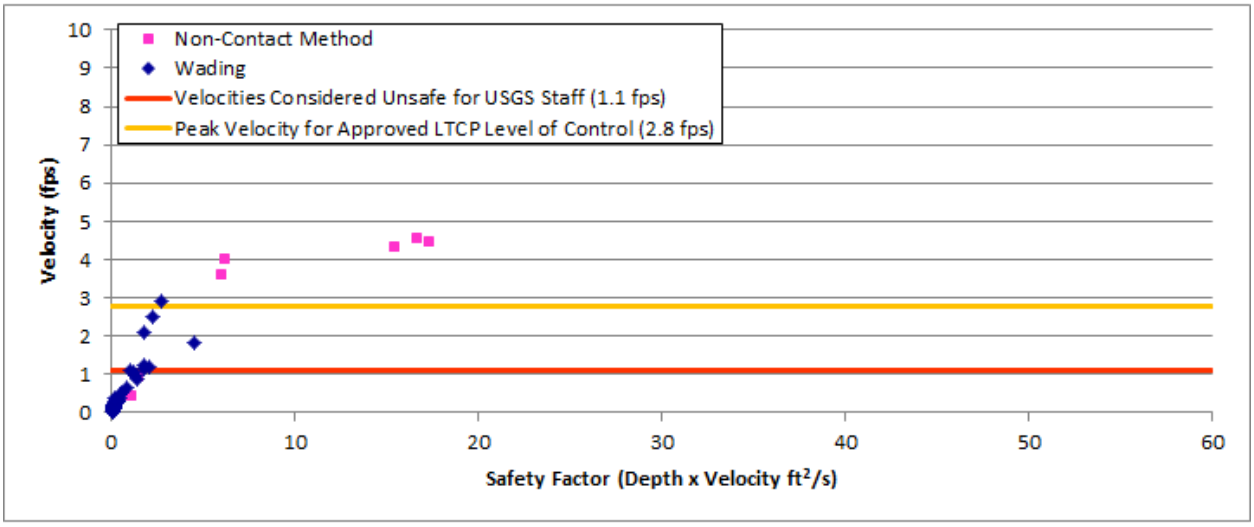


Figure 5.3-8 USGS Field Measurements Spy Run near Park Drive
USGS 04182808 - Data from 2008-2019





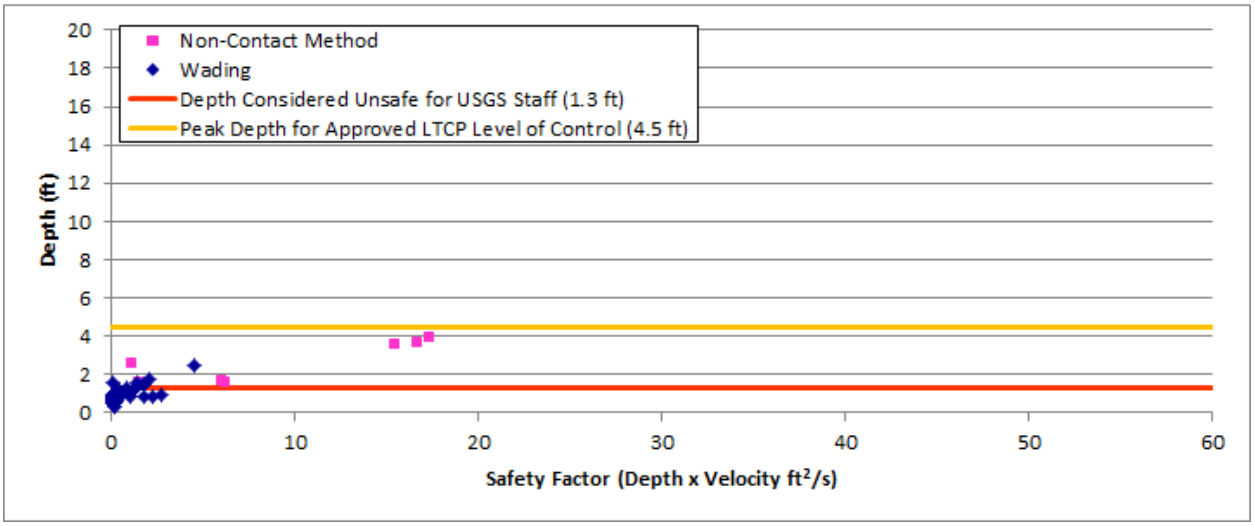


Table 5-3.1 Modeled Instream Peak Flow, Velocity, and Depth During CSO Activations Remaining After LTCP Implementation

Watershed	USGS Site ID	Flows Considered Unsafe for Wading by USGS Staff (cfs)[1]	Peak (Modeled) Stream Flows after LTCP Implementation (cfs)[2]	Velocities Considered Unsafe for Wading by USGS Staff (fps)[1]	Peak (Modeled) Stream Velocities after LTCP Implementation (fps)[3]	Depths Considered Unsafe for Wading by USGS Staff (ft)[1]	Peak (Modeled) Stream Depths after LTCP Implementation (ft)
St. Marys River[4]	04182000	>339	780	>1.5	3.8	>1.9	5.1
St. Joseph River[4]	04180500	>565	1550	>2.2	3.8	>2.1	6.4
Maumee River	04182900	>210	3100	>1.9	3.7	>1.1	11.2
	04182950	>415	2964	>1	3.4	>2.1	11.7
	04183000	>910	2633	>2.1	2.3	>2.8	12.2
	04183500[5]	>790	2353	>1.5	4.1	>2.6	3.5
Spy Run Creek[4]	04182808	>40	902	>1.1	2.8	>1.3	4.5

[1]Flows, velocities, and depths considered unsafe for wading by USGS staff were derived from field measurement data reported by USGS through November 2019 for each gaging station.

[2]Modeled flows, velocities, and depths in this table are based on model predictions of instream conditions during the infrequent CSO activations remaining after LTCP implementation. Specifically, values represent the average of the two lowest instream flow conditions projected during post-LTCP activation events over a 5-year period. Instream conditions during all other activation events will be more severe.

[3]The peak velocity represents the velocity within the stream cross section that will be likely encountered by persons attempting to recreate. The velocity is calculated as the average model-predicted velocity over the cross section multiplied by 2.0 based on natural irregular channel velocity profiles presented in Open Channel Hydraulics (V.T. Chow, 1959). Lower velocities may be found in impoundment areas.

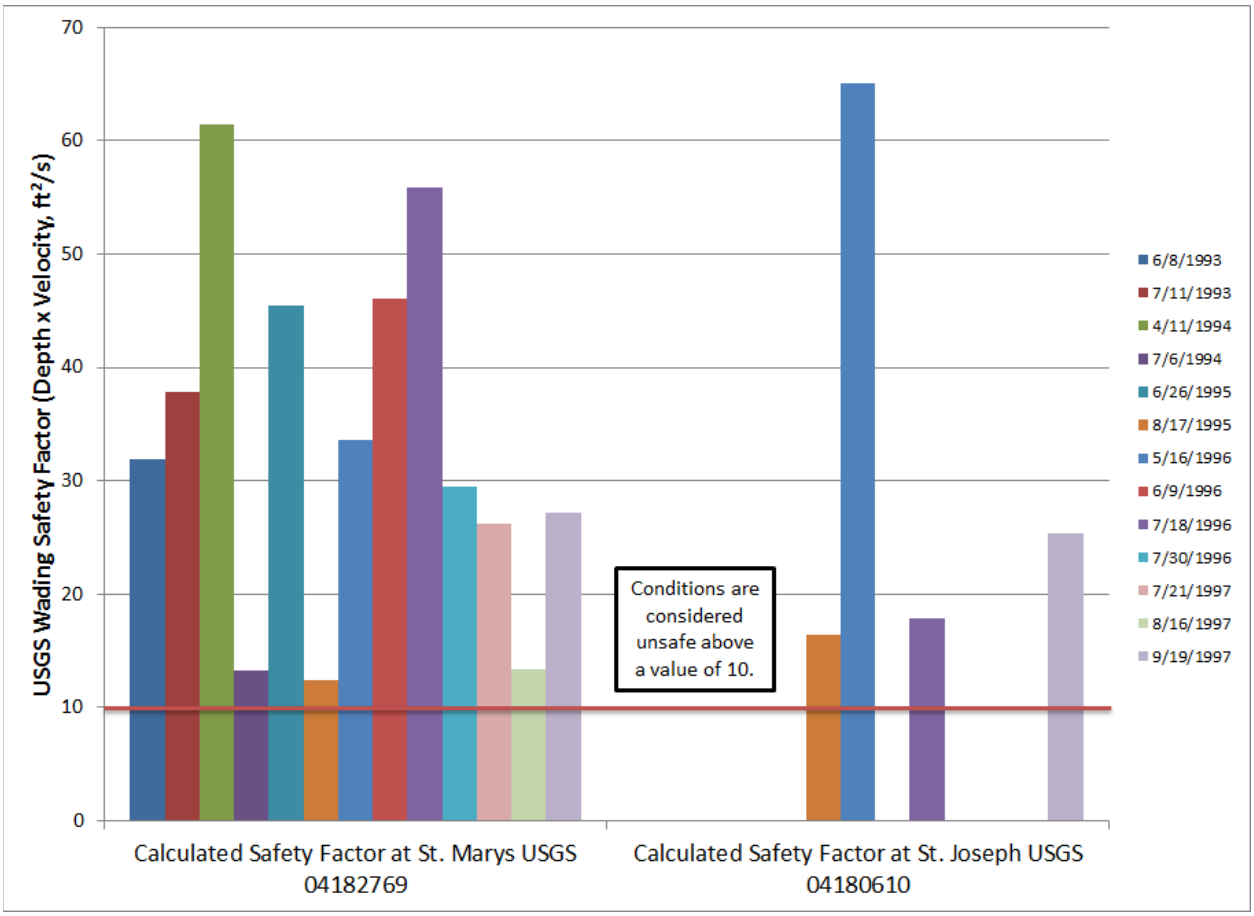
[4]These USGS sites are upstream of the CSO-impacted area on respective rivers/streams; however,they are included as representative of instream flow conditions under extreme events.

[5]This USGS site is downstream of the CSO-impacted area on the Maumee; however,it is included as representative of instream flow conditions under extreme events. This location is particularly important as it confirms that safety concerns will prevent recreational use throughout the CSO-Impacted Waters, i.e. extending to the downstream end at the Ohio border.

5.3.3 Assessing Wading Safety Criterion Using Model Projections

The remaining two USGS gaging stations (04182769, on the lower St. Marys River, and 04180610, on the lower St. Joseph River) are located along river segments with consistently elevated depths and, consequently, entail limited to no USGS wading data. The elevated depths are due to the downstream Hosey Dam on the Maumee River creating a backwater condition (note that the dam is not actively operated, so that while depths are increased, flow rates are not modified). In the absence of USGS wading data, the City used projections from their calibrated model to compare river flow conditions at these two locations during post-LTCP activation events to the USGS wading safety criterion of 10 ft^2/s. As shown in Figure 5.3-9, flows at these two USGS gaging stations also exceed the relevant USGS safety threshold during post-LTCP activation events.

Figure 5.3-9 Projected Safety Factors During Post-LTCP Activation Events at Two USGS Stations Without Wading Data

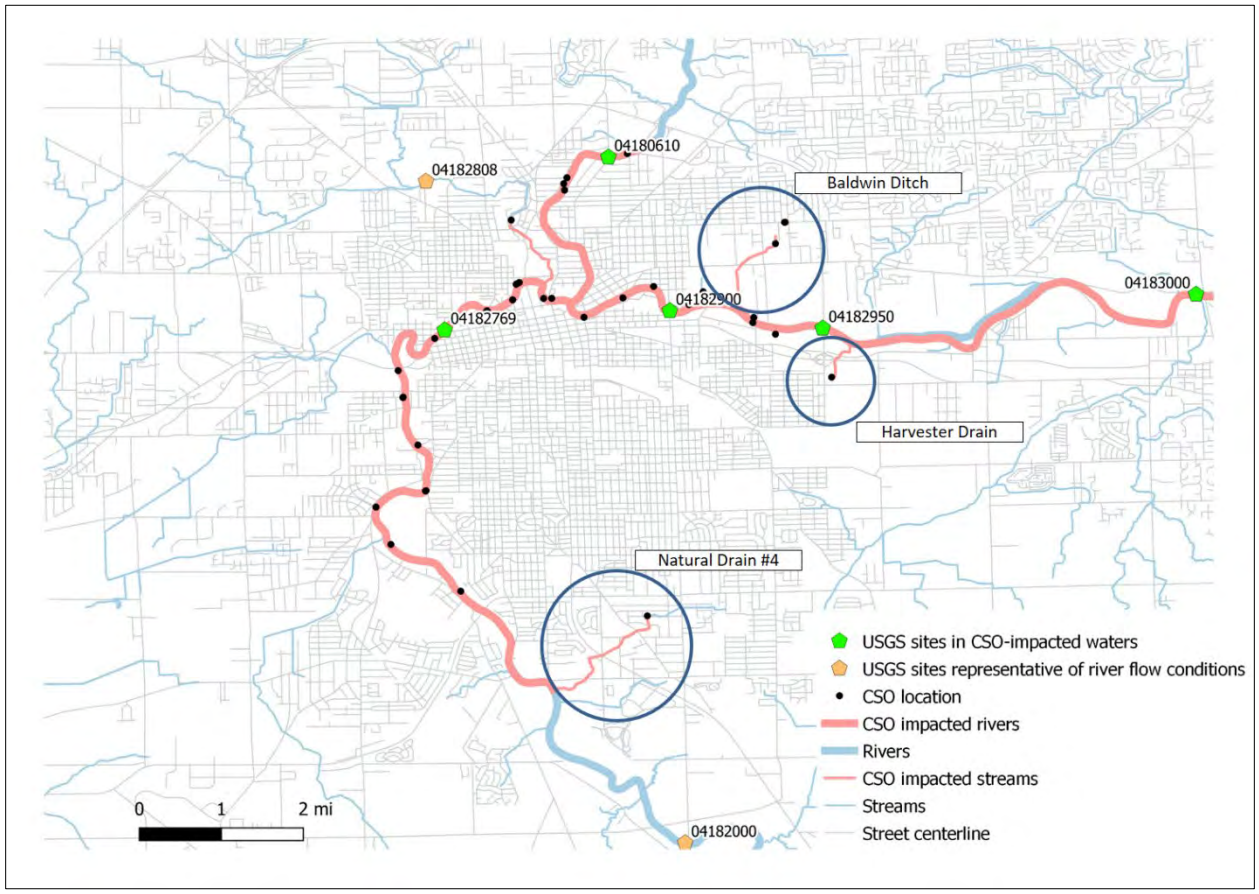


Based on model projections of representative post-LTCP activation events over a 5-year period from 1993-1997. Note that the fewer activations predicted on the St. Joseph River reflect the higher control level for St. Joseph CSOs.

A model-based method can also be used to assess post-LTCP conditions on the three small stream segments included in the City's CSO-Impacted Waters. These stream segments – the

downstream reaches of Natural Drain #4, Baldwin Ditch, and Harvester Drain - are identified on Figure 5.3-10, and as can be seen do not have any USGS gauging stations along their length.

Figure 5.3-10 Location of Three CSO-Impacted Streams



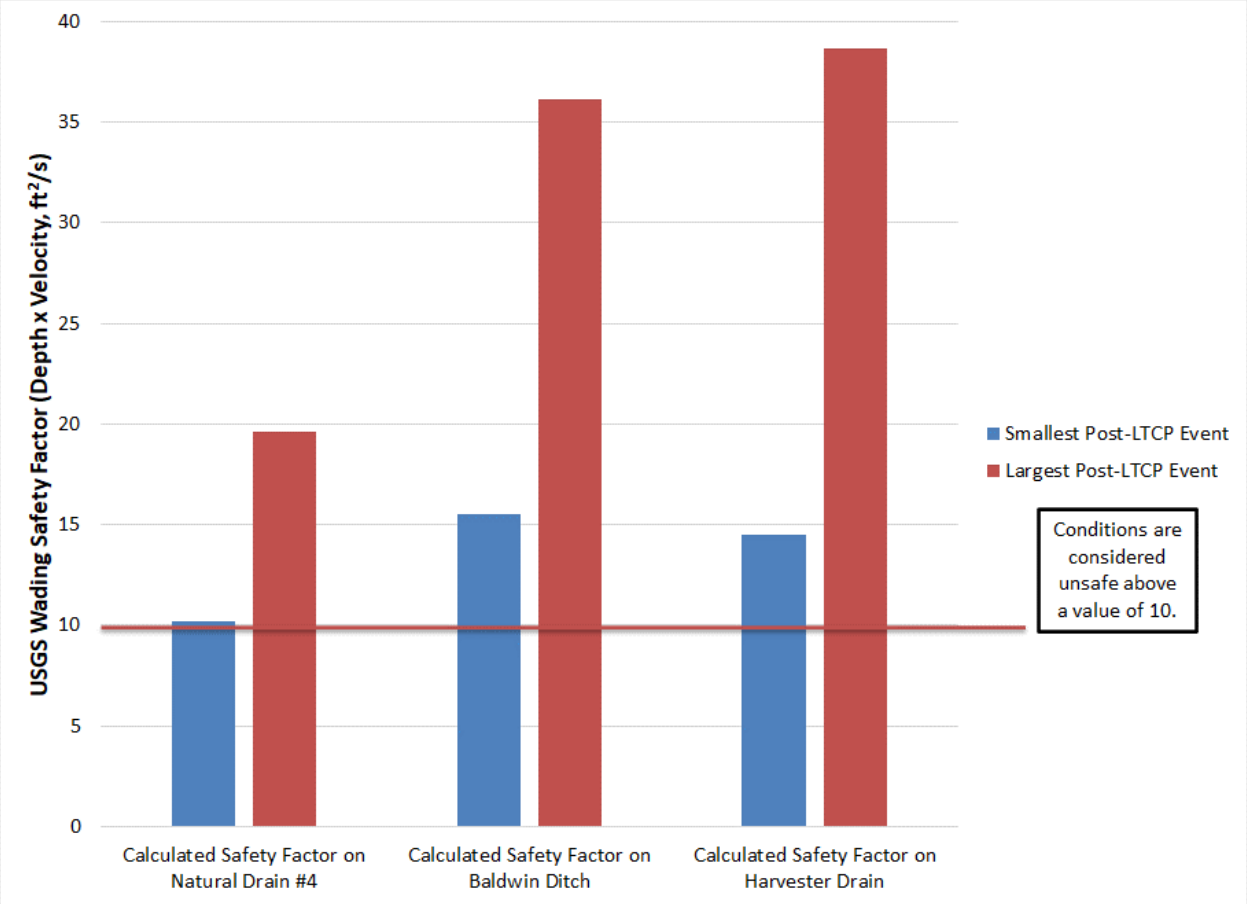
Further, while the flows in these three streams are accounted for in the City's calibrated model as inflow to the rivers, the stream channels themselves are not represented explicitly due to their small size. Therefore, a hybrid approach was used to assess post-LTCP hydraulic conditions on these streams as follows:

- Flow rates for post-LTCP activation events were extracted from the model for each of the three streams.
- A representative cross section and associated channel slope were defined for each stream using a digital elevation model maintained by the City.[52]
- Hydraulic calculations were performed to estimate the depths and velocities associated with the post-LTCP flows.

[52] The City's 2017 digital elevation model was derived from the QL2 (quality level 2) topographic LiDAR dataset under the statewide USGS 3DEP (3D Elevation Program).

The results of these calculations were used to compare flow conditions during post-LTCP activation events to the USGS wading safety criterion of 10 ft^2/s. Specifically, for all three streams, the safety factors for the smallest and largest post-LTCP activation events were estimated to span the range of post-LTCP conditions. As shown in Figure 5.3-11, flows on all three streams also exceed the relevant USGS safety threshold during post-LTCP activation events.

Figure 5.3-11 Projected Safety Factors During Post-LTCP Activation Events on CSO-Impacted Streams



5.4 Factor 3: Human-Caused Conditions or Sources of Pollution

Whether "human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place" is the focus of the third of the 40 CFR §131.10(g) factors. The City posits, as alluded to in the preceding section, that bacterial contamination from the presence of domesticated animals associated with human populations has adversely impacted the quality of the St. Joseph River and the St. Marys River in rural agricultural areas upstream of the City. Further, as discussed below, the City also asserts that the urbanization of Fort Wayne and the immediately surrounding areas constitute such a human-caused condition which leads to increased levels of bacterial

contamination in the CSO-Impacted Waters. Both human-caused conditions are believed to be significant contributing sources of bacterial contamination that routinely exceed applicable standards for full-body recreation, as described above, such that the designated recreational use cannot be attained under wet weather conditions.

5.4.1 Increased Bacterial Pollution from Domesticated Animals Associated with Human Populations.

As discussed in Section 5.2, above, the watersheds of the St. Marys River and St. Joseph River upstream of the City are characterized as consisting, primarily, of rural agricultural land. Notwithstanding the general agricultural character, portions of each watershed, particularly in forested or wooded areas fringing the rivers, serve as habitat for wildlife of various forms. These wildlife are a source of fecal contamination to the river, as described above. But, stemming from the agricultural uses made of the bulk of the watersheds, also present are substantial numbers of livestock, household pets, and other animals that frequent areas of human habitation and activity. Fecal contamination from the presence of these animals is a human-caused condition that contributes to the characteristic inability of the St. Marys River and St. Joseph River to exhibit the quality necessary to support full-body contact recreation. While livestock managed in confined animal feeding operations ("CAFOs") are subject to effluent limitation guidelines under the NPDES program, other livestock, managed in other ways, are not subject to such regulatory control. Grazing livestock and other domesticated animals that wander agricultural land constitute distributed non-point sources of bacterial pollution that, while not practically controllable, do result in contamination of stormwater flowing to the waters of each watershed and ultimately impact both the St. Marys and St. Joseph Rivers.

5.4.2 Increased Bacterial Pollution Caused by Urbanization

Urbanization inherently generates human-caused sources of bacterial pollution which can prevent attainment of water quality necessary for recreational use during significant wet weather events. These human-caused conditions include the density of human population, the presence of numerous pets and other animals associated with human population (including feral cats, geese, pigeons, and other avian species, squirrels, raccoons, mice, and rats), the high percentage of impervious surfaces in the urban landscape, and the draining of storm runoff from the impervious areas with storm sewer or combined sewer systems. As a result of these conditions, a substantially higher fraction of precipitation becomes runoff than is typical for rural areas and a higher percentage of that runoff is conveyed to waters draining the urban area. Not only does a much higher fraction of precipitation run off the urban lands but the runoff occurs with much greater rapidity than occurs in a rural area, resulting in larger short-term volumes of runoff.

As noted in Section 4.1.2.3 above, upstream contamination of both the St. Marys and St. Joseph River is regularly present to such a degree that it prevents the water quality of either river from meeting recreational water quality criteria, both upstream of and internal to the CSO-impacted zones. The contaminant levels shown in Figures 4.1-6 and 4.1-7, which regularly exceed water quality criteria for full-body contact recreational use, most likely reflect bacterial contamination from both natural sources (wildlife) and human-caused sources (livestock and domesticated

animals, among others) from both upstream rural areas and newer urban areas served by separate storm sewers.

5.4.3 Inability to Remedy Human-Caused Bacterial Contamination

Before the City can rely upon the human-caused condition factor of 40 CFR 131.10(g) to support removal of the recreational use designation during periods of CSO impacts that remain after implementation of CSO controls, it must consider a) whether it is feasible to remedy those conditions; or b) if feasible, whether remedying those conditions would cause more environmental damage than exists with those conditions in place. Given the nature of the sources of bacterial contamination as described in previous sections, the City posits that it is infeasible to remedy the human-caused conditions. It is inconceivable that anyone would suggest that farm livestock or family pets will disappear from the watersheds for the St. Joseph River or St. Marys River in the foreseeable future. Nor would anyone seriously suggest that urbanization will be reversed. Consequently, the only potentially feasible approaches to remedying these human-caused sources of bacterial contamination involve the implementation of management practices or actual controls on bacterial contamination that may mitigate the effects of these sources.

Potential management practices to limit the volume and, in particular, mitigate the bacterial content of rural and urban stormwater have significant practical limitations that severely restrict their effectiveness and create obstacles to their widespread implementation.

In rural areas, the use of agricultural Best Management Practices (BMPs) is widely recommended and already an accepted practice for many Midwestern farmers. Specific to bacteria control, agricultural BMPs such as conservation buffers, grazing management, and erosion and sediment control can have a positive effect. However, given the spatial extent of the sources, i.e. throughout the entire watersheds of the St. Marys and St. Joseph Rivers, it is impracticable to adequately control bacterial loads from widely distributed livestock and pets using BMPs. The only guaranteed solution is to change the fundamental land use and remove livestock and pets – which, as noted above, is inconceivable.

For urban areas, the use of certain BMPs, such as periodic street sweeping, provide limited capability for reduction of stormwater contaminants. Also, various green infrastructure technologies, such as those listed below, are emerging as another possible approach for mitigating the negative impacts of urbanization on the quality of area waters from stormwater runoff. These technologies are projected to be helpful in reducing the amount of stormwater runoff (and thus the amount of bacterial contaminants reaching public waters) from urbanized areas.

- Urban trees
- Green roofs
- Green parking lots
- Rain barrels
- Porous pavement
- Rain gardens

While such techniques may make minor reductions in stormwater runoff volumes, industry experience indicates that they do not appear capable of significant reductions in runoff from storms of moderate or more intense rain events. Moreover, their implementation on the broad scale required for appreciable impact would require widespread cooperation by private property owners, which cannot be assumed. Measures like street cleaning or "sweeping" cannot be done with sufficient frequency to make significant removal of animal fecal material prior to all storm events, and, in any event, the streets represent only a small fraction of the urban area on which such contamination may exist.

Modeling by the City indicates that approximately 75% of *E. coli* from fecal contamination of stormwater conveyed by the separate storm sewers within the City would need to be eliminated, in addition to eliminating upstream contamination of the St. Joseph River and St. Marys River in order to have a chance of meeting State bacterial standards for recreational use. The City believes that eliminating upstream contamination is impossible, for the reasons explained above, and that eliminating 75% of *E. coli* from separate storm sewers would require such a level of effort and cost as to make such a goal impossibly lofty and unattainable for the foreseeable future.

Nonetheless, the City will continue to investigate best practices for managing stormwater runoff within the urban area that may be effective in reducing the adverse effects of stormwater on bacterial quality of its waters, including any measures or practices and quantifiable results shared by other cities' stormwater management programs, and will seek to adopt any proven, workable best management practices. Also, the City will continue to encourage voluntary stormwater management practices through education, public information releases and other methods.

In conclusion, the full-body contact recreational use cannot be attained in the CSO-Impacted Waters due to: (i) the upstream bacterial contamination of the St. Joseph River and St. Marys River from livestock and pets; and (ii) the effects of urbanization, specifically, increased flows and increased *E. coli* bacteria pollution from domesticated animals and other urban sources in nonpoint storm runoff or in storm runoff discharged from the City's separate storm sewer system. It is neither feasible nor affordable to remedy or sufficiently mitigate these effects.

5.5 Factor 6: Substantial and Widespread Economic and Social Impact

The sixth factor described by 40 CFR 131.10(g) as a potential basis for the infeasibility of attaining a designated use in a particular waterbody is that:

- Controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

The City of Fort Wayne posits that, when the application of Indiana's designated use for full-body contact recreation to the City's CSO impacted waters is evaluated under this factor, a conclusion clearly emerges that it is not feasible to attain this designated use under all wet weather conditions which may occur. Furthermore, the analysis demonstrates that the extent of CSO controls specified in the City's LTCP defines the limit of feasible water quality improvements under this factor (i.e., the highest attainable use). As a result, the City proposes that a revision of this full-body contact recreational designated use is warranted to relieve the City from the obligation to

attain the designated use and associated bacterial standards in these waters under those wet weather conditions where attainment is infeasible. The following subsections explain the rationale for this position.

Before moving to a consideration of the specifics of the City's position, a preliminary observation is made concerning the scope of the sixth factor of 40 CFR 131.10(g). The reference to "controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act" has been consistently interpreted to mean controls more stringent than the technology-based requirements of the CWA. Any additional controls beyond the minimum technology-based requirements that would be needed to meet water quality-based requirements under the CWA are subject to evaluation under the sixth factor. The EPA's CSO Control Policy and other guidance identifies the Nine Minimum Controls as the minimum technology-based requirements of the CWA with respect to CSOs.[53]

5.5.1 Substantial Economic and Social Impact

5.5.1.1 Background

The first step in determining whether a revision of Indiana's water quality standards relating to wet weather recreation on the City's CSO-Impacted Waters is warranted under the sixth factor of 40 CFR 131.10(g) is to assess whether implementation of the CSO control measures needed to comply with the existing water quality standards under such conditions would result in a substantial economic and social impact on the City Wastewater Utility's ratepayers. Fort Wayne's demonstration of this threshold fact is presented in section 5.5.1.2.1, below. Before setting out that analysis, however, a brief review of relevant EPA guidance on this topic is provided.

Evaluation of potential substantial economic and social impacts associated with the City's implementation of CSO control measures is informed generally by EPA's guidance for applying the sixth factor of 40 CFR 131.10(g) – the March 1995 Interim Economic Guidance for Water Quality Standards ("*Interim Economic Guidance*").[54] Although this guidance was developed for a much broader purpose of guiding determinations on proposed water quality standard revisions of all types, including standards for aquatic life habitat as well as those for water-based recreation, and for water quality impacts by industrial discharges as well as municipal discharges, the EPA continues to rely upon this document for general guidance in the more narrow context of prospective water quality standard revisions relating to municipal CSO impacts.[55] Much of the discussion of this section will follow the general framework of the *Interim Economic Guidance*.

EPA has also developed guidance for municipalities in preparing financial capability analyses for use in scheduling the implementation of LTCPs. This document is entitled *Combined Sewer Overflows - Guidance for Financial Capability Assessment and Schedule Development*,[56] referred to hereinafter as the EPA's "*Financial Capability Guidance*." Comparison of EPA's *Interim*

[53] See *Coordinating CSO LTCPs and WQS Reviews, supra*, p. 9, Sec. II.1.B.
[54] EPA-823-B-95-002, U.S.EPA (March 1995). The basis of regulatory relief is described on Page 3 of this guidance that attaining a designated use would result in substantial and widespread economic and social impacts.
[55] See *Coordinating CSO LTCPs and WQS Reviews, supra*, App. IV, p. A-13.
[56] U.S. EPA (February 1997).

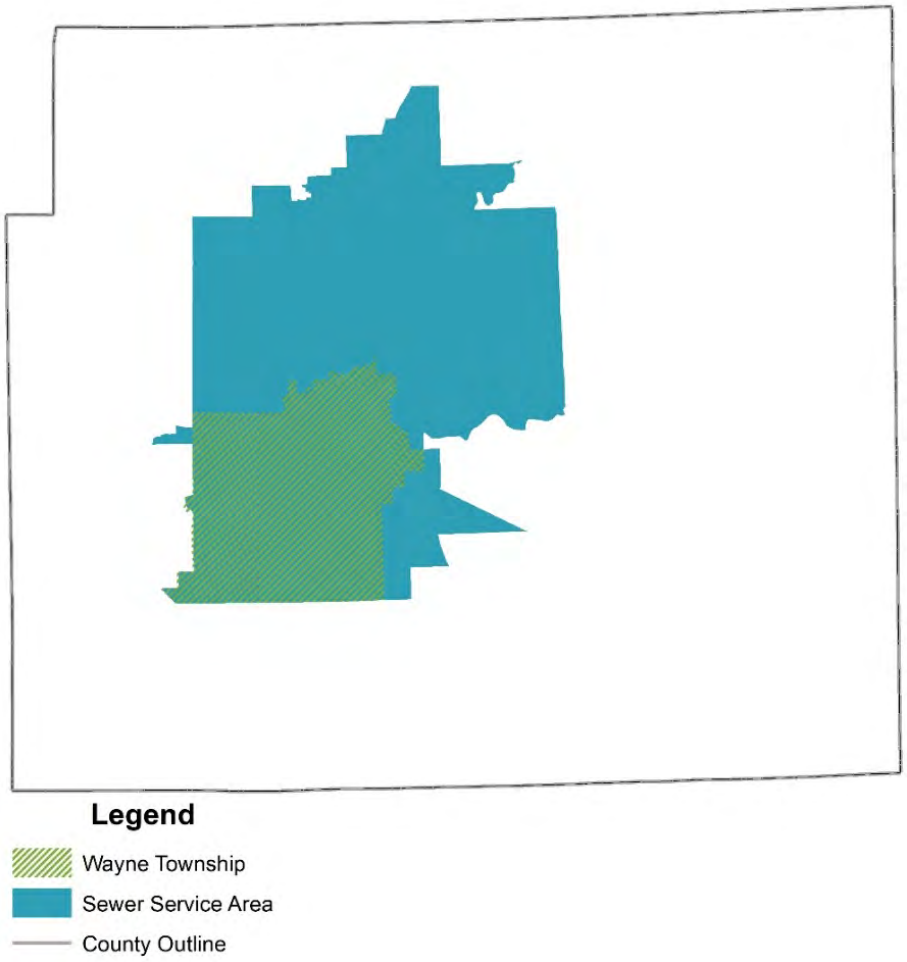
Economic Guidance with the agency's *Financial Capability Guidance* shows that the *Financial Capability Guidance* is essentially equivalent to that portion of the *Interim Economic Guidance* addressing whether attainment of a designated use would cause a "substantial economic and social impact". For this reason, the substantial economic and social impact analysis provided under this Updated UAA will be described following the *Interim Economic Guidance* and be compared to the City's Financial Capability Analysis which was prepared as a part of its LTCP and is generally consistent with EPA's *Financial Capability Guidance*. Section 3.5 of the City's LTCP contains the original financial capability analysis ("FCA") for the LTCP.[57] Comparisons to and updates to the original FCA information are described in Appendix L.

5.5.1.1.1 Median Household Income

An MHI value of $48,039 for the sewer service area, hereafter referred to as the City, is employed in the financial model for this Updated UAA. This sewer service area is shown in Figure 5.5-1, and the associated MHI value is derived from the 2017 American Community Survey (ACS) 5-Year Estimates, which generates such financial data in years other than census years. A second relevant MHI value of $35,881 was used to calculate the MPS for Wayne Township, also shown in Figure 5.5-1. The Wayne Township MHI reflects an economically disadvantaged segment of the Fort Wayne community and comes from the 2017 American Community Survey (ACS) 1-Year Estimates. The financial model currently used by the City does not provide forecasting of MHI values for future years.

[57]The City's financial capability – or affordability – analysis was prepared in collaboration with the Community Research Institute (CRI) at Indiana University – Purdue University, Fort Wayne, Indiana.

Figure 5.5-1 Map Depicting Sewer Service Area and Wayne Township within Allen County



5.5.1.2 Municipal Preliminary Screener

A key indicator in the substantial economic impact analysis, also commonly referred to as the affordability analysis, is the ratio, shown as a percentage, of cost per household of the selected LTCP controls and other wastewater collection and treatment activities to median household income. This indicator is referred to in the *Interim Economic Guidance* as the "Municipal Preliminary Screener" ("MPS").[58]

The MPS is used principally, according to the Interim Economic Guidance, to quickly identify those municipal projects that are clearly not expected to cause a substantial economic impact. Under the Interim Economic Guidance, an MPS value of 1.0 % or less is considered to represent a low or little economic impact and to pose virtually no likelihood of presenting a substantial economic impact. For such projects the analysis is terminated; hence the indicator is referred to as a "screening" indicator since it is used to identify and screen out projects with low economic impact.

[58] In the Financial Capability Guidance, this factor is referred to as the "Residential Indicator".

5.5.1.2.1 Municipal Preliminary Screener Value for CSO Compliance with Existing Water Quality Standards

A threshold question under the analysis of the sixth UAA factor is whether controlling the City's CSO discharges to comply with existing water quality standards for recreational use is feasible, or affordable. As explained earlier in this document, the manner in which Indiana NPDES regulations apply the bacteriological criteria for recreational use directly as end-of-pipe limits so that no mixing zone is allowed[59] results in essentially every untreated CSO discharge triggering an exceedance of the recreation-based water quality criteria for *E. coli.* Therefore, full compliance with existing WQS would be achieved only by a level of control that allowed no CSO discharges to occur without adequate treatment or other control for even the most severe storms. This level of control could be approximated, although its costs are underestimated, by a level of control of zero discharges without adequate treatment in a "typical" five-year period (consistent with the typical period approach described in the City's approved Post-Construction Monitoring Plan). A preliminary estimate of the capital costs of this extreme level of control was developed for the original May 2010 UAA submittal. Stated in 2005 dollars, the capital costs were estimated to be a total of $592.4 million.[60] With this Updated UAA, the capital costs for complete capture have been updated to reflect the modified LTCP control measure configuration and more accurate costing (based on more fully-developed projects, and using current industry cost information), resulting in a current estimate of $703.3 million.

The major impact on cost to go from the LTCP scenario to the zero-discharge scenario is associated with upsizing the 3RPORT system. The largest impact is to the tunnel diameter, which goes from the LTCP-required diameter of 16 feet to an estimated 36 feet in diameter to support full CSO control. Table 5.5-1 provides a breakdown of the capital costs of the major components of the CSO control measures projected for the full control scenario as discussed above.[61]

[59] 327 IAC 5-2-11.4(d)(2).

[60] Another approach for achieving full compliance by CSOs with existing WQS would be to completely separate the existing combined sewer system into separate sanitary and storm sewers. The City has developed preliminary capital costs for a complete separation which, when translated to 2005 dollars, total $544 million. This capital cost projection underestimates, though, the total costs of water quality compliance since it does not take into account the fact that a sewer separation would greatly increase the area of the City which contributes storm water to the separate storm sewer system and would consequently be expected to cause a substantial increase in the costs of the City's stormwater management program over current projections or, alternatively, a substantial increase in pollution, including bacterial pollution, conveyed from the separate stormwater sewer system to the area waters currently impacted by CSOs. For these reasons, the analysis for water quality compliance will focus on the level of control representing zero discharges from CSOs in a typical period.

[61] These capital cost projections, which were derived as part of the overall feasibility analysis of the City's LTCP, are considered preliminary cost estimates that would correspond to Class 4 of the Association for the Advancement of Cost Engineering International (AACE). The most accurate estimates in this Class are expected to range from approximately -15% to +20%, while less accurate estimates in this Class could vary from approximately -30% to +50%. See Appendix M for a more complete description of the AACE Classification System for Cost Estimating.

Table 5.5-1 Capital Costs for CSO Control Measures for Complete Capture and Control of CSOs

Program Element	Full Control Costs ($ millions, 2005)
Combined Sewer Capacity Improvements	$33.8
Wet Weather Pond Improvements	51.3
Treatment Plant Improvements	17.4
Remote CSO Relief Sewers, Storage & Floatables	51.8
3RPORT Tunnel & Foster Park Relief Sewers	549.0
Total Cost	**703.3**

(All cost estimates based on 2005 dollar value and Typical Five Year Design Period conditions)

When the capital cost estimate of $703.3 million for the zero overflow level of control is appropriately amortized and its debt service costs combined with estimates of additional O&M costs for the CSO controls, and added to existing wastewater collection and treatment utility costs as well as the amortized capital costs and operating costs for other wastewater and collection system projects that are expected over the years 2008-2025, the total costs of wastewater collection and treatment can be determined.

Considering capital costs alone, the total capital needed by the City of Fort Wayne over the life of the LTCP is estimated at nearly $1.03 billion (2005 dollars) to achieve full control and fulfill other projected wastewater collection and treatment needs. These other needs, collectively referred to as the Wastewater Improvement CIP, include projects from the various master plans that have been prepared for the City, together with other wastewater improvements and maintenance needs. These include unimplemented portions of the various Collection System Master Plans, Plant Facility Master Plans, Asset Management Plans, and other projected capital improvements and maintenance needs at the wastewater treatment plant and in the collection system. Since the costs published in the various master plans were developed at different times, all costs were converted to a common dollar base (2005 dollars). Thus, the total remaining capital need for the Wastewater Improvements CIP is estimated at $326.6.6 million, and the total capital needs projected by the City over the life of the LTCP are summarized in Table 5.5-2.

Table 5.5-2: Total Capital Needed – Full Control

Capital Program	2005 Dollar Value
LTCP (0 events/18 years)	$703.3 million
Wastewater Improvements CIP	326.6 million
Total Cost	**$1,029.9 million**

When the total debt service costs for the overall capital improvement program described above, along with total corresponding O&M costs, are allocated to residential users in the manner

described in Appendix L to develop a cost per household figure and the result is divided by the median household income (MHI) of all households within the sewer service area, again determined as described Appendix L, a Municipal Preliminary Screener ("MPS") value corresponding to compliance with existing water quality standards (WQS) for primary (full-body) contact recreation ("MPS_{WQS}") is obtained as follows:[62]

$$\mathbf{MPS_{WQS} = 2.96\%}$$

Thus, the MPS value corresponding to the projected level of controls needed to comply with existing water quality standards for recreation exceeds 2% of MHI by a wide margin. Under the *Interim Economic Guidance,* such a result is considered to be in the "large" economic impact range and is, preliminarily speaking, indicative of an unreasonable financial burden on the residential ratepayers of the City's sewer utility. Full demonstration of a substantial economic impact is confirmed below in the discussion of the substantial impacts matrix, which combines this high MPS value with the secondary scoring phase of the analysis.

5.5.1.2.2 Municipal Preliminary Screener Value for Proposed CSO LTCP

The preceding section has established that a CSO control program to achieve full compliance with existing recreational WQS would be indicative of a substantial economic impact. While the *Interim Economic Guidance* provides that even a MPS in the large impact range needs further evaluation under the second phase of analysis, the City is first presenting an updated summary of its selected LTCP control costs, given the preliminary indication of unreasonable financial burden for full WQS compliance, before moving to that second phase.

As stated previously, the City's LTCP is designed to reduce uncontrolled CSO discharge events to 4 events per typical year for the St. Mary's River and the Maumee River and to 1 annual event in a typical year for the St. Joseph River. From the City's preliminary engineering analysis, its costs to achieve this level of reduction in uncontrolled CSO discharges will require 2008-2025 capital expenditures of $339.9 million in 2005 dollars ($494.5 million in current dollars) for LTCP controls, and another $326.6 million in 2005 dollars ($471.7 million in current dollars) for the Wastewater Improvement CIP described above. In addition to these capital expenditures (and their amortized debt service), there will also be projected increases in operational costs for the new controls as well as a continuation of existing debt service and operational costs.

The following Table 5.5-3 provides a breakdown of the capital costs for the major components of the CSO control measures delineated in the City's LTCP.

[62] It bears reemphasizing that this MPS value represents costs of compliance with water quality standards for the context of a typical five-year period. Costs of fully controlling CSOs for more severe wet weather conditions will obviously be greater.

Table 5.5-3 Capital Costs for LTCP Control Measures

Program Element	LTCP Costs ($ millions, 2005)
Combined Sewer Capacity Improvements	$33.82
Wet Weather Pond Improvements	34.03
Treatment Plant Improvements	17.43
Remote CSO Relief Sewers, Storage & Floatables	24.67
3RPORT Tunnel & Foster Park Relief Sewers	229.98
Total Cost	**339.9**

(All cost estimates based on 2005 dollar value and Typical Five Year Design Period conditions)

Considering capital costs alone, the total capital needed by the City of Fort Wayne over the life of the LTCP is estimated at nearly $666.5 million (2005 dollars) to achieve Fort Wayne's current LTCP and fulfill other projected wastewater collection and treatment needs. As described in section 5.5.1.2.1, the total remaining capital need for the Wastewater Improvements CIP is estimated at $326.6.6 million, and the total capital needs projected by the City over the life of the LTCP are summarized in Table 5.5-4.

Table 5.5-4: Total Capital Needed - LTCP

Capital Program	2005 Dollar Value
LTCP (4 events/typical year)	$339.9 million
Wastewater Improvements CIP	326.6 million
Total Cost	**$666.5 million**

When the total debt service costs for the overall capital improvement program described above, along with total corresponding O&M costs, are allocated to residential users in the manner described in Appendix L to develop a cost per household figure and the result is divided by the median household income (MHI) of all households within the sewer service area, again determined as described in the Appendix L, a Municipal Preliminary Screener ("MPS") value corresponding to selected LTCP control costs ("MPS_{LTCP}") is obtained as follows:[63]

$$\mathbf{MPS_{LTCP} = 1.87\%}$$

An MPS value of 1.87% is considered a mid-range economic impact under the *Interim Economic Guidance* as it falls between 1% and 2% of MHI. The City's value, though, is 87% of the way through the mid-range segment and is at the threshold of large or substantial impact.

[63] This MPS represents the cost of compliance, as a percentage of MHI, with the Performance Criteria for LTCP implementation in the context of the typical 5-year period.

Under the *Interim Economic Guidance,* a result in the mid-range or substantial impact range is to receive further evaluation with the secondary indicators and the substantial impacts matrix. Before moving to that next phase of evaluation, the City first turns to some additional considerations regarding the MPS value that are believed to be both appropriate and relevant.

5.5.1.2.3 Additional Considerations for Municipal Preliminary Screener Values

Additional Consideration – Wayne Township. A demographic fact that the City considers quite germane to an evaluation of potentially substantial and widespread economic and social impact of proposed CSO controls is the point that 24.9% of the residents in the City's most populous township, Wayne Township, have household incomes below the poverty level[64]. Wayne Township's overall population represents 41% of the City's population[65]. A calculation of the Municipal Preliminary Screener was performed for Wayne Township residents, yielding the following result:

$$\mathbf{MPS_{Wayne\text{-}LTCP} = 2.51\%}$$

$$\mathbf{MPS_{Wayne\text{-}WQS} = 3.97\%}$$

These values exceed the "large," or substantial, impact threshold for this preliminary screening indicator by nearly a 26% margin for MPS-$_{LTCP}$ and a 99% margin for MPS-$_{WQS}$. The City believes that special consideration is warranted for the financial impacts to be incurred on residents of this quite sizable, low-income segment of the City's population.

Additional Consideration – Stormwater Regulatory Costs. The central question of the use attainability analysis is, "should the current full-body contact recreation designated use for the CSO-Impacted Waters be removed during times of wet weather impacts since attainment of that designated use is not feasible?" Accordingly, all factors contributing to the unattainability of the use and associated costs of the City must be considered. The waters impacted by the City's CSOs are also receiving bacterial loadings from stormwater discharged from the City's separate storm sewer system as well as from nonpoint sources. Thus, the question of attainability of the designated recreational use is a function of the combined effects of all bacterial loadings, which derive from both CSOs and other sources of urban stormwater. Consequently, in evaluating the applicability of 131.10(g)(6), it is appropriate to include the City's current and projected costs of implementing its separate stormwater management program (under MS4 requirements) along with costs of CSO controls and other sewer and wastewater treatment costs. When these stormwater management costs are added to the cost per household, the Municipal Preliminary Screener for the City of Fort Wayne becomes:

$$\mathbf{MPS_{LTCP\text{-}Storm} = 2.13\%}$$

$$\mathbf{MPS_{WQS\text{-}Storm} = 3.22\%}$$

[64] U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates
[65] U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates

When these stormwater management costs are added to the analysis for Wayne Township residents only, the resulting value for that more focused MPS indicator is:

$$\mathbf{MPS_{WayneLTCP\text{-}Storm} = 2.85\%}$$

$$\mathbf{MPS_{SWayneWQS\text{-}Storm} = 4.31\%}$$

From these MPS values, it can be seen that the economic impact to be incurred by the residents of Wayne Township, the City's most populous and financially stressed, exceeds the high, or substantial, impact threshold by nearly 43% for LTCP-Storm and 116% for WQS-Storm.

The MPS values determined above for the various scenarios are collated in the following table for easy reference**.** Details on the calculation of each MPS value are provided in Appendix L.

Table 5.5-5 Summary of Relevant MPS Values

Scenario	MPS	MPS – Wayne Twp.
WQS Compliance*	2.96%	3.97%
WQS Compliance*/Stormwater	3.22%	4.31%
LTCP Controls	1.87%	2.51%
LTCP/Stormwater	2.13%	2.85%

*The MPS values provided in this analysis understate the economic impacts associated with WQS compliance since the projected costs are based on storm events occurring in a typical 5-year period; but, storm events more severe than those in the analyzed typical period would still trigger CSO activations.

These results preliminarily suggest that the City's implementation of controls required for full WQS compliance,[66] when combined with preexisting debt service for sewer and wastewater treatment projects, additional operational costs for the new controls, and other contemporaneous wastewater/sewer improvements, would clearly place an unreasonable and severe economic burden on the City's residents living within the sewer service area. And, the addition of stormwater management costs (a real cost for ratepayers) only increases that severe burden.

A further preliminary conclusion to be drawn from these results is that the City's implementation of its LTCP, in conjunction with preexisting debt service and other operational costs of its sewer and wastewater treatment system, increased operational costs of the LTCP controls, and other contemporaneous wastewater treatment and local sewer separation projects, will result in a mid-range impact very near the large, or substantial, impact threshold when the City's sewer service area population is considered, and clearly a large or substantial impact for residents of Wayne

[66] It must be kept in mind that the reference to WQS compliance is restricted solely to the impacts from the City's combined sewer system. Even if the CSO control measures needed for WQS compliance were affordable and installed, the CSO Impacted Waters would continue to be impaired due to other sources of bacterial contamination as discussed above.

Township, the most financially distressed and most populous Township within the service area. Finally, when the City's stormwater management costs are included in the analysis, as needed for a full assessment of water quality impacts and associated costs, the effect of the City's LTCP implementation will be above the threshold of a large, or substantial, economic impact, when viewed from the perspective of the City as a whole, and even further into the substantial impact range with respect to its most populous and impoverished township, Wayne Township.

Under EPA's *Interim Economic Guidance*, MPS values indicating either mid-range or large economic impacts require a second phase or layer of analysis. This next phase is addressed in the following section.

5.5.2 Secondary Test

In the *Interim Economic Guidance*, the second phase of the impact analysis is described as involving an assessment of the City's general socioeconomic health through the use of six financial indicators, including two indicators in each of the following three categories: debt indicators, socioeconomic indicators, and financial management indicators. Site specific data are collected for each of the six indicators and "scores" are derived indicating relative economic position of the City vis-à-vis national guideline ranges.

5.5.2.1 Indicators for Secondary Test

The following table summarizes the secondary indicators, the benchmarks from EPA's guidance for three potential ranges of relative strength or weakness for each indicator, the appropriate values from the City's financial data, and finally the corresponding score for each indicator.[67]

[67] More background information on the City's underlying data can be found in the FCA, pp. 18-22.

Table 5.5-6 Summary of Secondary Indicators per U.S. EPA Benchmarks

Indicator	Strong	Mid-Range	Weak	City's Value	Points
Bond Rating	AAA-A or Aaa-A	BBB or Baa	BB-D or Ba-C	Aa2 GO Aa3 Sewer	3
Overall Net Debt	<2%	2%-5%	>5%	5.2%	1
Median Household Income	>25% above National MHI	+/-25% of National MHI of $57,652 (5-year estimate)	More than 25% below National MHI of $60,336 (1-year estimate)	$48,039 (5-year estimate)	2
Property Tax Revenues	<2%	2% - 4%	> 4%	2.19%	2
Unemployment Rate	More than 1% below National Average	+/- 1% of National Average of 3.5%	More than 1% above National Average	3.3%[68]	2
Property Tax Collection Rate	> 98%	94% - 98%	< 94%	97.33%	2

5.5.2.2 Secondary Score

The overall composite scores for the secondary indicator analysis for the City, which are obtained by totaling the values for each of the indicators and dividing by the number of indicators (6), is a mid-range value of approximately 2.0, based on current conditions.

It is important to note the long-term demographic trends that have continued to weaken this score since the City's preparation of its Financial Capability Analysis (FCA) in 2006. The secondary score from the 2006 analysis provided in the City's FCA was a mid-range value of 2.33.

5.5.2.3 Contraindications to the Secondary Scoring Result

There are substantial reasons for skepticism concerning the mid-range secondary score indicated for the City by this analysis. First, it should be observed that the City's MHI value is near the low end of the mid-range for this indicator, which might be reasonably considered as one of the more important indicators of the socioeconomic health of a community.

The City's 5-year estimate of MHI is $48,039, which is 83.3% of the national 5-year Estimate MHI. The City's value falls somewhat above the lower mid-range threshold of 75% of the national MHI, or $43,239. If the MHI value for the City's largest and poorest sector, Wayne Township,

[68] U.S. Bureau of Labor Statistics, City of Fort Wayne 2018 Annual Unemployment. As a snapshot update, June 2019 unemployment for the City of Fort Wayne was 3.2, while the national unemployment rate was 3.8.

were utilized for this indicator, the result would be more than 25% below the national MHI and thus in the weak range for this factor.

From 2005 to 2017, the gap between the City's MHI and the higher national MHI continued to widen,[69] illustrating Fort Wayne's worsening economic position on the national stage.[70] However, this marked worsening of the City's MHI as a percentage of the national MHI value is completely shielded by the broad mid-range span for this indicator in the secondary test analysis.

On the reverse side of the scale, two of the indicators on which the City had relatively strong showings – property tax revenues and property tax collection rates – can effectively be considered obsolete information, given the property tax crisis which has arisen in Indiana in the recent past. Transition to a new property value appraisal methodology has been extremely rocky, leading to a virtual taxpayer revolt in some parts of the state and a call by Indiana's governor for rather radical changes to local revenue generation. As a result, in 2008, the Indiana General Assembly passed, and the Governor signed into law, House Bill 1001, which limited property tax liability to one percent of assessed value for owner-occupied residential property, two percent for agricultural property and residential property, and three percent for commercial property[71]. In 2010, a state constitutional amendment was passed to solidify these property tax caps. As a result, cities have been limited in raising funds for their diverse range of operations; and, most significantly, HB 1001 prevents municipalities from achieving a "high burden," on two of the financial capability indicators. One indicator, Property Tax Revenues as a Percent of Full Market Value of All Real Property, will always be below two percent as a result of this legislation, receiving a "strong" score. Similarly, because Indiana provides cities with no home rule authority and generally limits their ability to raise revenue to a property tax, the indicator, "Overall Net Debt as Percent of Overall Assessed Value," will remain in the mid-range category, or perhaps even fall into the strong category. Therefore, while Fort Wayne has become even more distressed as a result of deteriorating economic conditions and legislative restrictions on its ability to raise revenue, it has become nearly impossible for the City to achieve a weak secondary score.

In sum, the City is weak on one of the more important indicators relating to its economic wellbeing – MHI. Yet this factor weighs evenly in the overall composite secondary score with less significant factors such as property tax collection rate. Moreover, two factors with relatively stronger values relating to property tax revenues and collection rates may prove illusory and obsolete in view of the state's continuing property tax crisis. The underlying point of this discussion is that the City's mid-range composite score from the secondary test should be viewed as suspect and should be significantly discounted.

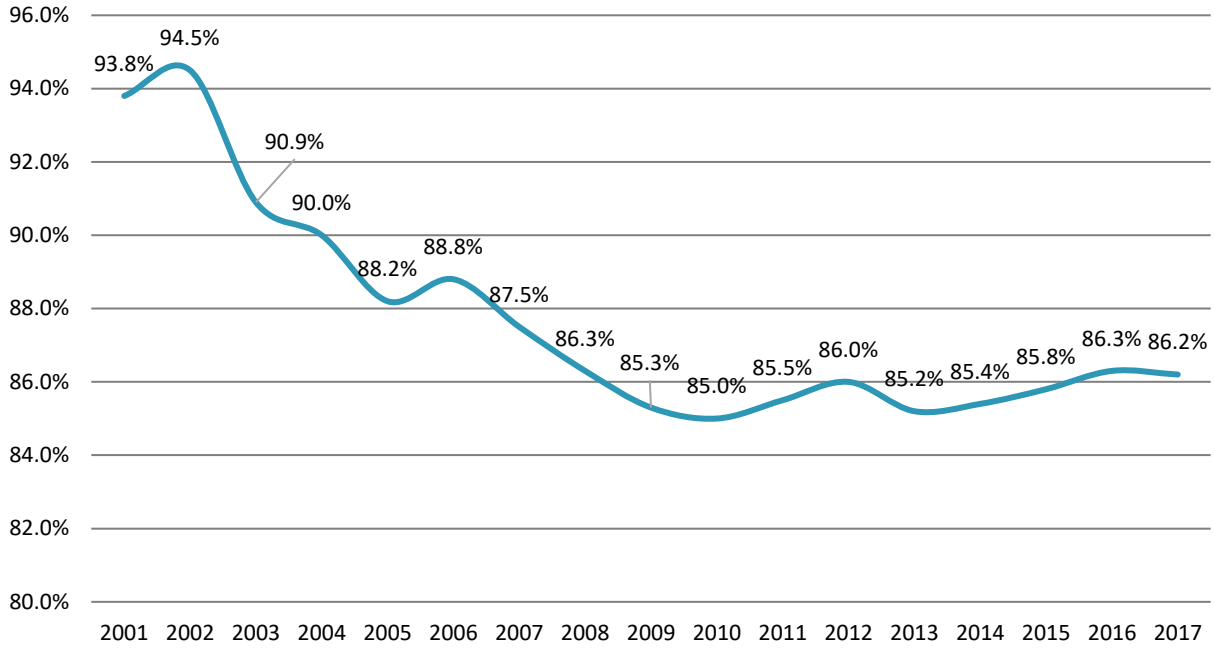
[69] U.S. Census Bureau, 2017 American Community Survey 5-Year Estimates
[70] It is believed, as discussed elsewhere, that this growing disparity from national economic performance is driven by underemployment resulting from the transitioning of the City's economy to service-dominated status.
[71] Indiana House Bill 1001 (2008). Retrieved from: http://www.in.gov/legislative/bills/2008/HE/HE1001.1.html on June 29, 2009.

5.5.2.4 Additional Considerations Beyond the Secondary Test

The following points drawn from the City's FCA and updated in this document illustrate trends at work in Fort Wayne's economy, as well as in the regional economy of which it is a part, which also portend downward slippage in the City's socioeconomic status. These trends may be somewhat reflected in the secondary indicators but they are largely indicative of prospective changes which are not yet incorporated in the specific economic data captured by the secondary indicators.

Those City residents who are employed are generally experiencing a significant degree of underemployment, as the high-paying manufacturing jobs that previously existed have been replaced with lower-paying service jobs. Fort Wayne's economy is in transition, slowly and even belatedly undergoing transformation from an economy based on heavy-manufacturing which lacks resiliency to a more diversified, service-oriented economy. As shown in Chart 5.5.2.4-1, Allen County (Fort Wayne) has experienced a substantial drop in per-capita personal income relative to the national average over the last 15 years or so.

Chart 5.5.2.4-1 Fort Wayne Per Capita Income as a Percentage of National Average



This graph starkly illustrates the impact of a demographic trend impacting Fort Wayne's residents that is discussed further below: chronic underemployment.

While these trends may be generally indicative of many CSO communities, the transformation to lower paying jobs with the decline of the manufacturing sector has been more accentuated in Fort Wayne over the past 25 years as Fort Wayne's economy has failed to keep pace with that of other communities within the nation. As illustrated in Chart 5.5.2.4-2 and consistent with what was described in the FCA, a comparison of 15 similar Midwestern and Southeastern cities shows Fort

Wayne's growth in per-capita personal income from 2001 to 2017 to be among the lowest (in 10th place). Over this same time period, Fort Wayne's per-capita personal income has dropped from 11th to 13th among this set of cities.

Chart 5.5.2.4-2 Comparative Change in Per Capita Income of Similar Cities between 2001 and 2017

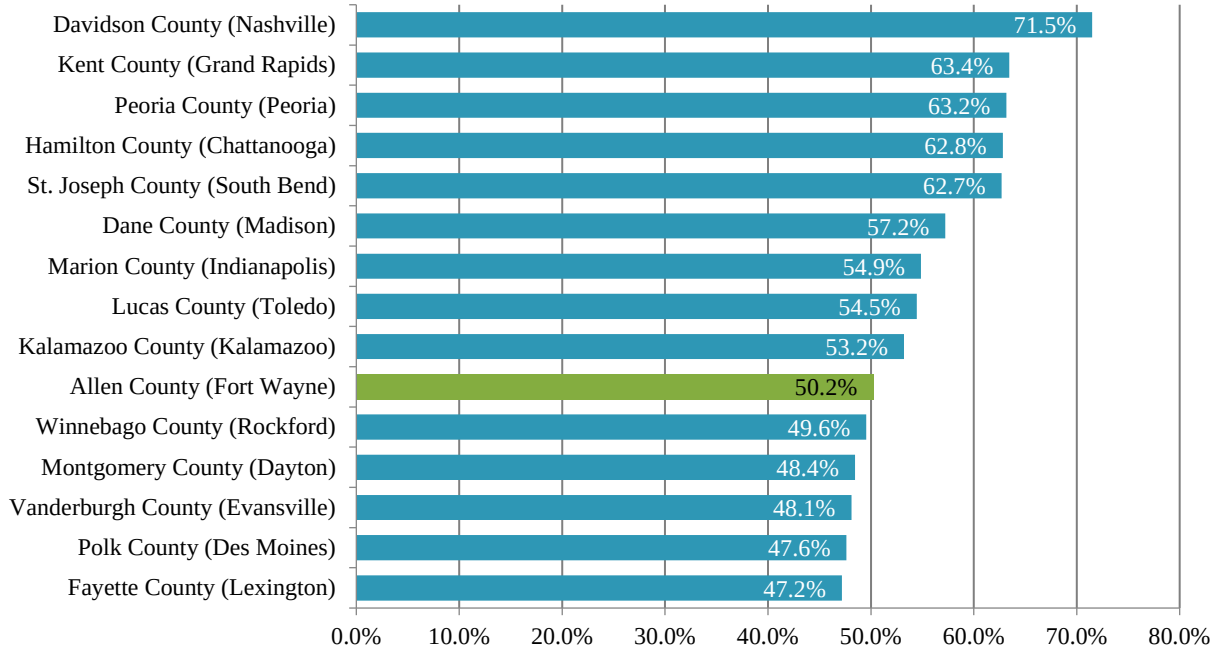
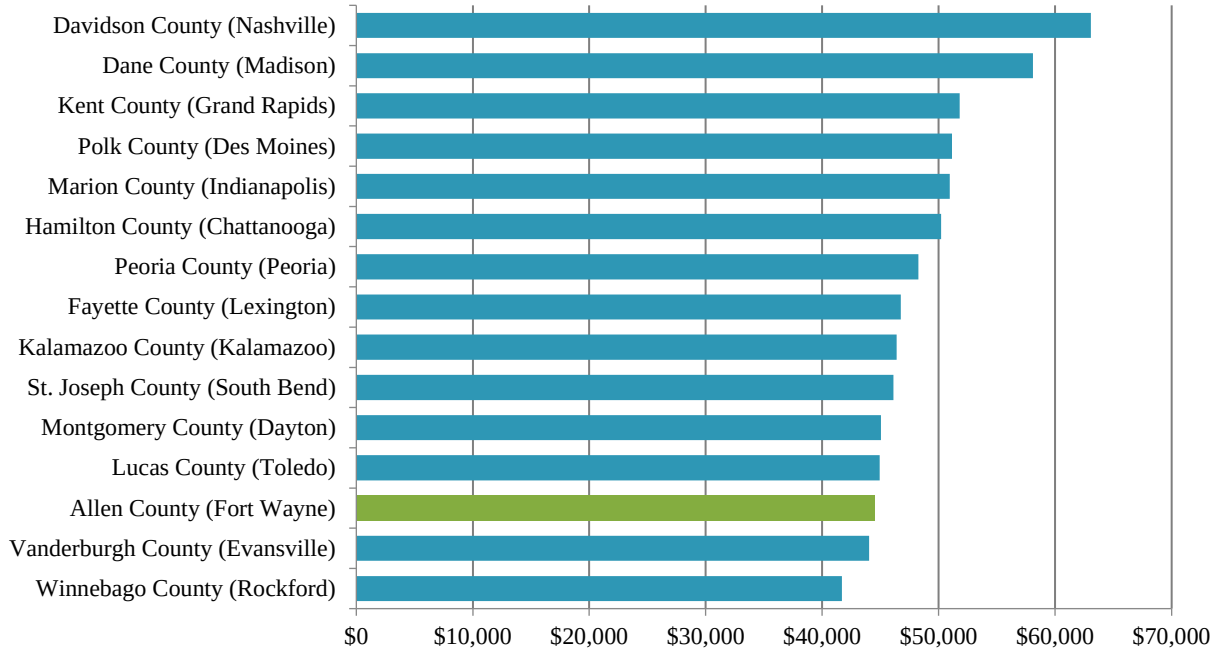
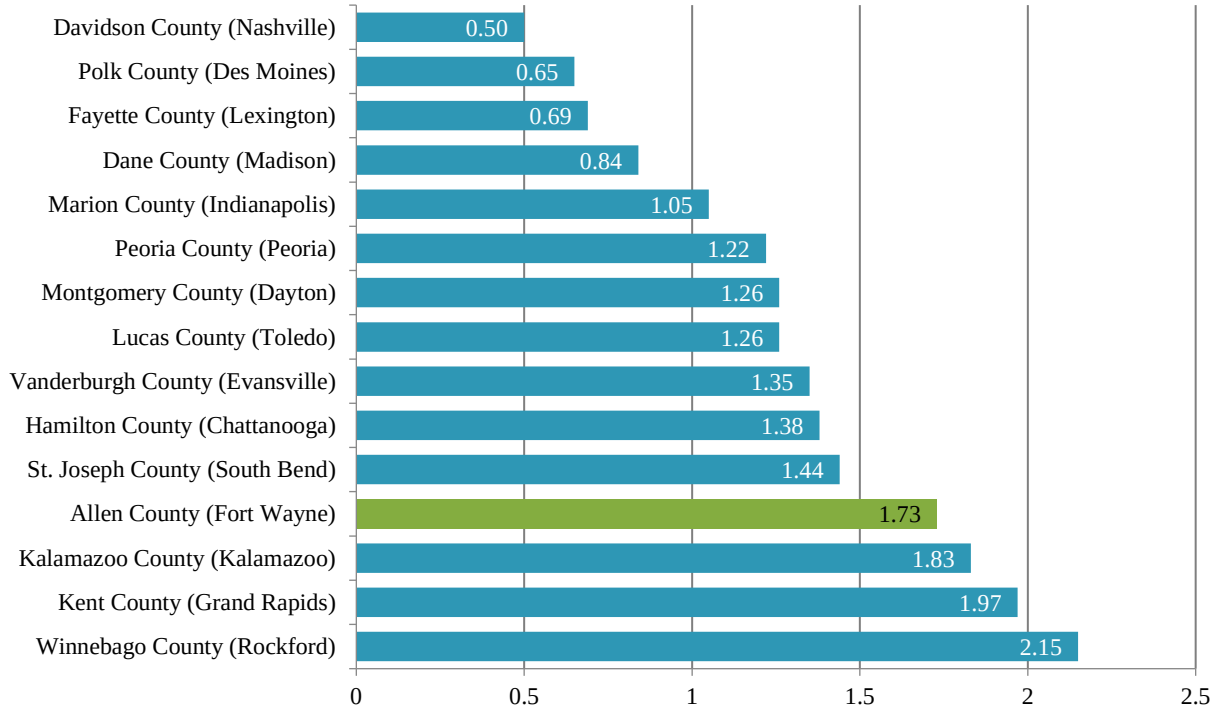


Chart 5.5.2.4-3 Per Capita Personal Income in 2017



Fort Wayne's location quotient for manufacturing of 1.73 helps to explain this phenomenon. A location quotient is an indicator of the concentration of a particular activity in a given area, compared to the rest of the nation. A location quotient greater than one demonstrates that the area's share of that activity is greater than experienced by the country as a whole, while a location quotient of less than one shows that the area has less of a share of the activity than found nationally. Review of the location quotient for each of the 15 cities referenced above shows that Fort Wayne remains among the most dependent on manufacturing employment. This, in turn, makes Fort Wayne's economy extremely sensitive to downturns in the local manufacturing base – because as manufacturing jobs are lost, there is a scarcity of other opportunities for displaced workers to move into.

Chart 5.5.2.4-4 Manufacturing Location Quotient



In July 2006, the Brookings Institution published a report entitled, "Bearing the Brunt: Manufacturing Job Loss in the Great Lakes Region, 1995 - 2005." [72] This report analyzed manufacturing activity in the 25 largest metropolitan statistical areas (MSAs) in the seven-state Great Lakes Region. Of the 25 MSAs, the report identified Fort Wayne as being the seventh-most manufacturing dependent, with 17.2% of its jobs in manufacturing. Even more troubling, the report found that, of these 25 MSAs, Fort Wayne was the only MSA that also lost advanced service jobs from 1995 - 2005. While this study is now 14 years old, the MHI and income data presented

[72] http://www.brookings.edu/~/media/Files/rc/reports/2006/07useconomics_wial/20060727_manufacturing.pdf

above clearly indicate that Fort Wayne's local economy has not recovered and in fact has continued to deteriorate since 2005.

The information summarized here, which is consistent with the City's FCA only accentuates the City's concern that its socioeconomic condition is more problematic than the mid-range score from the secondary indicators.

5.5.3 Substantial Impacts Matrix

The final step under the *Interim Economic Guidance* in assessing whether the City's LTCP will result in a substantial economic impact on City ratepayers is the correlation of the Municipal Preliminary Screener value with the Secondary Score to develop an overall measure of the community's economic health and social/financial capability or strength through the use of the substantial impact matrix. In this case, as a result of the mid-range Secondary Score, the matrix results are essentially a reprise of the Municipal Preliminary Screener results. The table below shows the Substantial Impacts Matrix with the various City MPS values inserted.

Table 5.5-7 Substantial Impacts Matrix

Indicator	**Low MPS** (Below 1%)	**Mid-Range MPS** (1% - 2%)	**High MPS** (Above 2%)
Weak Secondary Score (Below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range Secondary Score (Between 1.5 and 2.5)	Low Burden	Medium Burden 1.87[e]	High Burden 2.13[g] 2.51[f] 2.85[h] 2.96[a] 3.22[c] 3.97[b] 4.31[d]
Strong Secondary Score (Above 2.5)	Low Burden	Low Burden	Medium Burden

[a] MPS_{WQS} 2.96
[b] $MPS_{WayneWQS}$ 3.97
[c] $MPS_{WQS\text{-}Storm}$ 3.22
[d] $MPS_{WayneWQS\text{-}Storm}$ 4.31
[e] MPS_{LTCP} 1.87
[f] $MPS_{WayneLTCP}$ 2.51
[g] $MPS_{LTCP\text{-}Storm}$ 2.13
[h] $MPS_{WayneLTCP\text{-}Storm}$ 2.85

Conclusions on Substantial Economic/Social Impact.

- **CSO Controls to Meet Water Quality Standards under All Wet Weather Conditions Is Clearly Unaffordable**

From this analysis, it can be emphatically stated there is no affordable remedy that will attain the designated use of full-body contact recreation throughout the recreational season each year under all possible wet weather conditions.[73] It is abundantly clear that any approach to achieving full attainment of the currently applicable designated recreational use would cause a substantial economic impact on the City and its citizens.

The high MPS value (2.96) for the CSO control measures needed to produce attainment of full body-contact recreational water quality criteria under all wet weather conditions in a "typical period", when combined with the mid-range Secondary Score, demonstrates that a requirement to implement such control measures would produce a markedly high burden on the City and its residential ratepayers.

- **The Costs of CSO Controls Specified by the LTCP Will Result in Financial Impacts at the Very Threshold of a High Burden**

When fully implemented, the LTCP will reduce the number of overflow events for the City's CSO outfalls from as high as 20 to 71 annual events in the typical year to a maximum of 4 annual overflow events where the capacity of CSO controls will be exceeded. In addition, the six CSOs discharging to the St. Joseph River, the City's highest quality waterway, will see discharges in excess of adequate treatment/control reduced to a single annual overflow event in the typical year. This is an exemplary level of control for wet weather discharges of combined sewage to the City's CSO-Impacted Waters and it comes at a high price.

As has been shown, the costs of implementation of the approved LTCP control measures, when added to the already sizable water quality costs for existing and projected sewer and wastewater treatment infrastructure and O&M, result in MPS values that place the City and its residential ratepayers at the threshold of a substantial economic impact. Moreover, when stormwater management costs are included, or when the evaluation is focused on Wayne Township, the largest and lowest income township within the City's service area, the corresponding MPS values for the LTCP control costs surpass the threshold for a substantial economic impact.

Whether these related MPS values are slightly below or somewhat above the 2.0 threshold for a high financial burden, the City is committed to implementation of the approved LTCP and does not question or challenge this obligation. However, the increased capital and operating costs associated with any more stringent level of control above that prescribed in the LTCP would shift MPS values for the City and its overall service area well over the threshold for substantial economic impact and the City seeks relief from any such potential requirement pursuant to this Updated UAA.

[73] As determined for a "typical" period in the costing and sizing of CSO control alternatives in the LTCP.

5.5.4 Availability of Grants

The City has continually sought sources of outside revenue, such as grants-in-aid, for infrastructure and programmatic needs. However, grant eligibility is generally based upon a community's MHI and applicable user rates. As the largest municipally-owned utility in Indiana, Fort Wayne City Utilities generates economies of scale that place downward pressure on its rates. Many smaller utilities have not sought opportunities to consolidate or regionalize, and thus, experience higher rates. Paradoxically, this places these smaller utilities at a competitive advantage for many grants.

5.5.5 Widespread Economic and Social Impact

The sixth factor of 40 CFR 131.10(g) provides that attainment of a designated use will be deemed infeasible if attainment were to require controls beyond the Clean Water Act's minimum technology-based requirements to the degree that substantial and widespread economic and social impacts would result.

The foregoing discussion has demonstrated, the City believes, that substantial economic and social impacts would result from a requirement to achieve more stringent CSO control measures than those prescribed in the approved LTCP. The *Interim Economic Guidance*, however, suggests that some level of additional analysis may be appropriate to establish the widespread nature of economic and social impact that is already determined to be substantial in magnitude. The guidance states that, "There are no explicit criteria by which to evaluate widespread impacts." Further analysis is recommended to focus on whether the additional CSO control expenditures would produce changes in certain socioeconomic indicators.

Candidly, the City posits that the incurring of substantial economic and social impacts by the residential ratepayers of the second largest municipality in the state of Indiana is *per se* widespread economic and social impact. The City is greatly concerned about the degree of economic and social effects which would befall the community if CSO controls beyond the selected LTCP were required. Median household income within the City is already nearly 20.0% below the national average and the MHI within Wayne Township is markedly lower with 24.9% of its population already below the poverty level. Moreover, as described in Section 5.5.2.4, there are trends at work in Fort Wayne's economy which portend downward slippage in the City's socioeconomic status. The City's economy is in transition, slowly undergoing transformation from an economy based on high-paying heavy-manufacturing employment to one characterized by considerably lower-paying jobs of a service-oriented nature. Thus, many of the City's residents are experiencing a significant degree of underemployment. This provides much of the explanation for the fact that the City's population has experienced a substantial drop in per-capita personal income relative to the national average over the last 16 years or so. These trends may not yet have stabilized.

If the City were compelled to revise its LTCP to provide for full compliance with the bacterial standards specified to support the existing designated use of full-body contact recreation at all times and under all conditions, including severe storm events, the projected average compliance costs per household within the City's sewer system service area would more than double from the

projected costs for implementing the approved LTCP.[74] Such a marked increase in utility costs to Fort Wayne residents and employers beyond the increases currently required to implement the approved CSO control measures (and which will closely approach substantial economic impacts) will correspondingly exacerbate the current economic difficulties linked to lower income status. Such additional CSO control measure costs would provide a disincentive for current employers to expand and future employers to locate within the area, further exacerbating existing community problems.

The imposition of yet more burdensome economic impacts that would accompany a requirement for CSO controls more stringent that the City's LTCP would reduce disposable income of the City's citizenry, which would have a depressing effect on the local economy, and would not only reduce generation of public funds but also divert available public funds from the other critical needs such as housing, education, public safety and health care and detract from the city's ability to retain existing jobs and attract new employers that may provide opportunities for our citizens to improve the quality of life in our community. All sectors of local government are already under increasingly difficult pressures to address greater needs with less funds. Increasing the level of CSO control expenditures beyond those prescribed by the City in its approved LTCP would result in substantial and widespread economic and social impacts. Ironically, the imposition of such a high economic burden upon the City's residents would not fully attain the recreational use due to the documented impact of other sources (primarily upstream sources, along with residual urban stormwater and other nonpoint sources).

Consequently, the substantial and widespread social and economic impacts that would be imposed on the City and its residential ratepayers if required to provide full control or elimination of CSO discharges warrant relief from such a requirement. In other words, the City submits that, consistent with 40 CFR 131.10(g)(6), implementation of CSO controls more stringent than those corresponding to the level of control specified in the approved LTCP is unaffordable and infeasible. Therefore, the requested water quality standard revisions are warranted.

6 Public Outreach

6.1 2010 Public Outreach

The City of Fort Wayne worked with IDEM during the original UAA process in 2010 to develop a public outreach program on the benefits of the City's Long-Term Control Plan and the need for a UAA for revisions to designated recreational use to ensure continued progress in improving water quality.

During the outreach program, the City held two public participation meetings on February 17, 2010. Both meetings involved a presentation describing the City's proposed UAA, followed by open discussion and opportunity for questions and answers. The first meeting was held at the

[74] Once again, it must be recognized that this projection is based on the costs to address wet weather flows from a "typical" period, and there are yet more severe storm events beyond the typical period that would have to be addressed at correspondingly greater costs if the City were to be capable of complying with water quality goals under all circumstances.

Indiana Institute of Technology (Fort Wayne) at 1:00 pm, while the second meeting took place at Woodlan Jr./Sr. High School in Woodburn, IN at 6:30 pm.[75] A representative from IDEM as well as the Allen County Health Department were present at both meetings. Notices for these meetings were published in two local Fort Wayne newspapers as well as in a newspaper in Defiance, OH (a community downstream of the City's CSO impacted waters). A press release was issued and email notices were sent well in advance of the meetings to local citizen groups to advertise the meetings. The email notice was also sent to those who subscribe to the City's CSO overflow notification program. Others made aware of these public meetings include local elected officials in Fort Wayne and Allen County, the Sewer Advisory Committee, community organizations with an expressed interest in water quality issues, local governments from downstream communities, and other potentially interested groups.

The City distributed data discs at each meeting which included the City's UAA draft documents, Consent Decree, Long-Term Control Plan and Frequently Asked Questions and Answers regarding the City's proposed UAA. Hard copies were made available as well. The 30-day public comment period concluded March 17, 2010. The City received one written comment in favor of the proposed UAA. Attached at Appendix N-1 are the following:

1. Summary of minutes from Public Meetings held February 17, 2010.
2. Copy of the press release for the City's Public Meeting held February 17, 2010.
3. Copy of the sign-in sheet for each meeting.
4. Copy of comments received during the 30-day comment period.

The public meetings conducted by the City in conjunction with IDEM provided information on the affected waters, the benefits of the City's LTCP and other water quality improvement programs, the stream reaches affected by the proposed change in recreational use designation and the basis for the 2010 UAA's conclusion that the existing designated use is not attainable during and after large storms.

6.2 2019 Outreach

As part of its development of the Updated UAA, the City conducted additional stakeholder outreach. The City provided an update to its citizen Utility Advisory Group on March 11, 2019. On April 15, 2019 the City held a public meeting and invited all the local watershed board members to attend. The local watershed groups invited were the St Joseph River Watershed Initiative, the Upper Maumee Watershed Partnership, and the Tri-State Watershed Alliance. Attached at Appendix N-2 are the following:

1. Copy of the PowerPoint presentation given at the meetings
2. Copy of the sign-in sheet for the April 15, 2019 meeting.

Based on the information received from public comments, citizenry of the City of Fort Wayne and downstream communities near the CSO-Impacted Waters are accepting of a temporary suspension

[75] Woodburn is located within 3 miles of the Indiana/Ohio border and a similar distance south of the Maumee River.

of the full-body contact recreation standard such as will occur with the application of Indiana's CSO wet weather limited use designation.

7.0 A Revision of the Current Recreational Use Designation for the CSO-Impacted Waters Is Warranted, as Demonstrated by this UAA, With Respect to Wet Weather Conditions

The information provided in preceding sections of this Updated UAA supports approval of the UAA based on Factors 1, 2 and 3, and continued approval under Factor 6 as listed in 40 CFR 131.10(g). Consequently, this Updated UAA provides an adequate basis in fact and law for a revision to the full-body contact recreation use designation currently applied to the City's CSO-Impacted Waters at all times during the recreational season comprising the months of April through October, inclusive, pursuant to 327 IAC 2-1.5-5(a) and 327 IAC 2-1.5-8(e).

In summary:

- Section 4.1.1 reviews a survey of recreational activities observed in or on the CSO-Impacted Waters.
- Overall, Section 4.1.2 presents a summary of bacterial water quality data from the CSO-Impacted Waters from 1975 through 2018 and shows that the bacterial quality of those waters, including periods of dry weather and wet weather, has routinely exceeded water quality criteria specified for full-body contact recreation.
- Section 4.1.2.2 provides a summary of bacterial quality data collected from CSO-Impacted Waters within the City's urban area over the period of 1975 through 2006. Tabular information is provided on the percentage of samples from each of five sampling locations on the three major CSO-Impacted Waters that exceed bacteriological criteria for full-body contact recreation. Also, graphs are provided that summarize statistical analyses of the bacterial quality data for each of the five sampling locations for each decade since the mid-1970s. The overall conclusions drawn from this data are that the bacterial quality of all three rivers has consistently failed, at high percentages of the database, to attain applicable water quality criteria required for full-body contact recreation. In addition, there has been little change in the characteristic bacterial quality of these rivers over the period from 1975 to 2006.
- Section 4.1.2.3 describes a review of bacterial quality data acquired by the City's river sampling program at two sampling locations each for the St. Joseph River and the St. Marys River for the recent period of 2016 through 2018. One sampling location for each river is immediately upstream of the City's urban area (upstream of CSO discharge points) and one is near the downstream confluence of the two rivers (downstream of CSO discharge points). The conclusion drawn from this data review is that upstream bacterial contamination in both rivers is regularly present at levels that prevent the water quality of either river from meeting recreational water quality criteria, both upstream and downstream of CSO discharge points. This point is further reemphasized by the water quality modeling conducted by the City as recounted in Appendix B-2, which demonstrates that upstream bacterial contamination alone in the St. Joseph and St. Marys Rivers, with no bacterial input from the City's CSOs or

stormwater sewer system, will result in nonattainment of recreational water quality criteria in the Maumee River, as well as the St. Joseph and St. Marys Rivers.

- Section 4.1.2.4 describes the existing recreational use in the City's CSO-Impacted Waters: (1) there has been an almost total absence of full-body contact recreational activities in these waters, particularly during those infrequent wet weather conditions that will produce CSO discharges once LTCP implementation is complete; and (2) to the extent that any full-body contact recreation has occurred in these waters since 1975 during such wet weather conditions, it has occurred in waters with water quality that is characteristically impaired for recreational use.
- Section 4.2 explains that there are no existing recreational uses of the CSO-Impacted Waters that would be inconsistent with the requested revisions to the current recreational use designation of these waters since the water quality of these waters, at least since 1975, has not been sufficient to support recreational uses much of the time, and certainly not during wet weather conditions of the severity that will result in CSO discharges from the City's CSS following full implementation of its approved LTCP.
- Section 5.2 discusses the highly probable contribution of naturally-occurring sources of bacterial contamination (i.e., avian and mammalian wildlife) to the instream water quality of the St. Marys River and the St. Joseph River upstream of the City's urban area, and also within the urban area, that routinely exceeds levels supportive of full-body contact recreation. Such naturally-occurring bacterial contamination is conveyed downstream through the CSO-impacted segments of these waters and the Maumee River, which results from their confluence.
- Section 5.3 explains that high flow conditions expected in the CSO-Impacted Waters during and after the infrequent post-LTCP CSO activations will make the waters unsafe for recreational activity, independent of water quality conditions. These conclusions are based on both historical records from USGS field programs and projections from the City's calibrated model.
- Section 5.4 discusses the highly probable contribution of human-caused sources of bacterial contamination (e.g., livestock and domesticated pets) to the instream water quality of the St. Marys River and St. Joseph River upstream of the City's urban area, and also within the urban area, that routinely exceeds levels supportive of full-body contact recreation. This section also explains that urban development as a human-caused condition and in particular increased imperviousness contribute to bacterial contamination, by increasing stormwater runoff rates to the local rivers. As with naturally-occurring bacterial contamination, the bacterial contamination from human-caused sources is conveyed downstream through the CSO-impacted segments of these waters and the Maumee River. It is observed in Sections 5.2 and 5.4 that it is practically infeasible to separate the relative impacts of naturally-occurring sources of bacterial contamination and human-caused sources of bacterial contamination to the St. Marys River, the St. Joseph River, and the Maumee River.
- Section 5.4.2 briefly recounts the human-caused sources of bacterial contamination associated with the City's urbanized area. The infeasibility of sufficiently remediating human-caused sources of bacterial pollution is discussed in Section 5.4.3.

- Section 5.5.1.2 reviews the calculation of the indicator used to assess whether the costs of CSO controls are likely to impose a substantial economic burden on the City pursuant to EPA guidance. This indicator – sometimes referred to as the Municipal Preliminary Screener and elsewhere as the Residential Indicator - when applied to the projected costs of complete elimination of CSO discharges from the City, clearly shows that a markedly substantial economic burden would be incurred by the City's utility ratepayers if such measures were required. Application of this indicator shows that implementation of the City's approved LTCP will result in overall costs that are at the threshold of a substantial economic impact. When focused on the City's most populous township (which also has the highest percentage of households below the federal poverty level) or when LTCP costs are supplemented with costs of implementation of the City's separate stormwater management program, the indicator shows a substantial economic impact.
- Section 5.5.2 addresses the application of the "secondary test" prescribed by EPA guidance to assess the City's general socioeconomic health, given that the Municipal Preliminary Screener indicates that the costs of CSO controls more stringent than those posed by the LTCP would result in a substantial economic burden. The secondary test produces scores in the lower portion of the mid-range level. Sections 5.5.2.3 and 5.5.2.4 review additional financial information concerning the City that strongly suggest that the secondary test scores referenced above are overly optimistic as a general indicator of the City's economic status.
- Section 5.5.3 displays the Substantial Impacts Matrix based on the Municipal Preliminary Screener values for various alternative scenarios considered and the Secondary Test scores. A high, or substantial, economic burden is indicated by the Matrix if the City were required to implement more stringent CSO controls than prescribed by the approved LTCP. Moreover, a high economic burden is indicated when stormwater costs are included in the financial impact analysis for the LTCP or when the financial impacts of the LTCP implementation are considered for the more financially stressed portion of the City (Wayne Township). Section 5.5.5 provides the City's rationale for its substantial economic impact being considered widespread as well. As a result, it is concluded that the imposition of costs of controls more stringent than those required by the LTCP would result in a substantial and widespread economic and social impact. The extent of this burdensome impact would be markedly greater if the City were to be required to eliminate all CSO discharges under all wet weather conditions.

7.1 The Current Recreational Use Designation Cannot Be Attained in the CSO-Impacted Waters during Wet Weather Conditions that Result in CSO Impacts

- Discharges of combined sewage from the City's remaining CSO outfalls, which occur only as a result of wet weather conditions, affect the bacterial quality of the CSO-Impacted Waters.
- After completion of the installation of all CSO control measures prescribed by the City's LTCP, CSO discharges will occur to the St. Joseph River during only one storm event in a "typical year" as defined in the LTCP and will occur to the other CSO-Impacted Waters during no more than four storm events of a "typical year."

- To the extent that the CSO discharges that are projected to occur after full implementation of the City's LTCP will result in short-term bacterial quality in the CSO-Impacted Waters that does not comply with Indiana bacterial water quality criteria required for full-body contact recreation, this Updated UAA demonstrates that:
    - Consistent with UAA Factor 6, any further reduction in the water quality impacts of these CSO discharges is not attainable because the financial impacts of CSO controls more stringent than those provided under the approved LTCP would result in substantial and widespread economic and social impacts for the community of the City. Furthermore, this Updated UAA demonstrates that the markedly higher costs of implementing CSO controls with sufficient capacity to prevent any uncontrolled CSO discharges in a typical year period would clearly pose a high financial burden on the City and its residential ratepayers and, thus, is infeasible under UAA Factor 6.
    - Bacterial contamination considered highly probable of originating from both (i) naturally-occurring sources and (ii) human-caused sources combine to adversely impact the CSO-Impacted Waters to the extent that the water quality of those waters will not be adequate to support full-body contact recreation even if all CSO discharges (and all separate storm sewer discharges) were hypothetically eliminated. Thus, consistent with UAA Factors 1 and 3, bacterial contamination from naturally-occurring and human-caused sources combine to preclude full-body contact recreation in the CSO-Impacted Waters during those wet weather conditions in which CSO discharges occur after full implementation of the City's LTCP; and
    - It is not feasible to separate the impacts of naturally-occurring and human-caused sources of bacterial contamination to the CSO-Impacted Waters, nor is there any reason to separate those impacts. The simple fact is that the combined impact or these contaminant sources renders these waters incapable of supporting full-body contact recreation during the wet weather conditions that give rise to CSO discharges from the City's CSS after full LTCP implementation.
    - Intermittent stream flow conditions during those wet weather events in which CSO discharges occur after full implementation of the City's LTCP present unsafe conditions for fully-body recreational contact, based on documented experience from USGS field programs and projections from the City's calibrated model. The flow conditions expected during the few remaining post-LTCP CSO activations are well above de-facto safety thresholds used locally by USGS field staff, and also above the more general USGS wading safety criterion.

In short, the Updated UAA demonstrates that attainment of full-body contact recreation is not feasible in the CSO-Impacted Waters during those wet weather periods in which those waters are impacted by CSO discharges that occur notwithstanding the CSO controls installed through the full implementation of the City's approved LTCP. The infeasibility of attainment of the full-body contact recreation use during such periods is due to (i) the point that the costs of installing more stringent CSO controls would result in substantial and widespread economic and social impacts as provided by UAA Factor 6, (ii) independently, the fact that attainment of the current recreational use during those periods will be prevented by unsafe flow conditions, as provided by UAA Factor 2, and (ii), independently, the combined impacts of bacterial contamination from (a) naturally-occurring sources and (b) human-caused sources, as provided by UAA Factors 1 and 3.

7.2 Specific Revision Requested to the Full-Body Contact Recreation Use Designation for the City's CSO-Impacted Waters

Based on the information and rationale compiled in this Updated UAA, the City requests approval by IDEM and EPA of the following revision to the current full-body contact recreation use designation for the CSO-Impacted Waters:

- Approval for application of the CSO wet-weather limited use subcategory, as provided in IC 13-18-3-2.5, to the City's CSO-Impacted Waters, in lieu of the current full-body contact recreation use, during and following any and all storm events that trigger CSO discharges from the City's CSS notwithstanding the City's demonstrated capability to comply with the Performance Criteria prescribed in Section 4 of the City's LTCP (and, in particular, Table 4.2.4.1). For any storm event that triggers CSO discharges from the City's CSS under the foregoing conditions, the duration of applicability of the CSO wet-weather limited use designation should last no more than 96 hours after the conclusion of the storm event. The duration of impact supporting the Wet Weather Limited Use subcategory for each CSO-impacted segment is further summarized in Table 7.2-1.
- The CSO wet weather limited use subcategory, if approved, will be applicable to the following water segments under the wet weather conditions described above:
    - St. Marys River, from its junction with Natural Drain #4 near Tillman Road, to its confluence with the St. Joseph River;
    - Natural Drain #4, from CSO Outfall 054 near the intersection of Hollis Lane and Mercer Avenue, to its junction with the St. Marys River;
    - St. Joseph River, from CSO Outfall 052, located immediately south of Coliseum Blvd., near N. Anthony Boulevard, to the confluence with St. Marys River;
    - Spy Run Creek, from CSO Outfall 036, located north of W. State Street along Eastbrook/Westbrook Drive, to its junction with the St. Marys River south of 4th Street near Lawton Park;
    - Baldwin Ditch, from CSO Outfalls 061 and 062 near the intersection of E. State Street and Barnhart Avenue, to its junction with the Maumee River near CSO Ponds 1 and 2;
    - Harvester Drain, from CSO Outfall 064 to its junction with the Maumee River;
    - Maumee River, from its origin at the confluence of the St. Marys River and St. Joseph River in the City to the boundary between the states of Indiana and Ohio.

Table 7.2-1 Summary of UAA Factors and Durations of Impact Supporting Wet Weather Limited Use

Segment	Factor 1: Naturally Occurring Pollutant Concentrations[1],[3]	Factor 2: Natural or Intermittent High Flow Conditions[2],[3]	Factor 3: Human-Caused Conditions[1],[3]	Factor 6: Substantial and Widespread Economic and Social Impact
St. Marys River, from its junction with Natural Drain #4 near Tillman Road, to its confluence with the St. Joseph River	96 hours (bacteria)	96 hours (flow, depth, velocity)	96 hours (bacteria)	96 hours/ continuous
Natural Drain #4, from CSO Outfall 054 near the intersection of Hollis Lane and Mercer Avenue, to its junction with the St. Marys River[4]	96 hours (bacteria)	48 hours (flow, depth, velocity)	96 hours (bacteria)	
St. Joseph River, from CSO Outfall 052, located immediately south of Coliseum Blvd., near N. Anthony Boulevard, to the confluence with St. Marys River	96 hours (bacteria)	96 hours (flow, depth, velocity)	96 hours (bacteria)	
Spy Run Creek, from CSO Outfall 036, located north of W. State Street along Eastbrook/Westbrook Drive, to its junction with the St. Marys River south of 4th Street near Lawton Park	96 hours (bacteria)	48 hours (flow, depth, velocity)	96 hours (bacteria)	
Baldwin Ditch, from CSO Outfalls 061 and 062 near the intersection of E. State Street and Barnhart Avenue, to its junction with the Maumee River near CSO Ponds 1 and 2[4]	96 hours (bacteria)	48 hours (flow, depth, velocity)	96 hours (bacteria)	
Harvester Drain, from CSO Outfall 064 to its junction with the Maumee River[4]	96 hours (bacteria)	48 hours (flow, depth, velocity)	96 hours (bacteria)	
Maumee River, from its origin at the confluence of the St. Mary's and St. Joseph Rivers to the boundary between the states of Indiana and Ohio	96 hours (bacteria)	96 hours (flow, depth, velocity)	96 hours (bacteria)	

(1) As explained in Section 5.2, there is no practical means to distinguish between the bacteria impact from natural sources and human-caused sources. However, data and modeling results clearly demonstrate that bacteria durations of impact following post-LTCP activation events are independent of CSO frequency and duration and will be controlled by non-CSO sources.
(2) Factor 2 durations of impact were estimated using calibrated model results, specifically total hours above site-specific USGS safety thresholds (see Table 5-3.1) and/or the USGS wading safety criterion of 10 ft^2/s under the instream conditions expected after post-LTCP activation events. Shorter durations of impact for Spy Run Creek, Natural Drain #4, Baldwin Ditch, and Harvester Drain reflect the faster hydrologic response times associated with their smaller local watersheds (as compared to river watersheds).
(3) Durations of impact are based on model projections for the most severe post-LTCP activation events. It is likely that impacts will be felt for shorter periods of time during some post-LTCP activation events.
(4) Estimates for Natural Dain #4, Baldwin Ditch, and Harvester Drain assume that duration of impact metrics developed for Spy Run Creek apply to other urban streams in Fort Wayne. This is consistent with similarities observed across all five local stream watersheds, specifically a) similar hydrologic response time driven by local precipitation, and b) similar urban non-CSO bacteria sources.

- The water quality-based requirements that are applicable to the City's CSO-Impacted Waters during periods of applicability of the CSO Wet Weather Limited Use subcategory to such waters are determined by the City's approved LTCP as provided by IC 13-18-3-2.5. More specifically, such water quality-based requirements consist, implicitly, of the instream water quality in the CSO-Impacted Waters that results from CSO discharges that occur during wet weather conditions after full implementation of the approved LTCP and demonstrated compliance with the prescribed Performance Criteria. It must be recognized that these water quality-based requirements apply only to bacterial impacts of permitted CSO discharges and therefore assume there is no upstream bacterial contamination of the CSO-Impacted Waters. Since the extant water quality data for upstream reaches of the St. Marys River and the St. Joseph River routinely show the presence of significant bacterial contamination, the referenced water quality-based requirements cannot be assessed by ambient monitoring and can be quantified only through modeling of the CSS and the impacted waters. This statement of the water quality requirements of the CSO wet weather limited use subcategory should be utilized, as appropriate, in revisions to the relevant water quality standards and the City's NPDES permit.

References:

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City of Fort Wayne, Indiana, Department of Utilities, 2007, *Financial Capability Assessment for CSO Schedule Development.*

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IDEM, 2008, Nonrule Policy Document No. Water-014, *Application of Existing Use Concept in Conducting Use Attainability Analyses for Long Term Control Plan Communities for Primary Contact Recreational Uses.*

U.S. EPA, *Legacy STORET Database, http://www.epa.gov/storpubl/legacy.*

U.S. EPA, 1994, *Combined Sewer Overflow Control Policy* (59 *Federal Register* 18688, April 19, 1994).

U.S. EPA, 1995, *Interim Economic Guidance for Water Quality Standards,* EPA-823-B-95-002.

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U.S. EPA, Office of Water, 2001, *Guidance: Coordinating CSO Long Term Control Planning with Water Quality Standards Reviews*, EPA-833-R-01-002.

U.S. EPA, Office of Water, 2002, *Wastewater Technology Fact Sheet: Bacterial Source Tracking*. Washington, D.C. EPA-832-F-02-010.

APPENDIX A: Description of the *Typical Precipitation Year*, as excerpted from Chapter 3 of the City's LTCP.

ATTACHMENT 2

TYPICAL PRECIPITATION YEAR

A typical precipitation year was developed for Fort Wayne using long-term precipitation data. Long-term data was available for the period from 1949 through 1996. The purpose of developing a typical year was to provide a sound basis for annual estimates of CSO activity, including the average annual overflow volume, number of events, and number of overflow hours. The typical year is intended to approximate long-term averages relative to these parameters.

The 48-year hourly precipitation record was analyzed using the RAIN utility of XP-SWMM, which is equivalent to the USEPA SYNOP analysis package. RAIN reads hourly precipitation data, organizes the data into events, and computes statistics for each event, including depth, duration, average, and maximum intensity. RAIN also calculates inter-event time. The RAIN utility requires a definition of the minimum inter-event time as input; the inter-event time is used to identify the separation between two events. For the city of Fort Wayne a 6-hour inter-event time was considered an appropriate interval to separate storm events.

The statistical analysis of the 48-year precipitation data record revealed that a group defined by an annual precipitation of 31–35 inches has the highest probability of occurrence. Probability analyses of storm event volume, maximum intensity, average intensity, and storm duration were also performed for the 48- year data record.

Years 1995, 1989, and 1987 were identified as being the closest candidates for a typical year in terms of total annual rainfall. Event data for these years was subsequently examined in detail and compared with the long-term average event data. Year 1995 was found to be very close to a typical year. To convert 1995 into a true typical year, some storm events were added and removed to closely match the long-term average in terms of distribution of storm event sizes within a year. A summary of these storms are presented in Table A2-1.

For example, based on the long-term average, one storm with a volume greater than 2 inches typically occurs during May to October of each year. However, 1995 did not include any such storm. Therefore, the 1995 precipitation data was modified by adding a storm greater than 2 inches from the Year 1990 precipitation data. Similarly, the 1995 precipitation record had larger than normal number of storm events with depths less than 0.09 inches, so several storm events of less than 0.09 inches were deleted from the 1995 data to bring it into agreement with the long-term average.

The resulting typical year consists of 122 storm events with a total depth of 33.18 inches.

Table A2-1

Modifications to Precipitation Year 1995

Date	Start Hour	Duration (Hours)	Volume (in.)	Avg. Intensity (in/hr)	Max. Intensity (in/hr)	Inter Event Duration (hr)
Events Deleted from 1995 Ranfall Data						
1/13/1995	4	4	0.07	0.02	0.06	32
2/15/1995	2	15	0.07	0	0.02	252
7/5/1995	5	2	0.05	0.03	0.04	14
9/8/1995	4	1	0.01	0.01	0.01	9
9/8/1995	16	1	0.01	0.01	0.01	11
12/11/1995	21	3	0.03	0.01	0.01	66
12/13/1995	1	3	0.07	0.02	0.03	25
Events Replaced in 1995 Rainfall Data						
8/17/1995	10	14	1.82	0.13	1.48	44
Replaced with						
5/4/1990	5	14	1.44	0.1	0.33	7
Events Added to 1995 Precipitation Data						
6/18/1995						
Added with						
8/17/1990	17	16	2.2	0.14	0.34	107

APPENDIX B-1: Screening-level Spreadsheet Analysis of the Potential Impact of CSO Wet-weather Bacteria Loads on the Maumee River Downstream of Fort Wayne

Objective

The objective of this analysis was to determine the potential impact of Combined Sewer Overflow (CSO) discharges on the Maumee River downstream of Fort Wayne. The approach used for the analysis was presented to the US EPA and their technical consultant (SAIC) on August 24, 2004; no comments or concerns were voiced by the regulatory reviewers, and the original analysis was included as part of the City's original 2010 Use Attainability Analysis (UAA). This current presentation is an updated version of the original analysis, benefitting from the City's refinements to their water quality model (including extending the model further downstream) and additional water quality data collected since 2010.

This updated version of the original analysis examines the impacts of CSO sources only, under both existing conditions and LTCP conditions. In reality and as described in Sections 4 and 5 of the UAA report, wet-weather bacteria loads result from a number of sources, and the impacts of all sources are unavoidably intermingled in the river. This intermingling makes it difficult if not impossible to separate the impacts of individual sources in a real river using data analysis methods; however, the City's water quality model can be used to predict the impacts specific to CSOs.

The analysis uses predicted *E. coli* concentrations at State Road 101 (the downstream end of the City's detailed water quality model) as its starting point, and projects those concentrations further downstream along the Maumee River, to estimate where the City's CSOs no longer affect the Maumee River's ability to meet the *E. coli* recreational standard of 235 cfu/100ml. State Road 101 is approximately 19 miles downstream of the last CSO in the City's system.

Approach

The modeling of bacteria fate and transport in river systems is a well-established process. Given the nature and characteristics of bacteria dynamics, it is also a simple process relative to many other water quality parameters. The typical bacteria modeling approach is provided in a standard USEPA reference, *"Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling"* (EPA/600/3-85/040). As explained in this document,

> *"Traditionally, coliform modeling has only taken into account disappearance, and a simple first-order kinetics approach has been used."* p. 434.

and

> *"Modeling coliforms usually involves the use of a simple first-order decay expression to describe disappearance."* p. 449.

The governing equations for the "simple first order decay expression," again from the USEPA document, are as follows:

$$\frac{dC}{dt} = -kC \qquad (8\text{-}1)$$

or

$$C_t = C_o e^{-kt} \qquad (8\text{-}2)$$

where C = coliform concentration, MPN or count/100 ml
C_o = initial coliform concentration, MPN or count/100 ml
C_t = coliform concentration at time t, MPN or count/100 ml
k = disappearance rate constant, day^{-1} or hr^{-1}
t = exposure time, days or hours.

The approach used in this analysis was to perform the calculation shown in recommended Equation 8-2 in a spreadsheet template, using the assumptions presented in the next section.

Assumptions

In order to implement the desired calculation using Equation 8-2, several assumptions are required.

- *Bacteria loading rate at State Road 101 (SR101)*: This represents the C_0 value in Equation 8-2. The starting point for the analysis is the SR101 bridge, located downstream of the Fort Wayne urban area, and downstream of all City CSOs. This location represents the downstream boundary of the City's refined water quality model, and also a joint City/IDEM sampling location. As explained above, two loading rates were examined, as follows:

  – 15,500 cfu/100 ml for "Existing Conditions, CSO sources only" – based on peak wet-weather E. coli levels predicted at SR101 during calendar year 1995 (representative of the City's typical year) under the existing condition, CSO sources only scenario. Specifically, this value represents the predicted peak hourly *E. coli* concentration during a large event that occurred on August 17, 1995.
  – 4,900 cfu/100 ml for "LTCP Conditions, CSO sources only" – developed using the same approach as above, but under LTCP conditions, CSO sources only.

  Note that the August 17, 1995, event was chosen intentionally as a conservative indicator of potential *E. coli* impact from CSOs; as a predominantly local rainfall event, it exhibits high overflow rates relative to river flow rates. Most other post-LTCP activation events will result in a lesser *E. coli* impact.

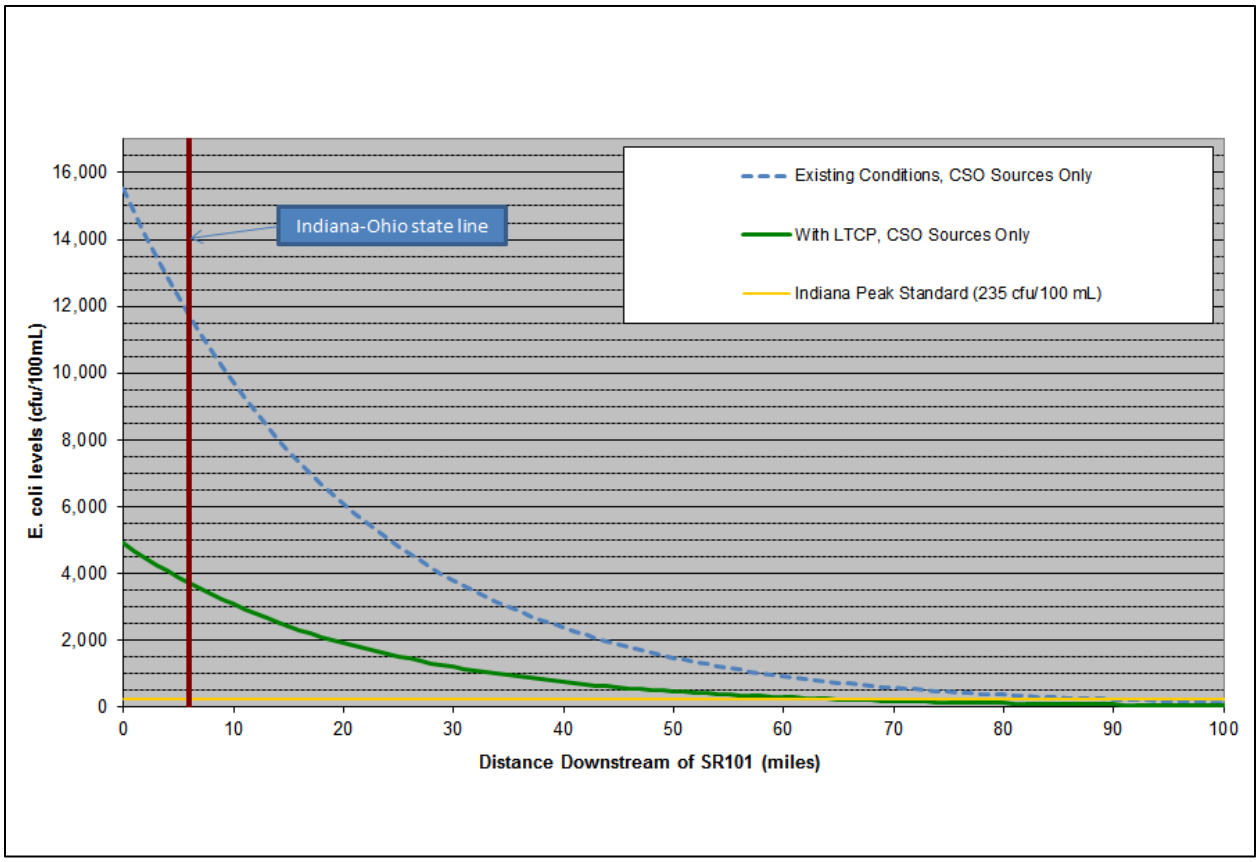
- *Decay rate (k)*: Assumed at 1 day^{-1}. This is a typical value used in bacteria analyses; for example, in 30 studies cited in Table 8-2 of *"Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling,"* the median rate *k* was 0.04 $hour^{-1}$, or 0.96 day^{-1}.

- *River velocity*: In a river setting, exposure time *t* in Equation 8-2 represents travel time moving downstream from the loading point (SR101). Therefore, for increasing time *t*, the distance travelled downstream from SR101 is controlled by river velocity. River velocity was assumed at 1.25 ft/s, representative of predicted river velocity at SR101 during the final stages of a wet-weather event.

Results

The results of applying Equation 8-2 with the above assumptions, in terms of predicted instream bacteria levels as a function of distance travelled downstream of SR101, are shown in the figure below. Given that SR101 is approximately 19 miles downstream of the City's CSO area, *E. coli* levels in the Maumee River due to CSO discharges are conservatively projected to remain above 235 cfu/100ml for approximately 83 miles under post-LTCP activation conditions.

Figure 1 Screening-Level Analysis of Bacteria Levels Remaining as Function of Distance Downstream of SR101



APPENDIX B-2: Model-Based Assessment of the Impact of Upstream Bacteria Sources on River Reaches in Fort Wayne

Objective

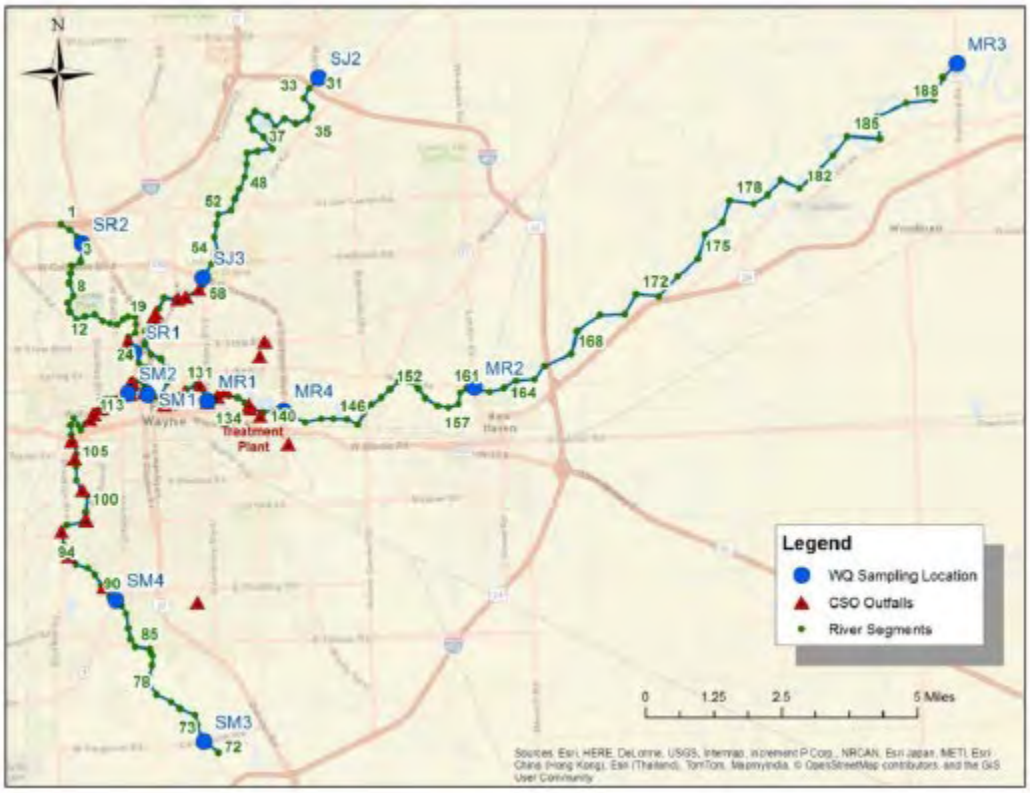
The objective of this analysis was to assess the bacteria impact of upstream sources on the rivers in Fort Wayne. Section 1 of the Use Attainability Analysis (UAA) explicitly identifies the "CSO-Impacted Waters" relevant to the City's submittal – these river reaches are, by definition, impacted by the bacteria in the few CSO discharges remaining after implementation of the LTCP. However, it is important to recognize that all of these reaches are also regularly impacted by non-CSO bacteria sources. In particular, upstream sources have been identified as a dominant contributor to bacteria in the City's rivers, including the CSO-Impacted Waters. The relative impact of these upstream sources can be further examined with the City's water quality model.

The City's water quality model underwent a significant update, expansion, and recalibration effort in 2014-2016, and now serves as an important tool in the City's decision-making process. Relevant background and full details on the water quality model can be found in project documentation[76]. The water quality model starts upstream of the City's CSOs on the St. Marys River and St. Joseph River, and extends well beyond the City's CSOs on the Maumee River (to State Road 101, approximately 19 miles downstream of the last CSO). The extent of the City's model is shown in Figure 1.

[*The remainder of this page is intentionally left blank.*]

[76] "Water Quality Modeling of the St. Joseph, St. Marys, and Maumee Rivers," HDR February 2017.

Figure 1 – Extent of Water Quality Model



Approach

The City's calibrated water quality model explicitly represents different bacteria sources as follows:

- Upstream sources (i.e. inputs at the upstream model boundaries)
- CSO sources
- Stormwater point sources
- Non-point sources
- The City's Water Pollution Control Plant (WPCP), as treated effluent

Each source is assigned unique bacteria concentrations in the model, based on a combination of collected water quality data and calibration of the model to observed in-river concentrations during sampled events.

Given that each source is represented individually, the water quality model provides the City with a tool to examine the relative impact of each of these bacteria source. For the analysis presented in this Appendix, all sources other than upstream sources were assumed to be "clean" – in other words, CSOs, stormwater point sources, non-point sources, and the City's WPCP effluent flowed into the river, but with zero bacteria concentrations. The only bacteria load in

this model run was from upstream sources. In effect, this represents a scenario where the City does not exist as a bacteria source.

The model was run for calendar year 1995, which is representative of the City's typical year, with the Long-Term Control Plan in place (but again, with zero bacteria concentrations for all sources other than upstream sources). Model results were processed to obtain hourly predictions of in-stream bacteria concentrations in all modeled river segments (193 segments).

Results

The hourly bacteria time series were used to calculate "sliding window" 30-day geometric mean (geomean) and 30-day maximum values for in-stream *E.Coli*. In other words, starting on Day 30 of the year, the past (30 x 24) = 720 "samples" were used to calculate a geomean and identify the maximum value from that period. The calculation then slid ahead one hour, and repeated – this process was continued for the full year. The resulting time series of 30-day geomeans and maximum values can then be plotted and compared to Indiana *E. coli* standards.
The results are shown in Figures 2 and 3, for the geomean and maximum values respectively. Four key river reaches are plotted:

- Segment 72, at the upstream model boundary on the St. Marys River (upstream of all CSOs).
- Segment 31, at the upstream model boundary on the St. Joseph River (upstream of all CSOs).
- Segment 127, at the upstream end of the Maumee River (just downstream of the confluence of the St. Marys and St. Joseph Rivers).
- Segment 190, at the downstream model boundary at SR101 (approximately 19 miles downstream of the last CSO).

As can be seen, both the geomean and single sample maximum *E. coli* standards are predicted to be regularly exceeded in all four river reaches due solely to upstream sources. Moreover, these exceedances occur much more frequently than will CSO discharges occur after full LTCP implementation. And, while only the four key reaches are plotted for simplicity, this result is repeated in every river reach, from the upstream model boundaries on the St. Marys and St. Joseph Rivers to the downstream model boundary on the Maumee River.

Figure 2 – Predicted E. coli 30-day geomean for calendar year 1995

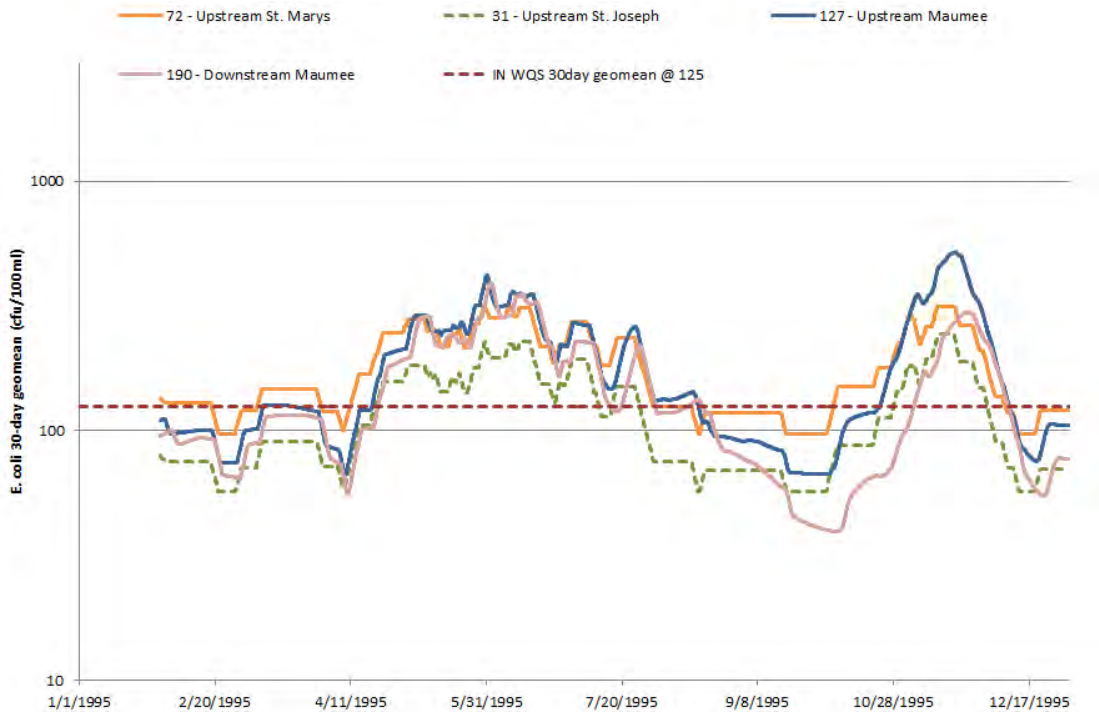
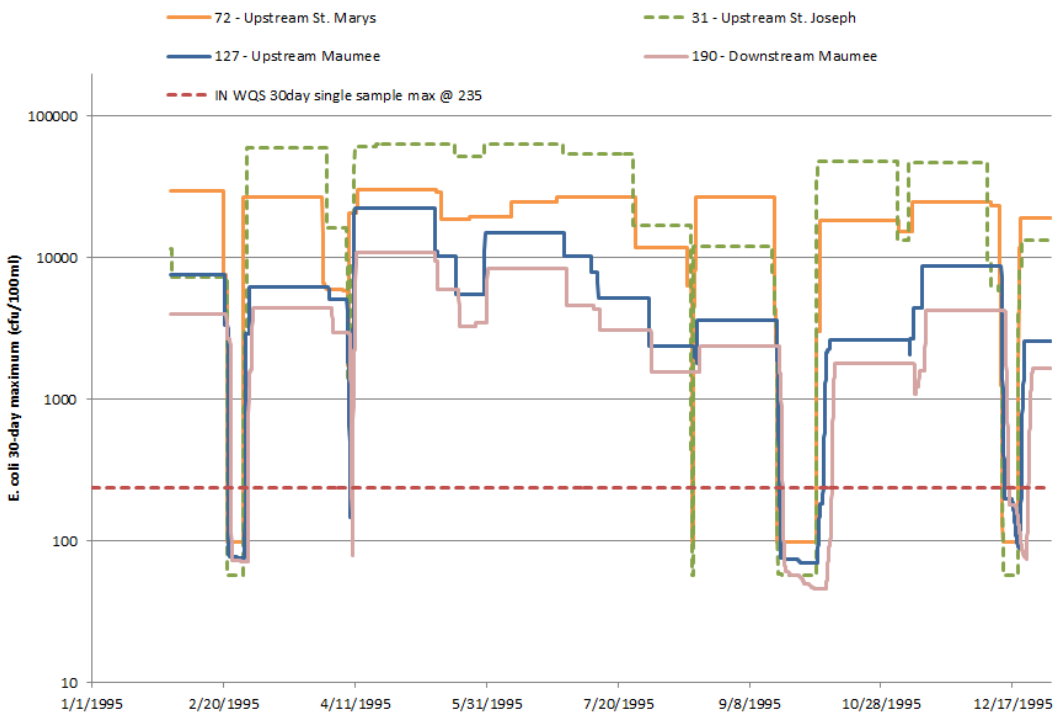


Figure 3 – Predicted E. coli 30-day maximum value for calendar year 1995, Upstream boundary loads only



APPENDIX C-1: Recreational Use Report

Recreational Waterbody Uses in Fort Wayne's Combined Sewer Area

This document is intended to provide an analysis of the recreational uses of rivers and streams in Fort Wayne, Indiana in areas that are affected by combined sewer overflows (CSOs) based on available information sources, including though not limited to surveys, interviews and workshops conducted by City Utilities staff.

OVERVIEW

A variety of methods were used to acquire information on the public's recreational uses of rivers and streams in the Fort Wayne urban area, particularly those portions of the waterways affected by CSO discharges. The collected information indicates that the prevalent recreational activities are those with only incidental water contact, such as walking along river greenways, fishing, and boating, and that a substantial majority of persons surveyed do not use area waterways for any recreational purpose. Full-body contact recreation, such as swimming and water skiing, does not occur, practically speaking, in CSO-impacted waterways. Wading in these waterways is reported only rarely. Downstream uses of the Maumee as it traverses northwestern Ohio were also surveyed and found to be similar to those occurring in the Fort Wayne area. Ohio EPA considers the main stem of the Maumee to be in attainment of its primary contact recreational use designation. Based on the findings of this report, the City of Fort Wayne concludes that there are no sensitive areas associated with primary contact recreation, as defined in the federal CSO Control Policy, located in waterways impacted by the City's CSO discharges.

DISCUSSION

PRIMARY CONTACT RECREATION

- **Swimming**

A literature review of public information sources performed by City Utilities staff did not discover any source that documents or promotes the use of Fort Wayne's rivers for full-body contact recreation. Neither the City nor its Parks and Recreation Department designates any portion of area waterways subject to CSO impacts for public swimming, wading (other than boat ramps), waterskiing or jetskiing. To the contrary, as described later, such activities are discouraged where contact with CSO discharges might occur.

A survey of recreational uses of Fort Wayne area rivers and streams was conducted by City Utilities staff as described in Appendix A. Seventy-three percent (73%) of the survey respondents indicated that, for a variety of reasons, they did not use Fort Wayne area rivers for recreational purposes. Of the twenty-seven percent (27%) of respondents who indicated some recreational use of area waterways, none reported that they or their immediate family members swim in Fort Wayne's rivers. When asked whether they have observed other people swimming in area rivers, only one person reported seeing any such occurrences of swimming.

Anecdotal information indicates that on January 1 of each year, a group known as the Polar Bear Club conducts a Polar Bear Swim in the St. Joseph River at Johnny Appleseed Park. The swim consists of a number of people taking one plunge into the icy water. This activity is, of course, outside the recreational season protected by state water quality standards.

Not only is there a dearth of swimming in area waters, the survey also indicates that there is a relatively high public awareness of the lack of adequate water quality for such recreational activities.

Although Fort Wayne does not have ordinances that prohibit full body contact recreation in CSO-impacted streams, the City discourages such activities through various measures, including the posting of signs at all CSO outfalls and in parks and at other public access points to area streams downstream of CSO outfalls advising that the streams are affected by CSOs and that contact with the water can cause illness. The City also provides other public notification of CSO discharges consistent with an IDEM-approved public notification plan and the Nine Minimum Controls as required by the City's NPDES permit.

An editorial article published in the Fort Wayne Reader, an on-line newspaper (www.fortwaynereadre.com) on September 27, 2004 observes that "there's probably a limit on how much time, energy and money Fort Wayne wants to expend to make sure E.coli levels in the St. Joseph River stay below the EPA's recreational water standards. *After all, no one swims in the St. Joseph River (not on purpose, anyway).*" (Emphasis added)

Another article from the same source, "There's Something in the Water", appeared on September 27, 2004. This and similar articles and items on television and radio, in addition to the City's CSO notification program, help to make citizens aware of concerns about water quality. This article focuses primarily on pesticides in the St. Joseph River but also discusses the presence of E.coli and its adverse health effects.

Fort Wayne's Department of Parks and Recreation operates public swimming pools in four neighborhood parks. In addition, at Headwaters Park, a water feature is provided for children to play in the clean water. It is hoped that, by providing a clean and controlled water recreation venue that is accessible and inviting, playing in the river within the park boundaries can be effectively discouraged.

- **Waterskiing and Jetskiing**

These recreational activities typically involve considerable water contact. The only information available on the occurrence of these activities in the Fort Wayne area arises from the recreational use survey conducted by City Utilities staff. Of the survey respondents who indicated some recreational use of area waterways, only one respondent stated that he or she participated in waterskiing. No location was provided for this activity. None acknowledged jetskiing on the rivers. For those survey respondents reporting observation of others engaging in waterskiing or jetskiing, a very high preponderance of the observations (13 of 15) related to the St. Joseph River upstream of the CSO-impacted area or other waterways with no

CSO impacts. Two respondents reported having seen waterskiing or jetskiing on the St. Joseph River or the Maumee River without specifying a particular area.

- **Wading**

Only two respondents to the recreational use survey (of 115 total) stated that they or family members had waded in area rivers. The St. Joseph River and Foster Park were mentioned as wading locations. A few respondents reported seeing other people wading in the rivers. However, only swimming and sailing/windsurfing were reported less often than wading. During the Johnny Appleseed Festival in 2004, the level of the St. Joseph River was very low as a result of a dry summer. During the two-day event, festival organizers noticed "a handful" of children and adults wading and playing in the river.

- **Conclusions on Primary Contact Recreation**

Recreational activities involving or approaching full-body contact with area rivers within CSO-impacted reaches are virtually non-existent. Survey respondents reported that they do not swim or jetski in waterways affected by CSO discharges and had only rare involvement in waterskiing (one respondent who did not specify a location) or wading (only two respondents). Furthermore, survey respondents reported similarly rare observations of others engaging in primary contact recreation in Fort Wayne's waterways. Also, there is no information indicating any occurrence of such activities during or soon after storm events.

In view of the collected information, the City posits that there are no recreational sensitive areas in the waterways affected by CSO discharges. No primary contact recreation is found in these waterways aside from rare, isolated occurrences or observations, and none has been reported during or immediately following rainfall. Analogizing to the principles of IDEM's LTCP/UAA guidance, such occasional or incidental instances of recreational use do not establish recreational sensitive areas.

RECREATIONAL ACTIVITIES WITH POTENTIAL INCIDENTAL CONTACT

The City's Recreational Use Survey indicates that walking along river greenways, fishing, and boating are the overwhelmingly predominant recreational activities associated with rivers and streams located in the Fort Wayne urban area. These activities generally involve, at most, incidental or secondary contact with waters of area rivers.

- **Boating/Sailing/Canoeing**

The Fort Wayne Department of Parks and Recreation identifies a number of park sites on CSO affected waters where launching areas are available for boating or sailing:

- Johnny Appleseed Park on the St. Joseph River has a boat launch. The launch are itself is located upstream of the City's first upstream CSO. However, because of the boat launch location just downstream of the St. Joseph River dam, most boaters will take a downstream course into CSO affected waters.

- St. Marys River at Guilden Park – boat ramp operated by DNR
- Maumee River boat launch near Maumee Park. This launch site is located between Fort Wayne and New Haven.

The Indiana Department of Natural Resources (DNR) web site contains an Indiana Canoeing Guide that describes a canoe trail on the St. Joseph River. The trail guide focuses on the river upstream of the St. Joseph River Dam and upstream of the CSO affected area. This site does not encourage canoeing downstream of the dam nor does it suggest canoe trails on the St. Marys or Maumee rivers in the Fort Wayne area.

The DNR's recommendations are mirrored by respondents to the City's recreational use survey. Canoeing and kayaking activities were stated as occurring predominantly on the St. Joseph River north of the CSO-impacted area. Limited use of the St. Joseph River within the area of CSO impacts is apparently indicated as well by survey respondents.

In the September/October 2004 edition of Fort Wayne magazine, an article entitled "Three Rivers Run Through It" highlighted canoeing and kayaking opportunities in downtown Fort Wayne, within the CSO area. The article focused on the "peace, quiet and sightseeing" available on the rivers.

The Fort Wayne Kayak Club in cooperation with a local outdoor outfitter sponsors evening canoe trips on Fort Wayne's rivers during the recreational season from April through the end of August. These trips reportedly take place two times per month.

There is no information available which indicates that any of the above-referenced recreational activities occur during wet weather events. To the contrary, those respondents to the recreational use survey who reported some use of area waterways for recreation voiced their avoidance of such activities during rain events or during high water conditions. More than half of such respondents stated that they would not boat or canoe on the rivers either when it is raining or when the river levels are high. Odors were also mentioned as a factor that would keep people from using the rivers, but it was not mentioned as often as rain or high water.

- **Fishing**

In 1989, the Division of Fish and Wildlife of the DNR undertook a project to locate and describe existing fishing waters and to document then-current access facilities in Fort Wayne. As a result of that study a paper was prepared in 1990 entitled: "Current Fish Resources and Fishing Opportunities in Fort Wayne, Indiana." The study identified the following fishing locations in Fort Wayne that are on CSO affected waters.

- St. Joseph River at Johnny Appleseed Park just downstream of the St. Joseph River Dam
- Spy Run Creek at Lawton Park
- St. Marys River at Foster Park
- St. Marys River at the Bluffton Road Bridge

- Pond in Swinney Park. The pond is located in the St. Mary's River flood plain and is subject to frequent flooding by the river.
- St. Marys River at Guilden Park
- Maumee River at Hosey Dam
- Several other sites were identified in this study. However, those sites are not on waters that are impacted by CSOs.

Currently the DNR lists the following locations within the City of Fort Wayne on its website under "Fishing: Where to Fish in Indiana":

- St. Joseph River from Coliseum Boulevard to the confluence of the Maumee River for smallmouth bass, crappie and walleye
- St. Marys River at Guilden Park for carp, catfish and walleye
- Maumee river off US 24 east of Webster Road for catfish and walleye

The Fort Wayne Parks and Recreation Department lists on its website several locations within Fort Wayne City Parks where fishing is available. Several of these are on CSO affected rivers or streams and some of them duplicate the fishing locations identified in the 1990 report by the DNR:

- St. Joseph River at Johnny Appleseed Park just downstream of the St. Joseph River Dam
- Spy Run Creek at Lawton Park
- St. Marys River at Foster Park
- St. Marys River and pond in Swinney Park
- St. Marys River at Guilden Park
- St. Marys River at Bloomingdale Park East and West

In conducting a foot survey of the Maumee River, Fort Wayne City Utilities staff identified two other well-used, but informal fishing areas:

- North side of the river near the large stormwater outfall at Niagara and Pemberton Avenues
- North side of the river where the Water Pollution Control Plant's Pond #2 discharges into the relief channel.

In 2004, a number of fish consumption advisories issued by the Indiana State Board of Health were in effect for various fish types found in Fort Wayne's rivers. In addition to the Statewide advisory for carp based on PCBs, other advisories are in effect in Allen County at various levels for the following species:

- St. Marys: bigmouth buffalo, black redhorse, carp, channel catfish, largemouth bass, quillback, silver redhorse, white sucker. All advisories are based on PCBs. In addition, the advisory for largemouth bass is based on mercury as well.

- Maumee River: bigmouth buffalo, carp, channel catfish, largemouth bass, river redhorse, rock bass, sauger, shorthead redhorse and walleye. The advisory on all of these species is based on PCBs.
- St. Joseph River: black crappie, black redhorse, channel catfish, golden redhorse, rock bass. All advisories on the St. Joseph are based on PCBs.

Observations by City staff and anecdotal information suggest that the majority of fishing in Fort Wayne's rivers is done from the bank. Most survey respondents who reported that they fish in the rivers did not indicate use of the rivers for boating. Conversely, most who reported canoeing did not report fishing. The data therefore suggest that most fishing is bank fishing. This coincides with observed behavior.

- **Walking along River Greenway Trails**

Fort Wayne operates more than 15 miles of greenway trail connecting the parks that are adjacent to the City's rivers and streams. Public use of these greenway trails for exercise and relaxation is the primary water-related recreation occurring in the urban area.

The Fort Wayne Parks and Recreation Department website identifies a number of locations in parks affording public access to the river greenway.

St. Joseph River at Johnny Appleseed Park
St. Joseph River at Hanna's Ford
St. Marys River at the Historic Old Fort
St. Marys River at Bloomingdale Park E & W
St. Marys River at Swinney Park
St. Mary's River at Foster Park
St. Marys River at Griswold Avenue Playlot
St. Marys River at Guildin Park
St. Marys River at Indian Village/Sears Park
St. Marys River at Roosevelt Park
St. Marys River at Traders Point
St. Marys River at Headwaters Park
St. Marys River at Orff Park
Maumee River at Lakeside Park
Spy Run Creek at Lawton Park
Wayne ND #4 at Tillman Park

Most of these public access points, especially those within close proximity to a combined sewer overflow outfall, are marked with signage stating that the water is affected by CSOs during wet weather and that contact with the water can cause illness.

During the fall of 2004, City Utilities staff did an on-foot survey of the riverbanks along the Maumee River. The purpose of the survey was to examine the riverbanks for areas that might be conducive to public access to the river and to identify areas with evidence that access had

been occurring. The bank survey found that such public access points are already identified on the City's Combined Sewer Overflow Outfall Location map.

City Utilities staff are currently conducting a more intensive riverbank survey of waterways affected by CSO discharges to identify those areas where physical characteristics of the riverbanks, such as steep slopes or dense vegetation, discourage or preclude access to waterways and, conversely, those areas whose characteristics are conducive to public access. GIS coordinates of significant features will be recorded.

- **Golf Courses**

Several public and private golf courses abut the rivers.

- One publicly owned golf course is located in Foster Park on St. Mary's River within the CSO affected area.
- Fairview Golf Course is privately owned and is bisected by the Wayne Natural Drain #4 downstream of a CSO.
- Lakeside Golf Course is located on the Maumee River, just downstream of the Coliseum Boulevard Bridge.
- Maumee Valley Golf Club is located within the City of New Haven adjacent to the Maumee River.

As with the greenways, the City's waterways contribute to the ambience at the golf courses but are not directly involved in the recreational activity, except, perhaps, for luckless individuals seeking to retrieve errant shots.

Use of area rivers as a backdrop for walking along their greenways is the primary water-related recreation in the Fort Wayne urban area. Fishing and, to a lesser extent, boating are also among the predominant water-based recreational activities in the area. For all these activities, contact with river waters is an incidental or secondary aspect, usually of an accidental or unintended nature. As previously mentioned, there is a high level of public recognition of the incidence of CSO discharges during wet weather and, by all indications, the public shuns these recreational activities during wet weather events.

COMMUNITY EFFORTS TOWARD IDENTIFICATION OF WATER QUALITY GOALS

In 1997, Fort Wayne City Utilities initiated the development of a "Total Quality Watershed Management" (TQWM) approach to help coordinate various water quality related efforts in Fort Wayne and the Upper Maumee River Basin. An early element of the TQWM program was the establishment of community-based water quality goals.

As a part of this process, the City solicited information about community attitudes and ideas about watershed management using two methods: stakeholder interviews and a series of three community involvement workshops.

Approximately 75 community stakeholders were interviewed between April 18 and 20, 1997. They were asked to identify water quality concerns, water quality goals, visions for use of the rivers and willingness to pay to implement the visions. Some of these same stakeholders participated in the public involvement workshops that included certain city and county elected officials and staff, the citizen advisory group that had been working with the City on water quality issues, representatives of the St. Joseph River Watershed Initiative, soil conservation and environmental groups, the Chamber of Commerce, and the agricultural industry, members of the media and private citizens.

A majority of those interviewed said that drinking water protection was the most important objective to be achieved through better management of the local watersheds. A secondary concern was public health, with issues related to agricultural runoff, industrial discharges and CSO discharges being the foremost public health concerns. When asked about their desire to have the local rivers be fishable and swimable, the majority of stakeholders did not think of this goal as practical. However, nearly half of those interviewed said that this it an appropriate goal, even though it may never be achieved.

The majority of interviewees also indicated that they, their friends and neighbors use the rivers in and around Fort Wayne for various activities, with the most popular activities being walking on the river greenway, fishing and boating. This collective description of waterway uses is consistent with the results of the City Utilities' recent recreational use survey. Stakeholders expressed a desire for improvement in overall recreation, including better access to the greenway. A large number of those interviewed wanted improved boating, boat accessibility and more docks and ramps. When asked about their visions for the rivers, most stakeholders mentioned better river water quality, more opportunities for contact and non-contact recreations and a better appearance of the rivers.

During the third workshop, participants prioritized the identified water quality goals by deciding how they would allocate a limited number of "greenbucks" to achieving each goal.

Based on the allocation of greenbucks, the participants voted their top priorities to be:

1. drinking water protection
2. habitat
3. E.coli
4. odor
5. litter and debris

DOWNSTREAM USE SURVEY – Maumee River

As part of the City's Long-Term Control Plan, a screening-level water quality analysis was conducted to estimate downstream bacteria levels in the Maumee River during and after wet-weather events. This analysis indicated that instream E. Coli levels due to wet-weather bacteria sources in and upstream of Fort Wayne have the potential to remain above the Indiana and Ohio Primary Contact Recreation standard for approximately 72 miles downstream of the City, a distance that would extend three miles into western Henry County, Ohio. These projections are based on a number of conservative assumptions, and include all

wet-weather sources in and upstream of the City, and so represent the maximum potential bacteria effect of Fort Wayne's CSOs.

Although these conservative projections identify the potential for elevated bacteria levels to extend into Ohio, the Ohio Environmental Protection Agency (Ohio EPA) considers the main stem of the Maumee River to be in attainment of its recreational use designation, i.e., Primary Contact Recreation. Ohio EPA's current 303(d) list of impaired waterbodies is included in the *Ohio 2004 Integrated Water Quality Monitoring and Assessment Report*, and was approved by U.S. EPA on May 5, 2004. This listing shows the main stem of the river from the Indiana state line to Lake Erie as impaired for Aquatic Life Use but NOT impaired for Recreation Use – Primary Contact. The Ohio EPA recreational use assessment was based on analysis of 881 fecal coliform samples, collected from 8 sampling sites on the Maumee from 1998 to 2003. Details on the Ohio EPA evaluation methods are contained in Section 6 of the *Ohio 2004 Integrated Water Quality Monitoring and Assessment Report*

Because the Ohio EPA considers the main stem of the Maumee River to be in attainment of its recreational use designation, the presence of primary contact recreation areas in Ohio would have no ramifications on CSO control decisions in Fort Wayne. However, as part of developing a thorough understanding of downstream conditions and impacts, City Utilities staff prepared and transmitted written survey instruments in May, 2005, to downstream county health departments, park departments, emergency management agencies and soil and water conservation districts in Paulding, Defiance and Henry Counties of the State of Ohio and city or town officials in Antwerp and Defiance in Ohio. A survey was also sent to the Independence Dam State Park in Defiance County. Of the fourteen surveys mailed, six were completed and returned.

The survey results indicate recreational activities comparable to those identified in the City's survey of its residents. Fishing and boating tend to predominate and a substantial majority of users are adults. Some wading and playing along riverbanks are also reported during the recreational season. In Defiance, Ohio, water skiing and jetskiing are also reported in city parks located along the Maumee. Swimming is not mentioned by respondents; it appears that the public looks to off-river facilities such as public swimming pools rather than the river to engage in this activity.

It should be noted that between Fort Wayne and Henry County, the City of New Haven in Indiana and 11 communities in Ohio also have combined sewer overflows that release into the Maumee River. The City of Defiance is the largest CSO community in this area of Ohio, with a total of 44 local CSOs.

Overall Conclusions

In view of the information contained in this report and summarized below, the City posits that there are no recreational sensitive areas in the waterways affected by CSO discharges. Aside from rare, isolated occurrences or observations, no primary contact recreation is found in these waterways and none has been reported during or immediately following rainfall. Analogizing to the principles of IDEM's LTCP/UAA guidance, such occasional or incidental instances of recreational use do not establish recreational sensitive areas.

Recreational uses of CSO-affected waterways in the Fort Wayne urban area are not carried out on an organized basis and are intermittent to incidental. The primary public use of the rivers is as a landscape feature or backdrop to other activities, including, most prominently, walking or running along Fort Wayne's River Greenway. The other predominant recreational uses are fishing, canoeing, and boating. For all these activities, contact with river waters is an incidental or secondary aspect, usually of an accidental or unintended nature.

Recreational activities involving or approaching full-body contact with area rivers within CSO-impacted reaches are virtually non-existent. Survey respondents reported that they do not swim or jetski in waterways affected by CSO discharges and had only rare involvement in waterskiing (one respondent) or wading (two respondents). Similarly rare observations of others engaging in primary contact recreation in Fort Wayne's waterways were reported by survey respondents. Also, there is no information indicating any occurrence of such activities during or soon after storm events.

There is no adverse impact by the City's CSO discharges on downstream recreational uses. Although worst-case conservative projections identify the potential for elevated bacteria levels to extend into Ohio, the Ohio EPA considers the main stem of the Maumee River to be in attainment of its recreational use designation, i.e., Primary Contact Recreation. Ohio EPA's current 303(d) list of impaired waterbodies does not show the Maumee River as impaired for Recreation Use – Primary Contact.

The reasons cited most often by people who say they do not use Fort Wayne's rivers for recreational purposes are the appearance (turbidity), color, and odor of the waters and the perception that the rivers are polluted. Although not stated by those surveyed, steep river banks and other factors limiting available access points to the waterways are likely contributors to the lack of primary contact recreational activities.

There is a high level of public recognition of the incidence of CSO discharges during wet weather and, by all indications, the public shuns these recreational activities during wet weather events. Fort Wayne's combined sewer overflow notification program is intended to provide information to the public about river water quality and to make them aware of the risks of full-body contact with CSO affected rivers and streams.

APPENDIX A – Information Sources

Literature Search

City Utilities staff conducted a review of newspaper and magazine articles, published reports, and websites concerning documented recreational usage of Fort Wayne area waterways.

Surveys of Recreational Uses

- **Web Survey**

The recreational uses survey was posted on the City of Fort Wayne website (www.cityoffortwayne.org) from February 1, 2005 – March 15, 2005. It was posted as a NEW! item on the City's homepage. **No responses were received.**

- **Survey of Potential River Users**

The Johnny Appleseed Festival takes place in Fort Wayne on the west bank of the St. Joseph River in Johnny Appleseed Park. It is held annually during the third weekend in October. During the Festival in 2004, random intercept surveys were conducted concerning uses of Fort Wayne's rivers.

Recreational use surveys were also distributed to three local bait stores in Fort Wayne during November 2004. The surveys were left with the owner or manager who was asked to distribute the surveys to customers and collect the responses. Surveys were collected by City staff every two weeks. The same survey instrument was used as was used for the random intercept surveys at the Johnny Appleseed Festival.

- **Survey of Fort Wayne Neighborhoods**

The same survey instrument was distributed to Fort Wayne neighborhoods using two methods. The availability of the web survey was announced to Fort Wayne's Sewer Advisory Group. Most members of the Advisory Group are active members of their neighborhood associations. SAG members were also provided with copies of the survey to be distributed.

The overall results of these surveys are shown in Appendix B.

Anecdotal Information

Anecdotal information on observed an actual river uses has been solicited from a number of sources including:
Sewer Advisory Group
Dan Wire – an avid river user
Jack Stark with the Fort Wayne River Greenway Consortium
Fort Wayne Parks Department
The Director of Headwaters Park
The Fort Wayne Kayak Club

APPENDIX B

Results of Surveys of Recreational Use of Fort Wayne Area Waterways

Recreational Waterbody Uses in Fort Wayne's Combined Sewer Area Supplemental Data Analysis

At the request of U.S. EPA and IDEM the City of Fort Wayne (the "City) collected additional information to supplement the draft Recreational Waterbody Uses in Fort Wayne's Combined Sewer Area report submitted to said agencies on July 7, 2005. This memorandum presents the requested additional information. As is explained below, the additional information well supports the conclusion of the City's July 7, 2005 submission that there are no sensitive areas associated with primary contact recreation, as defined in the Federal CSO Control Policy, located in waterways impacted by the City's CSO discharges.

Random intercept surveys, neighborhood surveys and anecdotal information collected in late 2005 and early 2006 from a variety of creditable sources indicated, as previously reported, that full-body contact recreational uses of the three rivers is minimal. The original surveys included only one report of an observed occurrence of swimming in Fort Wayne's rivers and only two respondents who reported that they or some member of their family had used Fort Wayne's rivers for wading. Based on the original survey work, Fort Wayne concluded that recreational uses of the rivers in the CSO affected area is not carried out on an organized basis but is intermittent to incidental. The primary use of the rivers is as a landscape feature or background for other activities, particularly walking or running along the Greenways. The other predominant recreational uses are canoeing, boating and fishing – all activities that do not involve full-body contact or the risk of ingesting river water.

In order to provide additional verification of the findings and conclusions of the City's original recreational use surveys, the City used two additional methods to corroborate this data in the fall of 2005. During Labor Day weekend, City Utilities staff members walked and biked along the City's rivers in order to observe river uses. A three-day holiday weekend with sunny skies and temperatures in the 80's provided a prime opportunity to observe human interactions with river water – if there were any. Four City employees spent approximately 16 hours making observations along the rivers throughout the Labor Day weekend.

The City also asked its corps of volunteer Greenway Rangers to provide information about recreational uses of the rivers that they may have observed during the 2005 recreational season. The Greenway Rangers patrol Fort Wayne River Greenway system looking for safety or other concerns related to the City's 17.5 miles of greenway trails. Because many of the trails are adjacent to the rivers, the Greenway Rangers may have observed people interacting with the rivers. Surveys were returned from eleven Rangers. Some of them reported activity that they had observed over the course of the summer. These may appear in the attached spreadsheet without specific dates or as activities that they may have observed "occasionally." Other Rangers provided new observations with specific dates and times during the month of September 2005.

The City staff that made observations during Labor Day weekend 2005 and the Greenway Rangers used the same data observation forms to record information. Both groups were provided with definitions for various kinds of activities that they might observe. The data sheets and definitions are attached. In this set of data collection, our observers were not asked to report on numbers of people who were walking along the river banks or using the greenway trails. They were asked to specifically observe for activities that might bring people into direct contact with the water

The new observational data, as summarized in the following bullets, is consistent with the survey information previously collected and reported.

- No swimming, wading or water skiing was observed on the days when staff or volunteers reported seeing activity on the rivers. This provides additional documentation for the original conclusion that there is no primary contact recreation.
- One instance of jet skiing was reported. In reviewing the data, City staff were somewhat surprised by this observation because jet skiing at this location had not been reported in the past. The information supports the assertion that any recreational use is not organized but is intermittent to incidental.
- Of the 24 observations reported in the fall of 2005, 18 involve fishing from the bank or bridge, fishing from a boat, boating or canoeing. These activities do not involve full body contact and have no inherent risk of ingesting river water.
- The reports of a man letting his dog play in the river and playing at the stream bank – although not wading -- suggest that any contact with the water is incidental to other activity and that full body recreation is not the intent of those interacting with the rivers.

Observational data collected in the late summer of 2005 provide further support for the conclusion that primary contact recreational activity on Fort Wayne's CSO affected waters is rare and isolated. Our conclusions remain that the primary use of the rivers is as a landscape or backdrop for other activities. Actual recreational activities directly involving the rivers consist of non-full body contact recreational activities such as fishing and boating.

Observed River Uses

	Location	Activity	Dates	Frequency	No of people	Weather
St. Joe						
	Johnny Appleseed park @ dam	fishing from dam wall	9-Sep-05	once	5	warm
	Johnny Appleseed Park	fishing from overlook	11-Sep-05	once	2	warm/evening
	St. Joe Dam boardwalk	fishing	4-Sep-05	once	4	sunny/85
	2 miles n. of confluence	playing at streambank on Stevic's island	4-Sep-05	once	3	sunny/85
	Near Elizabeth St./Griswold and Lafayette	Jetskiing	4-Sep-05	once	2	sunny/85
St Mary's						
	Under Harrison St. Bridge	Boys playing at bank	June, July, Aug	weekly	4	
	Sherman St. bridge	Boys playing at bank	June, July, Aug	weekly	4	
	Main Street railroad bridge	Boys throwing rocks from bridge	June, July, Aug	weekly	2 -- 4	Various weather conditions:
	West of Sherman St. bridge -- bench by Greenway	people sitting in chairs by bank/fishing	June, early AM	weekly	2 -- 4	sunny/pt. Sunny/ misty
	Confluence	boating in small motor boat	July -- evening		2	sunny
	Guldlin Park boat launch	people w/boat	Aug, Sept	Sundays	2+	
	Near Old Fort Bridge	canoeing	3-Sep-05	once	1	sunny
	E. of Sherman St. bridge on north bank	Fishing	17-Sep-05	once	2	partly cloudy
	Foster Park near Rudisill Ave	Fishing	3-Sep-05	once	2	sunny/80
	NFS railroad bridge	man letting dog play in water	Sept. 3, 2005	once	1	sunny/80
	South of Foster Park	Fishing from boat	Early May - AM	once	2	sunny
	North shore just east of skate park	fishing	9/26/2005 @5:30 PM	once	1	Partly cloudy/70
	Clearing between Taylor St. and Jefferson Blvd.	Fishing from bank	10/1/05 @10:30 AM	once	2	Pt. Cloudy

Maumee

north bank at Pemberton	Fishing	May, June, July	Occasional	2 -- 4	
Lake Ave bridge	Fishing from bridge	evenings	Occasional	1 -- 2	
Between Kreager Park and Landin Road	Boating	11-Sep-05	once	2	warm/sunny
Around Kreager Park	People riding in air boat	late June or early July	once	2	sunny/evening
East of Anthony Bridge	Fishing from bank	Mid June - afternoon	once	4	sunny/hot
WPCP outfall	Fishing from bank	all summer	daily	1 -- 10	warm/dry

APPENDIX C

Downstream Use Survey – Maumee River

In May 2005, Fort Wayne sent written survey instruments to downstream county health departments, park departments, emergency management agencies and soil and water conservation districts in Paulding, Defiance and Henry Counties and city or town officials in Antwerp and Defiance in Ohio. A survey was also sent to the Independence Dam State Park in Defiance County. These areas were chosen for surveying based on a screening-level water quality analysis that indicated instream E. Coli levels due to wet-weather bacteria sources in and upstream of Fort Wayne have the potential to remain above the Indiana and Ohio Primary Contact Recreation standard for approximately 72 miles downstream of the City. Therefore, the limits of Fort Wayne's maximum potential bacteria effect on downstream communities would be three miles into Henry County. It should be noted that despite these projections, the Ohio EPA considers the main stem of the Maumee River to be in attainment of its recreational use designation, i.e., Primary Contact Recreation.

Fourteen surveys were mailed; five were returned.

Antwerp, Ohio – Riverside Park

Fishing	weekly during recreation season, never during off-season	75% adults/25% children
Canoeing	monthly during recreation season, never during off-season	100% adults
Wading	monthly during recreation season, never during off-season	50% adults/50% children
Wading during duck race annually in August		100% adults
Fishing tournament annually in June		50% adults/50% children

Defiance, Ohio – Kingsbury Park

Fishing	fishing daily throughout the year	80% adults/20 % children
Boating	daily during recreation season, never during off-season	75% adults/25% children
Playing@ bank	daily during recreation season, weekly during off-season	55% adults/45% children
Wading	daily during recreation season, never during off-season	40% adults/60% children
Water/Jet skiing	daily during recreation season, never during off-season	50% adults/50% children

Defiance, Ohio – Independence Park

Fishing	daily throughout the year	75% adults/25% children
Boating	daily during recreation season, never during off-season	75% adults/25% children
Playing @bank	daily throughout the year	70% adults/25% children
Wading	daily during recreation season, never during off season	50% adults/50% children
Water/Jet skiing	weekly during recreation season, never during off-season	55% adults/45% children

Defiance, Ohio – Pontiac Park

Boating	daily during recreation season, weekly during off-season			80% adults/20% children
Canoeing	"	"	"	"
Kayaking	"	"	"	"
Water/Jet skiing	"	"	"	"

Independence Dam State Park – Defiance County, Ohio

Among the amenities noted on the Independence Dam State Park website are a three mile hiking trail along the bank of the Maumee River, a boat ramp, canoe/kayak portage and a fishing pier.

Boating	daily during recreation season, weekly during off-season			75% adults/25% children
Fishing	"	"	"	"
Playing @ bank	"	"	"	"
Wading	"	"	"	"

APPENDIX C-2: 2019 River Use Observation Survey Form

2019 River Use Observation Survey

Observation Period - Recreational Season (April to October 2019)

Fort Wayne City Utilities

12/1/2019

Name of Group/Organization Taking Survey: _____

Please check the box below for each river and activity that is CLOSEST to your OBSERVATION for Each Water Body and Activity
Please also briefly explain/indicate on line provided how frequently you TYPICALLY would VIEW/VISIT each Water Body listed

Date Completed: _____

Water Body / River Activity	Activities Observed During DRY WEATHER OR LOW RIVER CONDITIONS (NOT within 48 hours after a large rain)					Activities Observed During WET WEATHER OR HIGH RIVER CONDITIONS (or within 48 hours after a large rain)				
	Observed Activity Almost Every Day during Season	Observed Activity Multiple Times a Month in Season	Observed Activity a Few Times a Month in Season	Observed Activity Only a Few Times in Entire Season	Activity Not Observed at All	Observed Activity Almost Every Day during Season	Observed Activity Multiple Times a Month in Season	Observed Activity a Few Times a Month in Season	Observed Activity Only a Few Times in Entire Season	Activity Not Observed at All
St Joseph River (St Joe Dam to Maumee River confluence)										
Frequency of view/visit of this Water Body (i.e. hours a day, daily, weekly, monthly, do not observe at all, etc.) _____										
Fishing										
Boating (motor boat, canoe, kayak)										
Water/Jet Skiing, Paddle Boarding										
Wading										
Swimming										
St Mary's River (Tillman Road to Maumee River confluence)										
Frequency of view/visit of this Water Body (i.e. hours a day, daily, weekly, monthly, do not observe at all, etc.) _____										
Fishing										
Boating (motor boat, canoe, kayak)										
Water/Jet Skiing, Paddle Boarding										
Wading										
Swimming										
Maumee River (St Joseph River confluence to Anthony Blvd / Hosey Dam)										
Frequency of view/visit of this Water Body (i.e. hours a day, daily, weekly, monthly, do not observe at all, etc.) _____										
Fishing										
Boating (motor boat, canoe, kayak)										
Water/Jet Skiing, Paddle Boarding										
Wading										
Swimming										
Maumee River (Anthony Blvd/Hosey Dam to eastern edge of Allen County)										
Frequency of view/visit of this Water Body (i.e. hours a day, daily, weekly, monthly, do not observe at all, etc.) _____										
Fishing										
Boating (motor boat, canoe, kayak)										
Water/Jet Skiing, Paddle Boarding										
Wading										
Swimming										

APPENDIX C-3: Four Tributary Segments – Maps and Photographs

Spy Run Creek

May 5, 2020

This map is intended for general reference purposes only. The information displayed herein is not guaranteed to be completely accurate or all inclusive.

Spy Run Creek

Looking Downstream from Elizabeth Street – Dry Weather

Looking Downstream from Elizabeth Street – Wet Weather

Baldwin Ditch

May 5, 2020

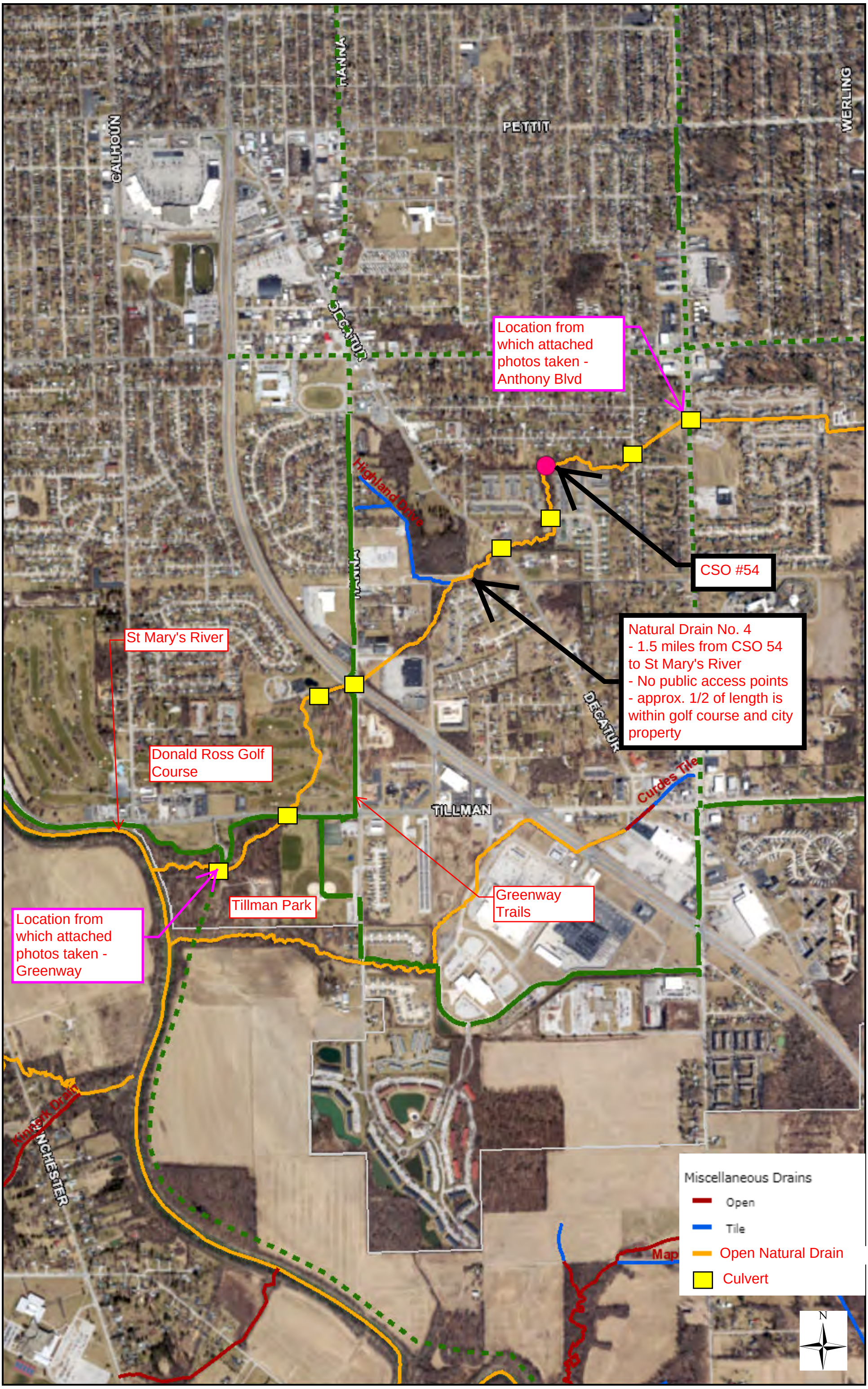
This map is intended for general reference purposes only. The information displayed herein is not guaranteed to be completely accurate or all inclusive.

Baldwin Ditch

Looking Downstream from Lake Avenue – Dry Weather

Looking Downstream from Lake Avenue – Wet Weather

Natural Drain No.4



May 5, 2020

Natural Drain No. 4

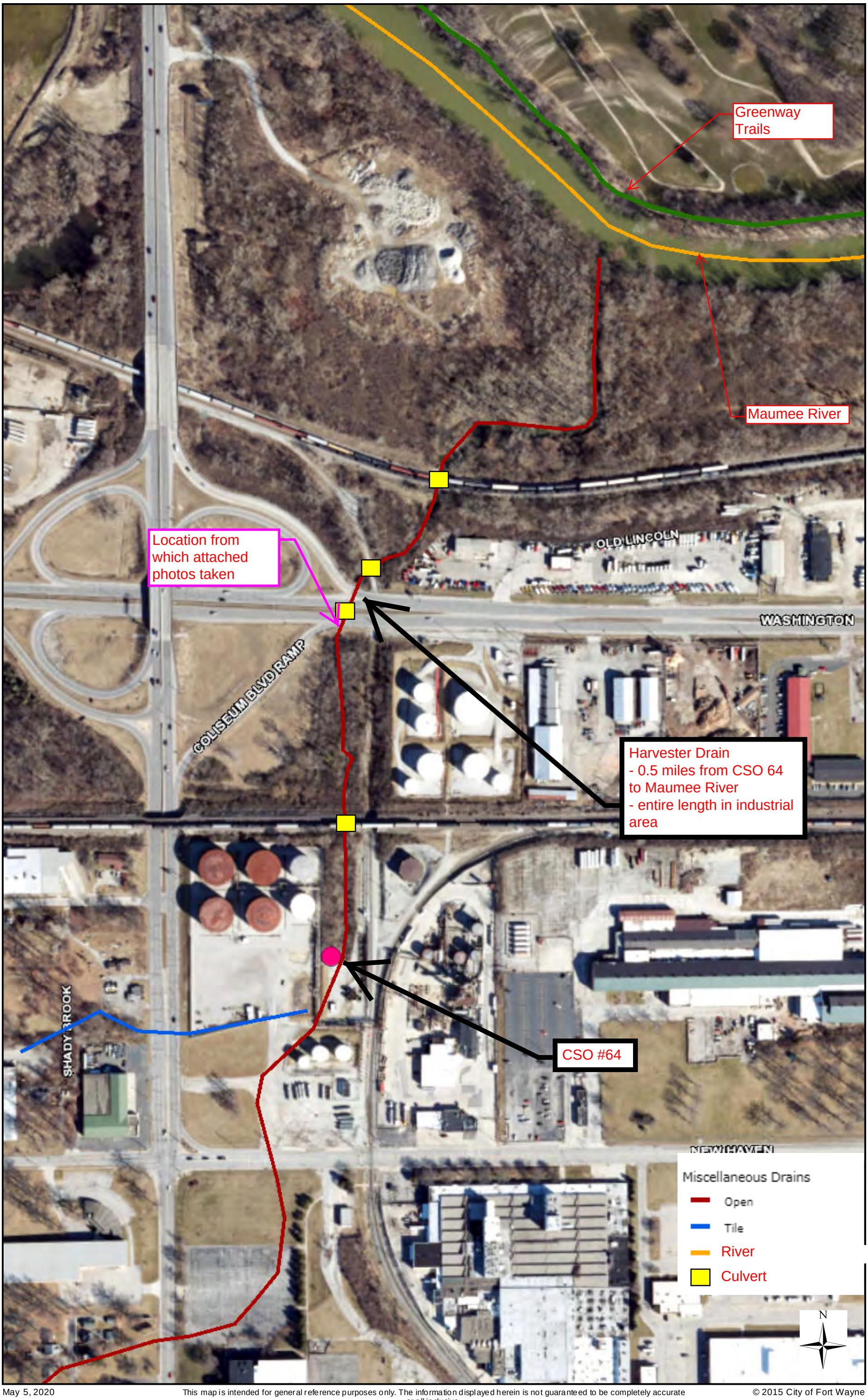
Looking Upstream from River Greenway – Dry Weather

Looking Upstream from River Greenway – Wet Weather

Looking Upstream from South Anthony Boulevard – Dry Weather

Looking Upstream from South Anthony Boulevard – Wet Weather

Harvester Drain



May 5, 2020

This map is intended for general reference purposes only. The information displayed herein is not guaranteed to be completely accurate or all inclusive.

Harvester Drain

Looking Upstream from East Washington Blvd – Dry Weather

Looking Upstream from East Washington Blvd – Wet Weather

APPENDIX D: Stream Data, Legacy STORET Database

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-10-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED,M-ENDO M	5400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	280.00		A

Start Date:	04-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED,M-ENDO M	3400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	170.00		A

Date Created: Nov 30, 2007

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-12-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	900.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

Start Date:	06-10-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	320.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	160.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	08-12-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	30.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Orgenization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-21-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	12000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

Start Date:	10-19-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5600.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	710.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-17-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	220.00		A

Start Date:	03-15-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	220.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-12-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

Start Date:	05-10-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ ,5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-14-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	07-06-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	760.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-09-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1000.00		A

Start Date:	09-08-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-12-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	360.00		A

Start Date:	11-15-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-21-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2900.00		A

Start Date:	04-11-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	210.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-09-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

Start Date:	06-06-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-01-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	70.00		A

Start Date:	08-29-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	610.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-04-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	70.00		A

Start Date:	10-31-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-05-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2600.00		A

Start Date:	03-07-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	400.00		A

STORET LDC - Detailed Data Report

Organization Code:	211ND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-03-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	570.00		A

Start Date:	05-01-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	80.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

Start Date:	07-11-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	420.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-16-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3200.00		A

Start Date:	09-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-18-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	870.00		A

Start Date:	11-08-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	290.00		A

Start Date:	01-10-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	180.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-06-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	140.00		A

Start Date:	03-05-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	290.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ ,5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-10-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

Start Date:	05-07-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-05-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

Start Date:	07-10-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	440.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-07-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2000.00		A

Start Date:	09-04-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2900.00		A

STORET LDC - Detailed Data Report

Organization Code:	211ND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-30-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2000.00		A

Start Date:	11-05-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-03-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	240.00		A

Start Date:	01-14-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	350.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-04-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	210.00		A

Start Date:	05-06-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	72.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-10-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4400.00		A

Start Date:	07-08-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indinna	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-02-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

Start Date:	12-16-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-06-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1900.00		A

Start Date:	04-07-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	660.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-06-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	110.00		A

Start Date:	06-03-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	18000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	09-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	250.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-13-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

Start Date:	11-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	270.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-13-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	50.00		A

Start Date:	02-01-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	490.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-08-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	890.00		A

Start Date:	04-19-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	430.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-11-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	06-29-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-19-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	140.00		A

Start Date:	08-31-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-27-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	380.00		A

Start Date:	11-15-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-06-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

Start Date:	04-03-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-09-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	330.00		A

Start Date:	06-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	540.00		A

Start Date:	08-08-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	250.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiann	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-05-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

Start Date:	10-10-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	590.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-07-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

Start Date:	12-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-15-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

Start Date:	02-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	750.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	750.00		A

Start Date:	04-09-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	460.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-21-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	06-11-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-09-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

Start Date:	08-13-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2000.00		A

Start Date:	10-08-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	110.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	250.00		A

Start Date:	12-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1900.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-11-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	90.00		A

Start Date:	03-25-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	220.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-22-1986	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

Start Date:	05-13-1986	Start Time:	1650
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	11.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-10-1986	Start Time:	1645
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	750.00		A

Start Date:	07-08-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-12-1986	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	600.00		A

Start Date:	09-16-1986	Start Time:	1400
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	210.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-14-1986	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	500.00		A

Start Date:	11-12-1986	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	110.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-09-1986	Start Time:	1510
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4600.00		A

Start Date:	01-13-1987	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-10-1987	Start Time:	1400
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	680.00		A

Start Date:	03-10-1987	Start Time:	1550
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-08-1987	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

Start Date:	05-12-1987	Start Time:	1340
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-10-1987	Start Time:	1425
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	470.00		A

Start Date:	07-15-1987	Start Time:	1615
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-13-1987	Start Time:	1445
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

Start Date:	09-09-1987	Start Time:	1515
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-05-1987	Start Time:	730
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	11-04-1987	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	60.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-08-1987	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	800.00		A

Start Date:	01-19-1988	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-16-1988	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	03-15-1988	Start Time:	1650
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-05-1988	Start Time:	1630
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	2400.00		A

Start Date:	05-11-1988	Start Time:	1645
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	70.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec, N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-08-1988	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1300.00		A

Start Date:	07-06-1988	Start Time:	1450
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	60.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-24-1988	Start Time:	1645
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	900.00		A

Start Date:	09-28-1988	Start Time:	1805
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	230.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-27-1988	Start Time:	1000
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	190.00		A

Start Date:	12-01-1988	Start Time:	1100
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	500.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-20-1988	Start Time:	1540
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	10000.00		A

Start Date:	01-26-1989	Start Time:	900
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1100.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-22-1989	Start Time:	1730
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	150.00		A

Start Date:	03-21-1989	Start Time:	1735
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	240.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-12-1989	Start Time:	1700
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	290.00		A

Start Date:	05-09-1989	Start Time:	1635
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-07-1989	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	200.00		A

Start Date:	08-02-1989	Start Time:	1615
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	90.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-30-1989	Start Time:	1705
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	180.00		A

Start Date:	09-27-1989	Start Time:	1615
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-01-1989	Start Time:	1635
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe IO:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	400.00		A

Start Date:	11-29-1989	Start Time:	1630
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe IO:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-17-1990	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	300.00		A

Start Date:	02-14-1990	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	90.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-14-1990	Start Time:	1525
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	120.00		A

Start Date:	04-18-1990	Start Time:	1630
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	10.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-30-1990	Start Time:	1540
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	20.00		A

Start Date:	06-19-1990	Start Time:	1540
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	170.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-25-1990	Start Time:	1545
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	410.00		A

Start Date:	08-14-1990	Start Time:	1100
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-12-1990	Start Time:	1330
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	480.00		A

Start Date:	10-17-1990	Start Time:	1045
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	60.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171400	Station Alias:	STJ 0 STJ .5
Station Name:	ST JOSEPH R AT FT WAYNE AT MILE POINT 0.44		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 22sec. N	Longitude:	85deg. 7min. 42sec. W
Hydrologic Unit Code (HUC):	04100003		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-14-1990	Start Time:	1100
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	100.00		A

Start Date:	03-18-1991	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	880.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-07-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2500.00		A

Start Date:	02-11-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	930.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-25-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2700.00		A

Start Date:	04-22-1986	Start Time:	1440
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Descriptinn:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-13-1986	Start Time:	1615
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	800.00		A

Start Date:	06-10-1986	Start Time:	1620
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-08-1986	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	800.00		A

Start Date:	08-12-1986	Start Time:	1560
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	29000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-16-1986	Start Time:	1330
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1700.00		A

Start Date:	10-14-1986	Start Time:	1545
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4900.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-12-1986	Start Time:	1540
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1300.00		A

Start Date:	12-09-1986	Start Time:	1445
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-13-1987	Start Time:	1515
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

Start Date:	02-10-1987	Start Time:	1325
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	340.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-10-1987	Start Time:	1520
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	940.00		A

Start Date:	04-08-1987	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-12-1987	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10000.00		A

Start Date:	06-10-1987	Start Time:	1410
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	211ND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-15-1987	Start Time:	1545
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3600.00		A

Start Date:	08-12-1987	Start Time:	1420
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	80.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-09-1987	Start Time:	1450
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	12000.00		A

Start Date:	10-05-1987	Start Time:	710
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	440.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-04-1987	Start Time:	1620
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	12-08-1987	Start Time:	1540
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	8800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-19-1988	Start Time:	1630
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	8300.00		A

Start Date:	02-16-1988	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-15-1988	Start Time:	1620
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C		230.00		A

Start Date:	04-05-1988	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	2400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-11-1988	Start Time:	1615
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	600.00		A

Start Date:	06-08-1988	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	16000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-06-1988	Start Time:	1420
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	30.00		A

Start Date:	08-24-1988	Start Time:	1615
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	30000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-28-1988	Start Time:	1710
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	540.00		A

Start Date:	10-27-1988	Start Time:	900
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	530.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-01-1988	Start Time:	1000
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	240.00		A

Start Date:	12-20-1988	Start Time:	1435
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	18000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-22-1989	Start Time:	1645
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	2300.00		A

Start Date:	03-21-1989	Start Time:	1620
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-12-1989	Start Time:	1610
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	470.00		A

Start Date:	05-09-1989	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM ,2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT ,2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-07-1989	Start Time:	1445
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	500.00		A

Start Date:	08-02-1989	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	2900.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-30-1989	Start Time:	1630
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1600.00		A

Start Date:	09-27-1989	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1700.00		A

STORET LDC - Detailed Data Report

Organization Code:	211ND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-01-1989	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	130.00		A

Start Date:	11-29-1989	Start Time:	1545
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-17-1990	Start Time:	1510
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1300.00		A

Start Date:	02-14-1990	Start Time:	1525
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	440.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-14-1990	Start Time:	1450
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	260.00		A

Start Date:	04-18-1990	Start Time:	1555
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	40.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-30-1990	Start Time:	1500
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	200.00		A

Start Date:	06-19-1990	Start Time:	1515
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	240.00		A

STORET LDC - Detailed Data Report

Organization Code:	211ND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-25-1990	Start Time:	1530
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1900.00		A

Start Date:	08-14-1990	Start Time:	1130
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	2500.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-12-1990	Start Time:	1320
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	4600.00		A

Start Date:	10-17-1990	Start Time:	1015
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	174348	Station Alias:	STM .2
Station Name:	ST MARY'S R-FT WAYNE SPY RUN BRIDGE MI PT .2		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 5min. 1sec. N	Longitude:	85deg. 8min. 7sec. W
Hydrologic Unit Code (HUC):	04100004		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-14-1990	Start Time:	1130
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	290.00		A

Start Date:	02-06-1991	Start Time:	1600
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-31-1974	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4000.00		A

Start Date:	01-28-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	750.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-25-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3600.00		A

Start Date:	03-25-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	520.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-22-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

Start Date:	05-28-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-10-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	570.00		A

Start Date:	07-09-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-12-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4800.00		A

Start Date:	09-09-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-08-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	380.00		A

Start Date:	11-12-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	710.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-10-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2200.00		A

Start Date:	01-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-10-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	670.00		A

Start Date:	04-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	260.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-12-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	110.00		A

Start Date:	06-10-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	470.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	390.00		A

Start Date:	08-12-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	50.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-21-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1000.00		A

Start Date:	10-19-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	440.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-17-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	210.00		A

Start Date:	12-21-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	510.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-22-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	20.00		A

Start Date:	03-16-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	240.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-12-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	50.00		A

Start Date:	05-10-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-14-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5900.00		A

Start Date:	07-06-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	790.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiann	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-09-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3200.00		A

Start Date:	09-08-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	810.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-12-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	270.00		A

Start Date:	11-15-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	140.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-21-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3700.00		A

Start Date:	02-15-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	46.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-11-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	570.00		A

Start Date:	05-09-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	330.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-06-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	260.00		A

Start Date:	08-01-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	80.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-29-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	750.00		A

Start Date:	10-04-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	320.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-31-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

Start Date:	12-05-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-10-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	520.00		A

Start Date:	02-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-07-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

Start Date:	04-03-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	560.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-01-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

Start Date:	06-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2500.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-11-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

Start Date:	08-16-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	530.00		A

Start Date:	10-18-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	830.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-08-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	680.00		A

Start Date:	12-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	880.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-10-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	04-10-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2100.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-07-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	06-05-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5500.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-10-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

Start Date:	08-07-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-04-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5000.00		A

Start Date:	09-30-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	910.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-05-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	780.00		A

Start Date:	12-03-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	760.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-04-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	180.00		A

Start Date:	05-06-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-10-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	8100.00		A

Start Date:	07-08-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	9900.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-02-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	11-04-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	20.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-16-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

Start Date:	01-06-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-06-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	280.00		A

Start Date:	06-03-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	690.00		A

Start Date:	09-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-13-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	540.00		A

Start Date:	11-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	140.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-13-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	360.00		A

Start Date:	02-01-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	460.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-08-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2600.00		A

Start Date:	04-19-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	770.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-11-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	270.00		A

Start Date:	06-29-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	840.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-19-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

Start Date:	08-31-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	50.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-27-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2200.00		A

Start Date:	11-15-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2100.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-06-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2600.00		A

Start Date:	04-03-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	440.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-09-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2900.00		A

Start Date:	06-13-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	42000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

Start Date:	08-07-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-06-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	9600.00		A

Start Date:	10-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1100.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-08-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1000.00		A

Start Date:	12-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	620.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-16-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

Start Date:	02-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	8800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2200.00		A

Start Date:	04-09-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-21-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	06-11-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	38000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-09-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	520.00		A

Start Date:	08-13-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	6400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3200.00		A

Start Date:	10-08-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171409	Station Alias:	M 116 M 135
Station Name:	MAUMEE RIVER AT FT WAYNE AT MILE POINT 135.0		
	LAKE ERIE		
	MAUMEE		
State:	Indiana	County:	Allen
Latitude:	41deg. 4min. 55sec. N	Longitude:	85deg. 6min. 53sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2800.00		A

Start Date:	12-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	13000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-28-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1100.00		A

Start Date:	02-25-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-25-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	420.00		A

Start Date:	04-22-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-28-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1300.00		A

Start Date:	06-10-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-09-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2300.00		A

Start Date:	08-12-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	180.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-10-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5500.00		A

Start Date:	10-08-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	90.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-13-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	720.00		A

Start Date:	12-10-1975	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1100.00		A

Start Date:	03-10-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	50.00		A

Start Date:	05-12-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	240.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-10-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	800.00		A

Start Date:	07-14-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	220.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-12-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	240.00		A

Start Date:	09-21-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-19-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

Start Date:	11-17-1976	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	70.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-15-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	9300.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	780.00		A

Start Date:	04-12-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	620.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-10-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	18000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	480.00		A

Start Date:	06-14-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	9500.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-06-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	670.00		A

Start Date:	08-09-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	4600.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	860.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-08-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	4600.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	720.00		A

Start Date:	10-12-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	1000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	430.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMDNT/STREAM		

Start Date:	11-15-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2600.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	40.00		A

Start Date:	12-20-1977	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	14000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TVPA/AMBNT/STREAM		

Start Date:	04-11-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	28000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	450.00		A

Start Date:	05-09-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	1400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-06-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	480.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	50.00		A

Start Date:	08-01-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	9400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-29-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	6100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	740.00		A

Start Date:	10-04-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	80.00		A

Dato Created: Nov 30, 2007

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-31-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2500.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

Start Date:	12-05-1978	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	36000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-06-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	8100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	500.00		A

Start Date:	04-03-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	20000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	600.00		A

STORET LDC - Detailed Data Report

Organization Code: 21IND
Organization Name: INDIANA DEPT. ENV MNGT
Station ID: 171423
Station Alias: M 95 M 114
Station Name: MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6
LAKE ERIE
MAUMEE RIVER
State: Indiana
County: Allen
Latitude: 41deg. 10min. 11sec. N
Longitude: 84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC): 04100005
Station Type Indicator Description: Surface Water
Legacy STORET Station Type: /TYPA/AMBNT/STREAM

Start Date: 05-01-1979
Start Time:
End Date:
End Time:
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5200.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	200.00		A

Start Date: 06-05-1979
Start Time:
End Date:
End Time:
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	200.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	20.00		A

Date Created: Nov 30, 2007

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-10-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	34000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4400.00		A

Start Date:	08-15-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	12000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-05-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	9800.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2300.00		A

Start Date:	10-17-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3700.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	140.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-08-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	8000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	270.00		A

Start Date:	12-05-1979	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	44000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	770.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-09-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

Start Date:	02-05-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5600.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	180.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-04-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	4900.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	260.00		A

Start Date:	04-09-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	47000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-07-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	4000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	20.00		A

Start Date:	06-04-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	60000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	6000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-09-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	250000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5500.00		A

Start Date:	08-06-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	1500.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-03-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	21000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1200.00		A

Start Date:	10-01-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	11000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-06-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	160.00		A

Start Date:	12-02-1980	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5500.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	340.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-03-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	05-05-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5500.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	160.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-09-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	380000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	35000.00		A

Start Date:	07-07-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	94000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	54000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-01-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	8200.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	640.00		A

Start Date:	10-06-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	220000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	72000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11scc. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-03-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	4100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3700.00		A

Start Date:	12-15-1981	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	7300.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	460.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-05-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	42000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	4300.00		A

Start Date:	04-06-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	7800.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	910.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-06-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

Start Date:	06-02-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	72000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	14000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-07-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED,M-ENDO M	30000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	19000.00		A

Start Date:	09-07-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED,M-ENDO M	3000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	140.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-13-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	80000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	920.00		A

Start Date:	11-08-1982	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	55000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-13-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	110.00		A

Start Date:	02-01-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2200.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	980.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-08-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	55000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	730.00		A

Start Date:	04-19-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	1400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	540.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-10-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	8000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	310.00		A

Start Date:	06-28-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3900.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-19-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2400.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	240.00		A

Start Date:	08-31-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5800.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-27-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	6100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	500.00		A

Start Date:	11-15-1983	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	43000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-06-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	11000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1000.00		A

Start Date:	04-03-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	600.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-09-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	9700.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	230.00		A

Start Date:	06-11-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	30000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	370.00		A

STORET LDC - Detailed Data Report

Organization Code: 21IND
Organization Name: INDIANA DEPT. ENV MNGT
Station ID: 171423
Station Alias: M 95 M 114
Station Name: MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6
LAKE ERIE
MAUMEE RIVER
State: Indiana
County: Allen
Latitude: 41deg. 10min. 11sec. N
Longitude: 84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC): 04100005
Station Type Indicator Description: Surface Water
Legacy STORET Station Type: /TYPA/AMBNT/STREAM

Start Date: 07-10-1984
Start Time:
End Date:
End Time:
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	150.00		A

Start Date: 08-08-1984
Start Time:
End Date:
End Time:
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	240.00		A

Date Created: Nov 30, 2007

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-05-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3200.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	550.00		A

Start Date:	10-10-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	54000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1800.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-07-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	11000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	220.00		A

Start Date:	12-12-1984	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	14000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	30.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-15-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	3100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

Start Date:	03-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	500000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3700.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	04-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	16000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1100.00		A

Start Date:	05-21-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	80.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	06-11-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	5900.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	07-09-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2200.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-13-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2500.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	100.00		A

Start Date:	09-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2000000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	95000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-08-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	2100.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	390.00		A

Start Date:	11-12-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	71000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	12-10-1985	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31501	COLIFORM,TOT,MEMBRANE FILTER,IMMED.M-ENDO M	26000.00		A
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1900.00		A

Start Date:	02-11-1986	Start Time:	
End Date:		End Time:	
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	340.00		A

STORET LDC - Detailed Data Report

Organization Code: 21IND
Organization Name: INDIANA DEPT. ENV MNGT
Station ID: 171423
Station Alias: M 95 M 114
Station Name: MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6
LAKE ERIE
MAUMEE RIVER
State: Indiana
County: Allen
Latitude: 41deg. 10min. 11sec. N
Longitude: 84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC): 04100005
Station Type Indicator Description: Surface Water
Legacy STORET Station Type: /TYPA/AMBNT/STREAM

Start Date: 03-25-1986
Start Time:
End Date:
End Time:
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	800.00		A

Start Date: 04-22-1986
Start Time: 1225
End Date:
End Time: 0
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2400.00		A

Date Created: Nov 30, 2007

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-13-1986	Start Time:	1340
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	380.00		A

Start Date:	06-10-1986	Start Time:	1400
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3200.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Loogitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-08-1986	Start Time:	1330
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	200.00		A

Start Date:	08-12-1986	Start Time:	1335
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3900.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-16-1986	Start Time:	1200
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	430.00		A

Start Date:	10-14-1986	Start Time:	1400
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	12000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-12-1986	Start Time:	1400
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	790.00		A

Start Date:	12-09-1986	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	5300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-13-1987	Start Time:	1330
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	190.00		A

Start Date:	02-10-1987	Start Time:	1315
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-10-1987	Start Time:	1320
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	520.00		A

Start Date:	04-08-1987	Start Time:	1245
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00	K	A

STORET LDC - Detailed Data Report

Organization Code: 21IND
Organization Name: INDIANA DEPT. ENV MNGT
Station ID: 171423
Station Alias: M 95 M 114
Station Name: MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6
LAKE ERIE
MAUMEE RIVER
State: Indiana
County: Allen
Latitude: 41deg. 10min. 11sec. N
Longitude: 84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC): 04100005
Station Type Indicator Description: Surface Water
Legacy STORET Station Type: /TYPA/AMBNT/STREAM

Start Date: 05-12-1987
Start Time: 1305
End Date:
End Time: 0
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	10.00		A

Start Date: 06-10-1987
Start Time: 1245
End Date:
End Time: 0
Sample Depth: feet
Effluent Monitoring Code:
UMK:
Replicate Number:
Composite Method Code:
Pipe ID:
Composite/Grab Number:
Primary/Secondary Activity Category:

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2200.00		A

Date Created: Nov 30, 2007

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-15-1987	Start Time:	1345
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	920.00		A

Start Date:	08-12-1987	Start Time:	1245
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	120.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-09-1987	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	90.00		A

Start Date:	10-06-1987	Start Time:	930
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	130.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-05-1987	Start Time:	915
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	70.00		A

Start Date:	12-09-1987	Start Time:	930
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	2600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-20-1988	Start Time:	955
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	3600.00		A

Start Date:	02-17-1988	Start Time:	1000
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	1600.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-23-1988	Start Time:	1510
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name	Result Value	Remark Code	Composite Statistic Code
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	70.00		A

Start Date:	04-06-1988	Start Time:	945
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	11000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-12-1988	Start Time:	920
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	110.00		A

Start Date:	06-09-1988	Start Time:	950
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	40.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-07-1988	Start Time:	915
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1200.00		A

Start Date:	08-24-1988	Start Time:	1315
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	27000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-28-1988	Start Time:	1315
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	210.00		A

Start Date:	10-26-1988	Start Time:	1400
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	370.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-30-1988	Start Time:	1420
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	410.00		A

Start Date:	12-20-1988	Start Time:	1145
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	6000.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	01-25-1989	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	290.00		A

Start Date:	02-22-1989	Start Time:	1430
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	03-21-1989	Start Time:	1345
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1500.00		A

Start Date:	04-12-1989	Start Time:	1345
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	270.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-09-1989	Start Time:	1445
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	200.00		A

Start Date:	06-07-1989	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	4300.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	08-02-1989	Start Time:	1330
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	700.00		A

Start Date:	08-30-1989	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	680.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	09-27-1989	Start Time:	1245
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	230.00		A

Start Date:	11-01-1989	Start Time:	1315
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	100.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	11-29-1989	Start Time:	1345
End Date:		End Time:	0
Sample Depth:	feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	160.00		A

Start Date:	01-17-1990	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1400.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	02-14-1990	Start Time:	1245
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	210.00		A

Start Date:	04-18-1990	Start Time:	1245
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	80.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT Mf POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	05-30-1990	Start Time:	1315
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	170.00		A

Start Date:	06-19-1990	Start Time:	1240
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	170.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	07-25-1990	Start Time:	1300
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	1400.00		A

Start Date:	08-14-1990	Start Time:	900
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	630.00		A

STORET LDC - Detailed Data Report

Organization Code:	21IND	Organization Name:	INDIANA DEPT. ENV MNGT
Station ID:	171423	Station Alias:	M 95 M 114
Station Name:	MAUMEE RIVER NEAR WOODBURN AT MI POINT 113.6		
	LAKE ERIE		
	MAUMEE RIVER		
State:	Indiana	County:	Allen
Latitude:	41deg. 10min. 11sec. N	Longitude:	84deg. 50min. 57sec. W
Hydrologic Unit Code (HUC):	04100005		
Station Type Indicator Description:	Surface Water		
Legacy STORET Station Type:	/TYPA/AMBNT/STREAM		

Start Date:	10-16-1990	Start Time:	1430
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	280.00		A

Start Date:	12-11-1990	Start Time:	1700
End Date:		End Time:	0
Sample Depth:	1 feet	Effluent Monitoring Code:	
UMK:		Replicate Number:	
Composite Method Code:		Pipe ID:	
Composite/Grab Number:			
Primary/Secondary Activity Category:			

Parameter Code	Parameter Long Name		Result Value	Remark Code	Composite Statistic Code
31648	E. COLI - MTEC-MF	N0/100ML	460.00		A

APPENDIX E: Stream Data, IDEM's AIMS Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

Test Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/14/1991 14:20 DI9674	10
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/11/1991 17:15 DI05804	10
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	4/3/1991 11:30 DI7454	20
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	11/14/1991 15:25 DI9677	20
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	4/3/1991 12:25 DI7452	20
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/14/1991 14:50 DI9675	20
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	4/2/1991 18:00 DI7451	30
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	11/14/1991 15:10 DI9676	40
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	4/2/1991 17:30 DI7450	50
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/17/1991 11:45 DI9247	50
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	12/10/1991 15:00 DI9797	60
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/19/1991 15:40 DI9176	80
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/19/1991 14:30 DI9173	90
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/29/1991 18:00 DI5908	120
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	4/3/1991 11:00 DI7453	120
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/14/1991 14:00 DI9673	130
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	7/17/1991 12:45 DI9231	150
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/8/1991 12:00 DI9588	160
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/19/1991 14:00 DI9172	170
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/17/1991 12:25 DI9249	200
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	12/10/1991 14:20 DI9799	220
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/17/1991 13:10 DI9230	250
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	12/11/1991 10:00 DI9801	250
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	8/20/1991 10:00 DI9387	290
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	10/8/1991 11:30 DI9590	300
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	5/29/1991 17:00 DI5905	330
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/11/1991 18:00 DI05805	340
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/17/1991 12:05 DI9248	350
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	12/10/1991 14:35 DI9798	430
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	12/10/1991 14:00 DI9800	450
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/19/1991 15:00 DI9174	460
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	9/17/1991 13:00 DI9485	500
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/20/1991 13:30 DI9383	530
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	8/20/1991 10:30 DI9386	600
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	5/29/1991 17:20 DI5904	840
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	2/6/1991 14:15 DI05705	860
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/18/1991 15:00 DI05808	880
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/18/1991 14:40 DI05807	1000
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/8/1991 11:00 DI9589	1200
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/29/1991 16:45 DI5906	1500
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	2/6/1991 14:35 DI05706	1600
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/8/1991 13:05 DI9586	1600
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	2/6/1991 16:00 DI05708	1600
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/29/1991 17:40 DI5907	1800
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/8/1991 12:30 DI9587	2200
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	2/7/1991 12:15 DI05707	2300

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/8/1991 13:47	DI6978	2900
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/19/1991 15:20	DI9175	2900
1991 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/17/1991 14:00	DI9483	3100
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/18/1991 14:20	DI05806	3300
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	1/8/1991 14:40	DI6979	3500
1991 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/17/1991 12:45	DI9486	3500
1991 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/20/1991 12:00	DI9385	4600
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/17/1991 13:20	DI9484	5200
1991 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	8/20/1991 13:00	DI9384	6200
1991 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/17/1991 12:30	DI9487	28000
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	5/12/1992 11:30	DI12304	10
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/12/1992 10:50	DI12307	10
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/12/1992 11:05	DI12305	10
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/12/1992 10:30	DI12306	50
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	12/9/1992 14:45	DI13777	60
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/20/1992 11:30	DI13125	90
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	12/9/1992 11:00	DI13776	100
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/21/1992 15:30	DI8399	110
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	12/9/1992 14:00	DI13778	110
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	12/8/1992 11:50	DI13774	120
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	8/20/1992 11:10	DI13127	120
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/15/1992 13:20	DI13413	140
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	4/29/1992 14:00	DI12063	210
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	12/8/1992 11:20	DI13775	220
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	4/28/1992 10:05	DI12066	250
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/9/1992 17:40	DI8293	250
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	2/5/1992 17:45	DI8087	310
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/9/1992 19:00	DI8291	330
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/19/1992 11:40	DI8193	330
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	2/5/1992 17:30	DI8088	340
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	11/24/1992 11:35	DI13514	360
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/19/1992 11:30	DI8192	370
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/15/1992 13:00	DI13414	370
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/19/1992 12:25	DI8190	400
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/24/1992 12:30	DI13515	440
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/15/1992 14:15	DI13411	450
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/9/1992 17:25	DI8295	450
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/9/1992 17:15	DI8294	490
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	10/15/1992 12:30	DI13415	520
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/15/1992 14:20	DI13229	540
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/9/1992 16:45	DI8292	550
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/24/1992 11:00	DI13513	550
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	4/28/1992 10:45	DI12064	560
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	4/28/1992 9:40	DI12065	580
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	2/5/1992 16:20	DI8089	590

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

Project Name	Stream Name	Description	Sample Date	Sample Number (Unit)	Coliform (Total) (MPN/100 mL)	E. Coli (CFU/100 mL)	ESCori (MPN/100 mL)
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/19/1992 10:23	DI8191			590
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	2/5/1992 17:05	DI8091			690
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/15/1992 13:30	DI13226			700
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/15/1992 13:50	DI13412			780
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	2/5/1992 16:50	DI8090			840
1992 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	9/15/1992 14:00	DI13228			1000
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	8/20/1992 10:30	DI13126			1500
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/18/1992 11:00	DI13123			1700
1992 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/15/1992 14:45	DI13230			1800
1992 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/21/1992 15:15	DI8398			1900
1992 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/19/1992 12:50	DI8189			2100
1992 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/15/1992 13:00	DI13227			6300
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/2/1993 16:00	DI14088			30
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/2/1993 15:20	DI14089			40
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/9/1993 13:00	DI15785			50
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	10/13/1993 14:15	DI15644			60
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/17/1993 15:15	DI14691			180
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/13/1993 12:45	DI15641			190
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/10/1993 13:45	DI15151			210
1993 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	4/7/1993 9:00	DI14391			220
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	4/7/1993 9:30	DI14392			230
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/5/1993 9:30	DI14523			230
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	4/6/1993 17:00	DI14388			250
1993 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/13/1993 13:45	DI15643			250
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	4/7/1993 8:40	DI14390			350
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/13/1993 13:15	DI15642			350
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	4/7/1993 8:00	DI14389			380
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/22/1993 16:05	DI14213			390
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/22/1993 16:25	DI14214			450
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	1/26/1993 13:40	DI13903			470
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/13/1993 12:25	DI15640			630
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	1/26/1993 13:00	DI13902			730
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	12/17/1993 13:30	DI15910			730
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	12/17/1993 12:30	DI15908			780
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	12/17/1993 13:00	DI15909			810
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	1/26/1993 14:15	DI13905			940
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	7/15/1993 9:30	DI14986			1200
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/26/1993 12:30	DI13901			1300
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/15/1993 11:00	DI14989			1600
1993 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/17/1993 14:20	DI14694			1800
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/15/1993 10:00	DI14987			1900
1993 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/16/1993 8:00	DI15438			2000
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/15/1993 9:00	DI14985			2500
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/16/1993 8:20	DI15439			2800
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/5/1993 8:00	DI14521			3300
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/23/1993 12:20	DI14215			3400

Source: Bell, Charles M. November 20, 2007. [Personal Communication], Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/23/1993 11:50	DI14217	4000
1993 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/5/1993 8:45	DI14522	4300
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/17/1993 14:50	DI14692	5400
1993 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/15/1993 18:00	DI14693	7000
1993 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/17/1993 14:00	DI14695	10000
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/15/1993 18:10	DI15436	18000
1993 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/23/1993 11:25	DI14216	20000
1993 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/15/1993 17:45	DI15435	39000
1993 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	11/9/1993 13:30	DI15786	< 10
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/12/1994 9:00	DI16067	10
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	8/16/1994 14:00	DI17585	10
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/22/1994 17:00	DI17865	20
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/24/1994 11:00	DI16284	20
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/18/1994 14:00	DI17120	20
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	2/24/1994 7:00	DI16170	50
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/18/1994 14:45	DI17123	50
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	2/24/1994 8:00	DI16172	60
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/24/1994 12:00	DI16285	70
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/12/1994 13:45	DI00045	80
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	2/24/1994 8:40	DI16174	80
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/24/1994 14:15	DI16288	90
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/16/1994 15:30	DI16757	90
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	2/24/1994 8:20	DI16173	120
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	2/24/1994 7:30	DI16171	130
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/12/1994 15:00	DI00047	140
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/20/1994 18:00	DI16755	150
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	7/18/1994 14:20	DI17121	150
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/20/1994 18:25	DI16754	150
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/12/1994 14:00	DI00046	170
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/12/1994 14:20	DI00048	180
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	8/16/1994 14:20	DI17592	200
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/18/1994 15:30	DI17124	220
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/16/1994 16:00	DI16758	230
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/24/1994 13:30	DI16287	250
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/16/1994 15:25	DI17589	270
1994 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	8/16/1994 14:55	DI17590	290
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/24/1994 12:45	DI16286	310
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/22/1994 15:45	DI17867	330
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/16/1994 15:00	DI16756	550
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/12/1994 11:15	DI16606	750
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	4/13/1994 13:30	DI16455	890
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/16/1994 15:50	DI17591	890
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	4/13/1994 13:00	DI16454	910
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	9/22/1994 16:15	DI17866	1000
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	11/29/1994 14:00	DI18137	1800

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/21/1994 16:55	DI17122	2900
1994 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	11/29/1994 13:30	DI18136	3100
1994 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/29/1994 13:00	DI18135	3300
1994 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/22/1994 15:15	DI17868	4000
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/29/1994 12:00	DI18133	13000
1994 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/22/1994 17:30	DI17864	< 10
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	10/18/1995 19:00	DI20232	10
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/4/1995 17:55	DI18740	20
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	5/4/1995 16:50	DI18736	40
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	5/4/1995 17:30	DI18737	50
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/31/1995 17:20	DI18971	50
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/18/1995 19:40	DI20230	70
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/18/1995 18:45	DI20231	70
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	12/12/1995 18:00	DI20610	100
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/1/1995 9:45	DI18968	110
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/20/1995 16:55	DI20199	110
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/18/1995 17:50	DI20228	130
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/1/1995 10:15	DI18967	140
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/31/1995 17:00	DI18970	140
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	12/12/1995 17:40	DI20611	150
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	8/28/1995 10:30	DI19796	160
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/19/1995 17:30	DI19396	160
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	11/21/1995 18:25	DI20511	160
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/4/1995 18:20	DI18738	170
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/1/1995 16:20	DI18969	170
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/18/1995 18:20	DI20229	200
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	8/25/1995 7:10	DI19799	200
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	9/20/1995 18:25	DI20201	200
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/20/1995 17:50	DI20202	200
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/4/1995 17:45	DI18739	210
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/21/1995 17:10	DI20507	270
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/28/1995 10:50	DI19795	280
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/19/1995 17:50	DI19394	310
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	11/21/1995 17:45	DI20508	330
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/20/1995 17:20	DI20200	340
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/5/1995 15:40	DI19288	360
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/21/1995 19:00	DI20509	360
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	11/21/1995 18:10	DI20510	380
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	7/5/1995 15:00	DI19285	400
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/5/1995 14:35	DI19284	400
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/19/1995 16:45	DI19393	400
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/5/1995 16:00	DI19286	430
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/5/1995 15:30	DI19287	510
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/25/1995 7:35	DI19797	530
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	7/20/1995 10:15	DI19392	540

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	1/25/1995 8:50 [illegible]	[illegible]
1995 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	1/25/1995 10:15 [illegible]	750
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/20/1995 10:45 DI19391	800
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	1/25/1995 9:50 DI18369	820
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	1/25/1995 9:10 DI18371	930
1995 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/25/1995 10:35 DI18367	970
1995 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	8/25/1995 7:00 DI19798	1400
1995 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/20/1995 18:00 DI20203	6600
1995 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	12/12/1995 16:45 DI20612	17000
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/21/1996 14:00 DI21127	20
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	2/21/1996 18:00 DI20819	30
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	2/21/1996 17:10 DI20823	30
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/6/1996 17:15 DI22867	40
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/23/1996 15:50 DI21989	40
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	11/6/1996 19:35 DI22871	40
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	8/27/1996 19:30 DI22109	50
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/16/1996 18:50 DI22763	60
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/16/1996 17:45 DI22766	70
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	11/25/1996 17:20 DI22979	80
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	2/21/1996 16:50 DI20822	80
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	2/21/1996 17:40 DI20820	90
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/24/1996 16:40 DI22559	110
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/27/1996 16:00 DI21637	120
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/3/1996 15:15 DI21532	120
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/27/1996 16:20 DI21640	120
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/6/1996 18:40 DI22869	130
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	11/6/1996 19:15 DI22870	130
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/16/1996 17:20 DI22765	150
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	10/16/1996 19:20 DI22764	170
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	11/6/1996 18:00 DI22868	170
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	1/30/1996 18:00 DI20719	200
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/27/1996 15:20 DI21636	240
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	2/21/1996 16:15 DI20821	250
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/27/1996 17:30 DI21638	270
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/3/1996 15:45 DI21533	320
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/27/1996 16:50 DI21639	330
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/27/1996 20:00 DI22108	350
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/3/1996 16:45 DI21536	360
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/24/1996 15:10 DI22555	380
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	1/30/1996 18:30 DI20717	380
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/1/1996 13:50 DI21231	390
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	8/27/1996 18:50 DI22112	440
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/27/1996 18:00 DI22110	450
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/3/1996 16:15 DI21535	460
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/3/1996 17:20 DI21534	530
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	1/30/1996 17:45 DI20718	530

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Ft. Wayne Fixed Station Sampling Data
1991-2000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/23/1996 16:10	DI21988	740
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	5/1/1996 12:40	DI21227	800
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/23/1996 16:40	DI21987	800
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	1/30/1996 17:15	DI20716	870
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	8/27/1996 18:35	DI22111	890
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	9/24/1996 17:20	DI22557	1100
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/30/1996 16:45	DI20715	1200
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	12/2/1996 16:45	DI22975	1200
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/24/1996 16:20	DI22558	1400
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/1/1996 14:15	DI21229	1600
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/21/1996 13:15	DI21124	1700
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/21/1996 14:30	DI21125	1800
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/21/1996 13:45	DI21126	2000
1996 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/25/1996 18:30	DI22977	2300
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	5/1/1996 13:15	DI21228	2600
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/24/1996 15:50	DI22556	2900
1996 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	12/2/1996 17:25	DI22976	3300
1996 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/21/1996 12:45	DI21123	3300
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/1/1996 13:35	DI21230	3400
1996 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	11/25/1996 18:00	DI22978	17000
1996 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	10/16/1996 18:10	DI22767	< 10
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	4/23/1997 18:10	DI23414	10
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	11/12/1997 14:40	DI24393	10
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	11/12/1997 15:15	DI24394	10
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	11/12/1997 16:05	DI24395	20
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	4/23/1997 17:25	DI23411	30
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	11/12/1997 16:50	DI24392	30
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	4/23/1997 19:00	DI23412	30
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/19/1997 16:45	DI23304	40
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	11/12/1997 18:05	DI24391	40
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	12/18/1997 16:30	DI24581	80
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	12/18/1997 15:45	DI24580	90
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/12/1997 17:00	DI23860	110
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	8/12/1997 15:45	DI23864	110
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	10/15/1997 15:35	DI24230	110
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	10/15/1997 14:15	DI24228	130
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/19/1997 17:25	DI23307	140
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	12/18/1997 15:00	DI24579	140
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	8/12/1997 16:10	DI23861	150
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/15/1997 17:00	DI23756	160
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	4/23/1997 16:50	DI23410	190
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	4/23/1997 17:50	DI23413	210
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	2/19/1997 19:15	DI23195	230
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	7/15/1997 17:40	DI23757	290

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Ft. Wayne Fixed Station Sampling Data
1991-2000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	3/19/1997 16:00	DI23303	420
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/19/1997 18:00	DI23305	440
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/12/1997 14:35	DI23862	500
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	10/15/1997 17:00	DI24226	530
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	12/18/1997 18:20	DI24576	530
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	7/15/1997 18:30	DI23755	540
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/15/1997 19:10	DI23754	560
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	8/12/1997 15:25	DI23863	600
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/26/1997 18:45	DI23644	800
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	5/21/1997 19:45	DI23529	970
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	12/18/1997 17:15	DI24577	1400
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/19/1997 17:10	DI23306	1400
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/26/1997 19:25	DI23642	1500
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	5/21/1997 18:30	DI23525	1700
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	2/19/1997 18:20	DI23192	1800
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	5/21/1997 19:30	DI23528	2200
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	2/19/1997 19:50	DI23193	2500
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	5/21/1997 19:10	DI23526	2600
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	2/19/1997 18:50	DI23194	2700
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	5/21/1997 20:30	DI23527	3000
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	2/19/1997 17:40	DI23191	3300
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	1/22/1997 18:30	DI23089	3700
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/22/1997 16:40	DI23087	4900
1997 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	9/17/1997 18:25	DI23995	7900
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	6/26/1997 18:20	DI23643	8100
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	6/26/1997 17:50	DI23641	8800
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/26/1997 17:15	DI23640	11000
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	10/15/1997 15:00	DI24229	15000
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	9/17/1997 19:00	DI23992	21000
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	1/22/1997 17:40	DI23090	22000
1997 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	9/17/1997 17:40	DI23993	25000
1997 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	1/22/1997 17:15	DI23088	59000
1997 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	9/17/1997 19:30	DI23991	89000
1997 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	9/17/1997 18:10	DI23994	120000
1998 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	2/25/1998 19:10	DI24820	160 (H)
1998 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/24/1998 15:15	DI24959	1600 (H)
1998 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	1/28/1998 16:35	DI24691	1700 (HJ)
1998 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	1/28/1998 17:35	DI24693	180 (HJ)
1998 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	2/25/1998 18:40	DI24821	220 (H)
1998 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	3/24/1998 15:35	DI24960	370 (H)
1998 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	2/25/1998 17:00	DI24823	430 (H)
1998 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	1/28/1998 18:50	DI24688	440 (HJ)
1998 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	2/25/1998 18:15	DI24825	50 (H)
1998 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	1/28/1998 18:15	DI24689	590 (HJ)

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]		T10 (H)	
1998 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	1/28/1998 17:05	DI24692	800 (HJ)	
1998 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/24/1998 14:40	DI24958	810 (H)	
1998 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/24/1998 16:10	DI24956	870 (H)	
1999 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/4/1999 10:30	DI27785	150 (H)	
1999 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/4/1999 8:30	DI27787	40 (H)	
2000 E Coli	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/11/2000 9:10	AA00670	9208	74.3
2000 E Coli	ST Joseph River	DNR boat ramp, or Grabill Rd Bridge	7/12/2000 12:45	AA00704	> 2420	156.5
2000 E Coli	Maumee River	Lake Ave Bridge, D/S of Filtration Plant	7/11/2000 8:55	AA00667	12996	172.3
2000 E Coli	ST Joseph River	Canoe Launch Across From IUPUFW	7/11/2000 8:10	AA00665	7270	238.2
2000 E Coli	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/10/2000 16:30	AA00660	24191.1	256
2000 E Coli	ST Joseph River	DNR boat ramp, or Grabill Rd Bridge	7/5/2000 11:50	AA00607	> 2420	325.5
2000 E Coli	Maumee River	Lake Ave Bridge, D/S of Filtration Plant	6/13/2000 9:30	AA00227		387.3
2000 E Coli	Maumee River	Lake Ave Bridge, D/S of Filtration Plant	6/20/2000 8:55	AA00296		426
2000 E Coli	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/13/2000 9:42	AA00228		435.2
2000 E Coli	ST Joseph River	DNR boat ramp, or Grabill Rd Bridge	6/14/2000 14:25	AA00222		488.4
2000 E Coli	ST Joseph River	DNR boat ramp, or Grabill Rd Bridge	6/29/2000 11:55	AA00519	> 2420	488.4
2000 E Coli	ST Joseph River	Tennessee St Bridge, Fort Wayne	7/4/2000 8:50	AA00571	> 24200	517.2
2000 E Coli	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/10/2000 17:35	AA00664	> 24200	556
2000 E Coli	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/20/2000 9:10	AA00299		613
2000 E Coli	ST Joseph River	Tennessee St Bridge, Fort Wayne	6/28/2000 8:55	AA00464	> 24200	794
2000 E Coli	ST Joseph River	Canoe Launch Across From IUPUFW	6/20/2000 8:11	AA00294		805
2000 E Coli	Maumee River	Lake Ave Bridge, D/S of Filtration Plant	6/28/2000 8:45	AA00461	> 24200	882
2000 E Coli	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/12/2000 17:35	AA00219	> 2420	980.4
2000 E Coli	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	7/3/2000 16:30	AA00564	19863	987
2000 E Coli	ST Joseph River	Canoe Launch Across From IUPUFW	7/4/2000 7:50	AA00565	> 24200	1299.65
2000 E Coli	ST Marys River	Spy Run Bridge, Fort Wayne	6/20/2000 8:40	AA00295		1439
2000 E Coli	ST Marys River	Spy Run Bridge, Fort Wayne	6/28/2000 8:25	AA00456	> 24200	1467
2000 E Coli	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/12/2000 18:35	AA00221	> 2420	1553.07
2000 E Coli	ST Marys River	Spy Run Bridge, Fort Wayne	7/11/2000 8:40	AA00666	> 24200	1553.07
2000 E Coli	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/27/2000 16:45	AA00453	> 24200	1989
2000 E Coli	ST Joseph River	DNR boat ramp, or Grabill Rd Bridge	6/21/2000 11:55	AA00329	> 24200	3448
2000 E Coli	Maumee River	Lake Ave Bridge, D/S of Filtration Plant	7/4/2000 8:35	AA00569	> 24200	3654
2000 E Coli	ST Marys River	Spy Run Bridge, Fort Wayne	7/4/2000 8:20	AA00566	> 24200	5172
2000 E Coli	ST Joseph River	Canoe Launch Across From IUPUFW	6/28/2000 8:00	AA00454	> 24200	14136
2000 E Coli	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	7/3/2000 15:30	AA00562	> 24200	14136
2000 E Coli	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	6/19/2000 19:40	AA00293		> 2420
2000 E Coli	ST Joseph River	Canoe Launch Across From IUPUFW	6/13/2000 8:30	AA00226		> 2420
2000 E Coli	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	6/19/2000 18:45	AA00289		> 2420
2000 E Coli	ST Marys River	Spy Run Bridge, Fort Wayne	6/13/2000 9:10	AA00230		> 2420
2000 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	3/8/2000 8:40	DI29173		81
2000 Fixed Station	ST Marys River	Ferguson Rd Bridge W of Winchester Rd, Fort Wayne, near USGS gage	8/9/2000 9:30	DI30131		110
2000 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	8/9/2000 8:45	DI30130		770
2000 Fixed Station	Maumee River	SR 101 Bridge, 3 Miles N of Woodburn	8/9/2000 8:00	DI30129		310 (HJ)
2000 Fixed Station	ST Joseph River	Tennessee St Bridge, Fort Wayne	4/5/2000 8:45	DI29320		50

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

Ft. Wayne Fixed Station Sampling Data
1991-2000

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	4/5/2000 8:00	DI29326 240
2000 Fixed Station	Maumee River	Landin Rd, New Haven/Fort Wayne	3/7/2000 9:20	DI29172 730
2000 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	4/5/2000 8:25	DI29319 870
2000 Fixed Station	ST Marys River	Spy Run Bridge, Fort Wayne	3/7/2000 8:25	DI29165 970

Source: Bell, Charles M. November 20, 2007. [Personal Communication]. Indiana Department of Environmental Management (IDEM), Assessment Information Management System (AIMS) Database

APPENDIX F: Stream Data, City of Fort Wayne Sampling Program

City of Fort Wayne
River Survey 2001
St. Joseph River @ Tennessee Street

Wk	Date	ECOLI	Elev(ft)	Depth(ft)	PHOS	NH3-N	TSS
1	4/3/2001	220	739.93	8.43	0.06	0.0042	20
2	4/9/2001	260	743.61	12.11	0.365	0.253	152
3	4/16/2001	110	743.54	12.04	0.077	0.0504	36
4	4/23/2001	140	743.66	12.16	0.06	0.0306	38
5	4/30/2001	20	742.33	10.83	0.085	0.0152	34
6	5/7/2001	48	740.99	9.49	0.06	0.0414	46
7	5/14/2001	32	740.28	8.78	0.06	0.0327	28
8	5/21/2001	500	744.06	12.56	0.202	0.259	76
9	5/29/2001	540	743.77	12.27	0.594	0.135	80
10	6/4/2001	370	742.98	11.48	0.088	0.0816	48
11	6/11/2001	100	743.58	12.08	0.136	0.0363	44
12	6/18/2001	100	742.72	11.22	0.06	0.0404	36
13	6/26/2001	200	743.09	11.59	0.179	0.185	54
14	7/2/2001	144	742.85	11.35	0.137	0.02	34
15	7/9/2001	100	742.96	11.46	0.127	0.0284	27
16	7/16/2001	20	742.72	11.22	0.101	0.0133	38
17	7/23/2001	80	742.97	11.47	0.083	0.035	22
18	7/30/2001	44	742.74	11.24	0.103	0.0524	14
19	8/6/2001	102	738.66	7.16	0.121	0.0324	38
20	8/14/2001	102	736.98	5.48	0.136	0.0092	56
21	8/20/2001	480	738.20	6.70	0.06	0.0718	36
22	8/27/2001	450	739.75	8.25	0.145	0.0535	18
23	9/4/2001	210	738.06	6.56	0.159	0.0675	84
24	9/10/2001	1120	740.22	8.72	0.144	0.0707	44
25	9/17/2001	160	738.02	6.52	0.111	0.041	64
26	9/24/2001	360	740.05	8.55	0.151	0.0321	40
27	10/1/2001	180	738.22	6.72	0.068	0.0143	20
28	10/9/2001	550	741.24	9.74	0.126	0.0087	30
29	10/15/2001	3200	745.98	14.48	0.41	0.0241	108
30	10/22/2001	270	745.38	13.88	0.302	0.0336	70
31	10/29/2001	180	744.21	12.71	0.208	0.023	28
	Max.	3200	745.98	14.48	0.594	0.259	152
	Min.	20	736.98	5.48	0.06	0.0042	14
	Avg.		741.73	10.23	0.152	0.0579	47

E.coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l,
TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2002

1215713v1

City of Fort Wayne
River Survey 2001
St. Marys River @ Spy Run Avenue

Wk	Date	ECOLI	Elev(ft)	Depth(ft)	PHOS	NH3-N	TSS
1	4/3/2001	1600	739.09	6.09	0.12	0.159	64
2	4/9/2001	600	742.45	8.75	0.19	0.165	70
3	4/16/2001	1200	743.07	10.07	0.418	0.131	210
4	4/23/2001	900	742.70	9.70	0.09	0.124	62
5	4/30/2001	70	741.69	8.69	0.091	0.0148	46
6	5/7/2001	32	740.07	7.07	0.06	0.0313	52
7	5/14/2001	90	739.56	6.56	0.075	0.02	80
8	5/21/2001	520	743.37	10.37	0.366	0.204	168
9	5/29/2001	600	743.06	10.06	0.155	0.0848	68
10	6/4/2001	1480	742.45	9.45	0.214	0.106	104
11	6/11/2001	2920	742.76	9.76	0.129	0.0363	34
12	6/18/2001	1000	742.07	9.07	0.07	0.0236	16
13	6/26/2001	848	742.31	9.31	0.158	0.0596	32
14	7/2/2001	450	742.10	9.10	0.402	0.213	36
15	7/9/2001	3000	742.35	9.35	0.247	0.0219	56
16	7/16/2001	260	741.85	8.85	0.162	0.0198	32
17	7/23/2001	3000	742.37	9.37	0.284	0.0839	60
18	7/30/2001	1450	742.15	9.15	0.214	0.129	56
19	8/6/2001	500	737.81	4.81	0.247	0.20	60
20	8/14/2001	360	736.04	3.04	0.34	0.01	176
21	8/20/2001	4600	737.43	4.43	0.229	0.115	80
22	8/27/2001	4000	738.98	5.98	0.416	0.145	66
23	9/4/2001	700	737.22	4.22	0.24	0.0962	172
24	9/10/2001	4250	739.63	6.63	0.272	0.192	90
25	9/17/2001	1160	737.12	4.12	0.264	0.113	168
26	9/24/2001	6000	739.47	6.47	0.319	0.103	72
27	10/1/2001	600	737.37	4.37	0.217	0.102	58
28	10/9/2001	620	740.40	7.40	0.346	0.0319	58
29	10/15/2001	3000	745.14	12.14	0.523	0.0632	100
30	10/22/2001	1800	744.79	11.79	0.479	0.148	150
31	10/29/2001	380	743.52	10.52	0.472	0.056	72
	Max.	6000	745.14	12.14	0.523	0.213	210
	Min.	32	736.04	3.04	0.06	0.01	16
	Avg.		740.98	7.96	0.252	0.0968	83

E.coli = colonies per 100 mls, yellow indicates >235

PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l,

TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2002

1215713v1

City of Fort Wayne
River Survey 2001
Maumee River @ Anthony Boulevard

Wk	Date	ECOLI	Elev(ft)	Depth(ft)	PHOS	NH3-N	TSS
1	4/3/2001	560	732.23	2.16	0.06	0.0153	24
2	4/9/2001	340	736.35	6.28	0.384	0.296	146
3	4/16/2001	1320	737.23	7.16	0.283	0.107	128
4	4/23/2001	1000	736.24	6.17	0.06	0.0595	56
5	4/30/2001	20	733.20	3.13	0.089	0.0213	42
6	5/7/2001	44	732.08	2.01	0.06	0.0392	62
7	5/14/2001	26	731.99	1.92	0.077	0.0176	88
8	5/21/2001	432	738.48	8.41	0.308	0.241	144
9	5/29/2001	590	737.46	7.39	0.172	0.123	120
10	6/4/2001	1000	735.28	5.21	0.122	0.0954	95
11	6/11/2001	570	734.49	4.42	0.122	0.0434	44
12	6/18/2001	230	732.24	2.17	0.065	0.0271	32
13	6/26/2001	1600	732.61	2.54	0.18	0.202	48
14	7/2/2001	150	731.94	1.87	0.168	0.03	55
15	7/9/2001	980	732.24	2.17	0.175	0.062	49
16	7/16/2001	60	731.48	1.41	0.105	0.0416	38
17	7/23/2001	980	732.09	2.02	0.16	0.0899	60
18	7/30/2001	810	731.93	1.86	0.173	0.119	52
19	8/6/2001	330	731.50	1.43	0.193	0.116	48
20	8/14/2001	110	730.67	0.60	0.194	0.0134	62
21	8/20/2001	6000	731.24	1.17	0.107	0.106	56
22	8/27/2001	1080	732.07	2.00	0.275	0.101	62
23	9/4/2001	260	731.29	1.22	0.166	0.0704	92
24	9/10/2001	2400	732.65	2.58	0.194	0.0825	78
25	9/17/2001	8000	731.29	1.22	0.156	0.115	104
26	9/24/2001	20000	732.11	2.04	0.252	0.155	72
27	10/1/2001	460	731.97	1.90	0.109	0.0468	40
28	10/9/2001	440	733.37	3.30	0.268	0.0228	54
29	10/15/2001	3200	743.34	13.27	0.472	0.0345	120
30	10/22/2001	700	741.67	11.60	0.365	0.0648	100
31	10/29/2001	220	738.22	8.15	0.331	0.039	54
	Max.	20000	743.34	13.27	0.472	0.296	146
	Min.	20	730.67	0.60	0.06	0.0134	24
	Avg.		733.90	3.83	0.1885	0.0838	72

E.coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l,
TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2002

City of Fort Wayne
River Survey 2001
Maumee River @ Landin Road

Wk	Date	ECOLI	Elev(ft)	Depth(ft)	PHOS	NH3-N	TSS
1	4/3/2001	600	728.16	3.65	0.06	0.0344	22
2	4/9/2001	270	732.20	7.69	0.371	0.292	152
3	4/16/2001	390	732.36	7.85	0.309	0.122	168
4	4/23/2001	480	734.35	9.84	0.074	0.0734	76
5	4/30/2001	10	731.02	6.51	0.11	0.0189	36
6	5/7/2001	44	730.30	5.79	0.06	0.034	46
7	5/14/2001	64	729.83	5.32	0.093	0.0327	76
8	5/21/2001	308	736.21	11.70	0.337	0.245	140
9	5/29/2001	650	735.55	11.04	0.152	0.117	108
10	6/4/2001	600	732.98	8.47	0.133	0.112	44
11	6/11/2001	360	732.86	8.35	0.144	0.0632	58
12	6/18/2001	170	730.41	5.90	0.114	0.02	24
13	6/26/2001	1024	730.87	6.36	0.196	0.194	68
14	7/2/2001	200	730.01	5.50	0.06	0.0259	46
15	7/9/2001	800	730.65	6.14	0.222	0.0281	56
16	7/16/2001	60	728.68	4.17	0.155	0.0376	39
17	7/23/2001	830	730.38	5.87	0.187	0.136	62
18	7/30/2001	1020	729.98	5.47	0.174	0.121	72
19	8/6/2001	440	729.26	4.75	0.171	0.141	24
20	8/14/2001	60	728.63	4.12	0.15	0.17	38
21	8/20/2001	3200	730.07	5.56	0.108	0.513	96
22	8/27/2001	920	730.82	6.31	0.28	0.108	78
23	9/4/2001	200	729.58	5.07	0.10	0.0937	76
24	9/10/2001	2240	730.70	6.19	0.202	0.116	68
25	9/17/2001	1460	729.41	4.90	0.205	0.188	168
26	9/24/2001	8000	730.92	6.41	0.281	0.133	44
27	10/1/2001	500	729.79	5.28	0.171	0.109	28
28	10/9/2001	1020	730.91	6.40	0.301	0.0298	44
29	10/15/2001	4600	740.61	16.10	0.459	0.0516	132
30	10/22/2001	620	739.55	15.04	0.336	0.0966	72
31	10/29/2001	1020	735.74	11.23	0.346	0.071	44
	Max.	8000	740.61	16.10	0.459	0.513	168
	Min.	10	728.16	3.65	0.06	0.0189	22
	Avg.		731.70	7.19	0.1955	0.1138	71

E.coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l,
TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2002

1215713v1

City of Fort Wayne
River Survey 2002
St. Joseph River @ Tennessee Street

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/01/02	544	15.79	0.261	0.172	100
2	04/08/02	320	12.43	0.183	0.037	66
3	04/15/02	220	13.04	0.270	0.100	109
4	04/22/02	200	11.58	0.141	0.043	56
5	04/29/02	360	12.02	0.095	0.018	24
6	05/06/02	100	10.51	0.061	0.029	38
7	05/13/02	5600	13.79	0.526	0.080	220
8	05/20/02	100	12.37	0.150	0.100	48
9	05/29/02	100	10.47	0.146	0.002	42
10	06/03/02	140	11.43	0.104	0.011	14
11	06/10/02	290	9.52	0.152	0.002	58
12	06/17/02	140	11.30	0.110	0.100	26
13	06/24/02	240	11.22	0.089	0.009	24
14	07/01/02	240	10.87	0.125	0.002	30
15	07/08/02	210	11.70	0.160	0.002	37
16	07/15/02	220	10.72	0.120	0.100	23
17	07/22/02	150	10.71	0.118	0.052	40
18	07/29/02	80	11.28	0.128	0.002	25
19	08/05/02	50	10.21	0.072	0.044	21
20	08/12/02	245	5.34	0.112	0.003	34
21	08/19/02	980	7.64	0.120	0.100	46
22	08/26/02	210	7.23	0.116	0.055	27
23	09/03/02	70	10.99	0.060	0.004	11
24	09/09/02	50	10.92	0.063	0.140	15
25	09/16/02	30	10.70	0.110	0.100	16
26	09/23/02	320	11.06	0.121	0.082	15
27	09/30/02	415	11.11	0.183	0.002	29
28	10/07/02	100	11.06	0.132	0.002	10
29	10/14/02	10	11.08	0.101	0.022	20
30	10/21/02	75	11.17	0.080	0.100	13
31	10/28/02	150	10.85	0.018	0.030	10
	Max.	5600	15.79	0.526	0.172	220
	Min.	10	5.34	0.018	0.002	10
	Avg.	386	10.97	0.136	0.050	53

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2003

1215713v1

City of Fort Wayne
River Survey 2002
St. Marys River @ Spy Run Avenue

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/01/02	884	13.60	0.489	0.188	112
2	04/08/02	740	9.69	0.308	0.049	26
3	04/15/02	660	10.83	0.310	0.100	96
4	04/22/02	680	9.34	0.128	0.028	260
5	04/29/02	3740	9.86	0.994	0.779	44
6	05/06/02	1000	7.19	0.120	0.015	272
7	05/13/02	5400	11.46	0.631	0.155	59
8	05/20/02	500	9.94	0.310	0.100	110
9	05/29/02	2700	8.36	0.408	0.083	158
10	06/03/02	560	8.90	0.373	0.036	76
11	06/10/02	1400	7.51	0.304	0.002	46
12	06/17/02	420	8.82	0.210	0.100	34
13	06/24/02	360	9.02	0.188	0.014	36
14	07/01/02	220	8.87	0.249	0.024	34
15	07/08/02	300	9.10	0.220	0.002	17
16	07/15/02	380	8.27	0.240	0.200	20
17	07/22/02	170	8.66	0.298	0.028	20
18	07/29/02	270	9.31	0.151	0.002	13
19	08/05/02	740	8.16	0.140	0.022	62
20	08/12/02	55	3.19	0.369	0.782	55
21	08/19/02	130	5.35	0.320	0.600	76
22	08/26/02	Test Failed	5.05	0.271	0.321	28
23	09/03/02	1600	8.69	0.082	0.017	11
24	09/09/02	60	8.59	0.062	0.160	46
25	09/16/02	240	8.63	0.370	0.500	6
26	09/23/02	250	8.77	0.297	0.361	11
27	09/30/02	220	8.94	0.260	0.324	19
28	10/07/02	260	8.83	0.245	0.070	51
29	10/14/02	600	8.69	0.211	0.117	23
30	10/21/02	190	8.89	0.140	0.100	20
31	10/28/02	160	8.74	0.060	0.098	20
	Max.	5400	13.60	0.994	0.782	272
	Min.	55	3.19	0.060	0.002	6
	Avg.	830	8.68	0.282	0.173	60

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2003

1215713v1

City of Fort Wayne
River Survey 2002
Maumee River @ Anthony Boulevard

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/01/02	616	15.71	0.390	0.189	144
2	04/08/02	1040	8.28	0.205	0.039	76
3	04/15/02	460	9.85	0.280	0.100	333
4	04/22/02	360	5.96	0.151	0.040	46
5	04/29/02	4440	8.12	0.643	0.503	224
6	05/06/02	300	3.51	0.089	0.015	44
7	05/13/02	4300	13.45	0.585	0.118	260
8	05/20/02	100	8.63	0.190	0.100	54
9	05/29/02	1100	4.16	0.253	0.022	74
10	06/03/02	540	4.27	0.254	0.025	58
11	06/10/02	330	3.36	0.236	0.002	76
12	06/17/02	260	1.34	0.160	0.100	56
13	06/24/02	430	1.78	0.104	0.066	48
14	07/01/02	540	1.84	0.174	0.006	70
15	07/08/02	290	2.15	0.138	0.056	27
16	07/15/02	70	1.39	0.160	0.100	27
17	07/22/02	470	1.00	0.229	0.298	150
18	07/29/02	60	1.94	0.140	0.005	11
19	08/05/02	270	2.46	0.165	0.035	36
20	08/12/02	600	0.96	0.146	0.179	37
21	08/19/02	400	1.74	Test Failed	Test Failed	45
22	08/26/02	2400	1.48	0.210	0.244	52
23	09/03/02	110	1.23	0.016	0.171	17
24	09/09/02	50	1.10	0.058	0.262	10
25	09/16/02	90	0.98	0.130	0.200	22
26	09/23/02	900	1.31	0.202	0.195	17
27	09/30/02	310	2.01	0.213	0.093	10
28	10/07/02	220	1.72	0.399	0.186	9
29	10/14/02	70	1.21	0.147	0.109	27
30	10/21/02	115	1.06	0.070	0.100	20
31	10/28/02	800	1.06	0.039	0.074	20
	Max.	4440	15.71	0.643	0.503	333
	Min.	50	0.96	0.016	0.002	9
	Avg.	711	3.71	0.206	0.121	68

E.Coli = colonies per 100 mls, yellow indicates >235

PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen m

TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2003

City of Fort Wayne
River Survey 2002
Maumee River @ Landin Road

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/01/02	768	18.73	0.417	0.173	100
2	04/08/02	440	11.63	0.216	0.047	84
3	04/15/02	400	13.19	0.290	0.100	106
4	04/22/02	300	9.32	0.155	0.051	60
5	04/29/02	5000	10.64	0.671	0.495	224
6	05/06/02	400	7.20	0.099	0.027	50
7	05/13/02	5400	17.68	0.509	0.115	244
8	05/20/02	300	11.12	0.210	0.100	55
9	05/29/02	1800	6.98	0.291	0.042	108
10	06/03/02	200	7.84	0.250	0.045	66
11	06/10/02	470	6.75	0.407	0.002	74
12	06/17/02	250	6.25	0.200	0.100	61
13	06/24/02	660	5.22	0.131	0.155	36
14	07/01/02	430	5.80	0.204	0.044	66
15	07/08/02	420	5.87	0.179	0.112	27
16	07/15/02	Test Failed	5.27	0.190	0.100	33
17	07/22/02	400	4.46	0.215	0.114	210
18	07/29/02	130	5.30	0.201	0.022	28
19	08/05/02	160	5.73	0.161	0.157	53
20	08/12/02	65	4.73	0.167	0.016	32
21	08/19/02	620	5.77	0.210	0.100	39
22	08/26/02	1480	5.64	0.178	0.218	52
23	09/03/02	420	4.88	0.009	0.080	21
24	09/09/02	560	4.59	0.198	0.458	20
25	09/16/02	370	4.33	0.180	0.400	27
26	09/23/02	640	4.72	0.206	0.325	70
27	09/30/02	680	5.69	0.326	0.241	13
28	10/07/02	220	4.73	0.533	0.124	13
29	10/14/02	130	4.59	0.263	0.258	33
30	10/21/02	105	4.79	0.080	0.100	27
31	10/28/02	270	4.66	0.073	0.127	20
	Max.	5400	18.73	0.671	0.495	244
	Min	65	4.33	0.073	0.002	13
	Avg.	783	7.23	0.239	0.143	66

E.Coli = colonies per 100 mls, yellow indicates >235

PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n

TSS = Total Suspended Solids mg/l

Jim Cornell, Feb. 2003

City of Fort Wayne
River Survey 2003
St. Joseph River @ Tennessee Street

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/07/03	8	13.53	0.348	0.181	90
2	04/14/03	34	11.69	No Sample	0.081	25
3	04/21/03	5	11.55	0.130	0.100	9
4	04/28/03	3	11.31	0.079	0.003	26
5	05/05/03	12	14.12	0.174	0.062	124
6	05/12/03	700	18.73	0.358	0.313	176
7	05/19/03	78	12.27	0.140	0.100	39
8	05/27/03	76	11.01	0.225	0.027	28
9	06/02/03	38	11.30	0.057	0.003	27
10	06/09/03	80	11.32	0.021	0.003	14
11	06/16/03	130	13.38	0.100	0.100	22
12	06/23/03	40	11.92	0.120	0.018	35
13	06/30/03	190	11.29	0.131	0.053	26
14	07/07/03	360	15.36	0.136	0.047	54
15	07/15/03	500	13.91	0.793	0.011	42
16	07/21/03	440	14.37	0.350	0.100	236
17	07/28/03	60	12.95	0.192	0.023	72
18	08/04/03	640	14.46	0.316	0.077	87
19	08/11/03	120	12.01	0.145	0.012	31
20	08/18/03	54	11.51	0.100	0.100	28
21	08/25/03	20	11.20	0.126	0.155	13
22	09/02/03	8	15.51	0.541	0.076	200
23	09/08/03	96	12.16	0.110	0.029	20
24	09/15/03	92	12.07	0.009	0.024	38
25	09/22/03	92	11.93	0.110	0.100	25
26	09/29/03	184	14.30	0.279	0.043	63
27	10/06/03	104	11.96	0.153	0.039	22
28	10/13/03	20	11.58	0.107	0.009	18
29	10/27/03	23	11.69	0.062	0.034	22
	Max.	700	18.73	0.793	0.313	236
	Min.	3	11.01	0.009	0.003	9
	Avg.	145	12.77	0.193	0.066	56

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

Jim Cornell

City of Fort Wayne
River Survey 2003
St. Marys River @ Spy Run Avenue

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/07/03	32	11.48	0.499	0.294	166
2	04/14/03	8	9.54	No Sample	0.050	33
3	04/21/03	20	9.27	0.150	0.300	35
4	04/28/03	8	9.15	0.087	0.003	24
5	05/05/03	8	12.04	0.573	0.271	536
6	05/12/03	2000	16.53	0.763	0.188	392
7	05/19/03	249	10.46	0.370	0.100	118
8	05/27/03	88	9.08	0.145	0.011	39
9	06/02/03	36	9.19	0.119	0.003	35
10	06/09/03	20	9.15	0.121	0.035	22
11	06/16/03	300	11.01	0.540	0.300	188
12	06/23/03	260	9.43	0.262	0.016	92
13	06/30/03	620	9.38	0.175	0.036	41
14	07/07/03	250	13.25	0.406	0.072	232
15	07/15/03	500	11.82	1.248	0.014	33
16	07/21/03	200	12.27	0.420	0.200	340
17	07/28/03	20	10.44	0.261	0.036	36
18	08/04/03	800	12.1	0.583	0.068	136
19	08/11/03	340	9.97	0.255	0.143	25
20	08/18/03	29	9.83	0.180	0.100	37
21	08/25/03	67	9.09	0.176	0.035	26
22	09/02/03	24	12.63	0.506	0.174	100
23	09/08/03	34	10.13	0.168	0.016	33
24	09/15/03	3	9.61	0.072	0.162	33
25	09/22/03	5	9.62	0.220	0.300	30
26	09/29/03	64	12.19	0.515	0.028	102
27	10/06/03	18	9.58	0.203	0.037	21
28	10/13/03	56	9.34	0.184	0.004	14
29	10/27/03	1	9.61	0.159	0.074	16
	Max.	2000	16.53	1.248	0.300	536
	Min.	1	9.09	0.072	0.003	14
	Avg.	209	10.59	0.334	0.106	101

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen m
TSS = Total Suspended Solids mg/l

Jim Cornell

1215713v1

City of Fort Wayne
River Survey 2003
Maumee River @ Anthony Boulevard

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/07/03	Test Failed	11.24	0.337	0.261	108
2	04/14/03	80	3.63	No Sample	0.030	29
3	04/21/03	9	2.84	0.060	0.100	39
4	04/28/03	13	1.98	0.106	0.003	30
5	05/05/03	28	11.45	0.421	0.170	374
6	05/12/03	1100	18.41	0.605	0.144	356
7	05/19/03	146	6.35	0.230	0.100	82
8	05/27/03	84	1.66	0.215	0.005	35
9	06/02/03	40	1.97	0.117	0.003	40
10	06/09/03	44	2.19	0.075	0.082	30
11	06/16/03	495	8.96	0.440	0.200	176
12	06/23/03	320	4.79	0.288	0.019	64
13	06/30/03	400	2.20	0.153	0.030	29
14	07/07/03	250	15.44	0.378	0.070	246
15	07/15/03	300	10.82	1.131	0.012	36
16	07/21/03	140	12.56	0.390	0.200	292
17	07/28/03	10	5.61	0.219	0.010	37
18	08/04/03	760	11.88	0.458	0.071	139
19	08/11/03	230	4.44	0.190	0.053	32
20	08/18/03	42	2.62	0.130	0.100	39
21	08/25/03	26	1.75	0.141	0.039	17
22	09/02/03	10	13.85	0.553	0.082	216
23	09/08/03	14	5.07	0.188	0.011	27
24	09/15/03	3	3.12	0.041	0.046	32
25	09/22/03	5	7.39	0.150	0.200	31
26	09/29/03	104	12.21	0.420	0.022	100
27	10/06/03	80	3.05	0.208	0.031	29
28	10/13/03	136	2.15	0.125	0.004	20
29	10/27/03	15	2.64	0.137	0.029	23
	Max.	1100	18.41	1.131	0.261	374
	Min.	3	1.66	0.041	0.003	17
	Avg.	174	6.63	0.282	0.073	93

E.Coli = colonies per 100 mls, yellow indicates >235
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Jim Cornell

1215713v1

City of Fort Wayne
River Survey 2003
Maumee River @ Landin Road

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/07/03	32	14.59	0.438	0.246	110
2	04/14/03	36	8.02	No Sample	0.092	34
3	04/21/03	7	6.39	0.140	0.100	37
4	04/28/03	48	6.04	0.160	0.003	25
5	05/05/03	28	15.57	0.444	0.242	308
6	05/12/03	1000	21.48	0.620	0.156	260
7	05/19/03	152	9.48	0.240	0.100	82
8	05/27/03	64	6.07	0.241	0.043	43
9	06/02/03	352	6.17	0.094	0.003	34
10	06/09/03	296	5.93	0.081	0.048	34
11	06/16/03	500	11.97	0.500	0.300	196
12	06/23/03	340	8.60	0.319	0.035	110
13	06/30/03	500	5.87	0.176	0.060	35
14	07/07/03	200	18.95	0.382	0.063	222
15	07/15/03	1500	14.98	1.133	0.034	40
16	07/21/03	140	17.65	0.320	0.200	216
17	07/28/03	15	9.29	0.238	0.047	49
18	08/04/03	840	15.20	0.497	0.060	126
19	08/11/03	250	8.52	0.208	0.046	40
20	08/18/03	78	6.45	0.140	0.100	47
21	08/25/03	22	5.90	0.136	0.101	11
22	09/02/03	8	16.98	0.644	0.078	210
23	09/08/03	20	8.84	0.129	0.024	40
24	09/15/03	1	7.26	0.183	0.133	46
25	09/22/03	7	7.55	0.180	0.100	44
26	09/29/03	24	15.51	0.491	0.023	73
27	10/06/03	78	7.50	0.211	0.049	26
28	10/13/03	84	6.38	0.169	0.004	33
29	10/27/03	52	6.49	0.151	0.111	21
	Max.	1500	21.48	1.133	0.300	308
	Min.	1	5.87	0.081	0.003	11
	Avg.	230	10.33	0.309	0.090	88

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

Jim Cornell

City of Fort Wayne
River Survey 2004
St. Joseph River @ Tennessee Street

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/05/04	20	11.62	0.13	0.009	22
2	04/12/04	21	11.70	0.12	0.009	25
3	04/19/04	14	11.73	0.09	0.100	30
4	04/26/04	36	11.87	0.10	0.040	21
5	05/03/04	1454	12.09	0.08	0.070	30
6	05/11/04	238	12.18	0.10	0.110	39
7	05/17/04	93	12.03	0.15	0.160	33
8	05/24/04	9680	14.61	0.57	0.200	434
9	06/01/04	6520	15.57	0.44	0.120	230
10	06/07/04	218	12.01	0.33	0.030	48
11	06/14/04	3309	20.83	0.17	0.190	180
12	06/21/04	126	13.22	0.20	0.100	8
13	06/28/04	190	11.92	0.08	0.008	34
14	07/06/04	20	11.57	0.08	0.008	22
15	07/12/04	1288	11.78	0.13	0.008	66
16	07/19/04	85	11.56	0.13	0.100	31
17	07/26/04	320	12.18	0.15	0.080	50
18	08/02/04	82	12.12	0.13	0.010	16
19	08/09/04	104	11.71	0.11	0.009	33
20	08/16/04	Failed	11.30	0.05	0.020	33
21	08/23/04	190	11.95	0.12	0.100	30
22	08/30/04	1488	13.27	0.11	0.010	30
23	09/07/04	840	12.74	0.09	0.009	13
24	09/13/04	82	11.74	0.12	0.008	24
25	09/21/04	85	6.68	0.17	0.023	32
26	09/27/04	66	5.83	0.12	0.100	41
27	10/04/04	110	6.35	0.15	0.020	35
28	10/11/04	58	11.72	0.21	0.022	31
29	10/18/04	39	11.74	0.10	0.100	23
30	10/25/04	613	8.75	0.11	0.008	28
	Max.	9680	20.83	0.57	0.200	434
	Min.	14	5.83	0.05	0.008	8
	Avg.	944	11.81	0.15	0.059	56

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

City of Fort Wayne
River Survey 2004
St. Marys River @ Spy Run Avenue

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/05/04	159	9.28	0.16	0.009	38
2	04/12/04	41	9.26	0.12	0.009	41
3	04/19/04	25	9.39	0.19	0.400	37
4	04/26/04	365	9.48	0.20	0.320	38
5	05/03/04	3972	9.75	0.04	0.060	29
6	05/11/04	9676	9.84	0.17	0.160	32
7	05/17/04	189	9.90	0.16	0.009	31
8	05/24/04	1844	12.27	0.48	0.200	198
9	06/01/04	8220	13.27	0.67	0.260	352
10	06/07/04	452	9.91	0.70	0.040	71
11	06/14/04	7754	18.42	0.38	0.220	158
12	06/21/04	798	10.94	0.29	0.100	73
13	06/28/04	325	9.55	0.08	0.008	37
14	07/06/04	264	9.57	0.08	0.008	54
15	07/12/04	8212	9.63	0.17	0.008	120
16	07/19/04	84	9.42	0.29	0.100	27
17	07/26/04	816	9.80	0.18	0.060	64
18	08/02/04	840	9.84	0.43	0.050	68
19	08/09/04	1352	9.53	0.28	0.030	57
20	08/16/04	Failed	9.07	0.28	0.020	58
21	08/23/04	576	9.88	0.48	0.100	88
22	08/30/04	6510	10.86	0.81	0.030	374
23	09/07/04	12262	10.00	0.09	0.009	13
24	09/13/04	238	9.90	0.22	0.038	41
25	09/21/04	160	3.93	0.35	0.030	62
26	09/27/04	299	3.56	0.31	0.100	92
27	10/04/04	169	4.17	0.27	0.010	57
28	10/11/04	60	8.99	0.14	0.026	32
29	10/18/04	126	9.00	0.28	0.100	39
30	10/25/04	365	6.00	0.14	0.008	40
	Max.	12262	18.42	0.70	0.400	374
	Min.	41	3.56	0.04	0.008	13
	Avg.	2281	9.48	0.28	0.084	81

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen m
TSS = Total Suspended Solids mg/l

1215713v1

City of Fort Wayne
River Survey 2004
Maumee River @ Anthony Boulevard

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/05/04	82	3.35	0.14	0.009	27
2	04/12/04	31	1.89	0.09	0.010	32
3	04/19/04	17	2.28	0.11	0.200	28
4	04/26/04	291	2.57	0.18	0.340	30
5	05/03/04	3972	3.42	0.11	0.070	32
6	05/11/04	4480	3.90	0.11	0.040	39
7	05/17/04	166	3.28	0.17	0.120	39
8	05/24/04	9680	11.34	0.53	0.200	192
9	06/01/04	6280	15.46	0.56	0.220	270
10	06/07/04	406	3.70	0.41	0.040	63
11	06/14/04	5178	20.91	0.27	0.180	220
12	06/21/04	436	8.43	0.24	0.100	50
13	06/28/04	153	2.65	0.08	0.008	33
14	07/06/04	126	2.31	0.08	0.008	38
15	07/12/04	9222	2.85	0.12	0.009	90
16	07/19/04	85	2.20	0.14	0.100	33
17	07/26/04	728	3.59	0.17	0.070	54
18	08/02/04	808	4.36	0.42	0.060	72
19	08/09/04	710	2.36	0.22	0.009	54
20	08/16/04	Failed	1.48	0.09	0.020	51
21	08/23/04	602	4.08	0.38	0.100	78
22	08/30/04	8704	8.13	0.62	0.030	218
23	09/07/04	9768	6.75	0.32	0.037	70
24	09/13/04	218	2.10	0.19	0.010	34
25	09/21/04	187	1.16	0.28	0.012	44
26	09/27/04	84	1.53	0.33	0.100	94
27	10/04/04	105	1.43	0.17	0.010	63
28	10/11/04	57	2.10	0.23	0.018	35
29	10/18/04	84	2.09	0.17	0.100	40
30	10/25/04	411	2.13	0.20	0.008	62
	Max.	9768	20.91	0.62	0.340	270
	Min.	17	1.16	0.08	0.008	27
	Avg.	2174	4.46	0.24	0.074	73

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

City of Fort Wayne
River Survey 2004
Maumee River @ Landin Road

Wk	Date	ECOLI	Depth(ft)	PHOS	NH3-N	TSS
1	04/05/04	51	7.05	0.17	0.009	29
2	04/12/04	27	6.34	0.12	0.027	26
3	04/19/04	16	6.26	0.16	0.200	22
4	04/26/04	411	6.70	0.20	0.360	30
5	05/03/04	4840	7.70	0.09	0.100	46
6	05/11/04	630	7.76	0.16	0.060	69
7	05/17/04	110	7.32	0.17	0.100	52
8	05/24/04	9680	14.76	0.50	0.200	386
9	06/01/04	7740	18.62	0.52	0.200	258
10	06/07/04	366	7.67	0.51	0.060	68
11	06/14/04	5767	23.92	0.32	0.200	198
12	06/21/04	500	11.44	0.26	0.100	81
13	06/28/04	186	6.96	0.08	0.030	40
14	07/06/04	786	6.39	0.08	0.008	46
15	07/12/04	1024	6.84	0.14	0.030	64
16	07/19/04	63	5.94	0.15	0.100	36
17	07/26/04	456	7.70	0.24	0.090	62
18	08/02/04	700	8.01	0.50	0.060	76
19	08/09/04	424	6.48	0.23	0.040	35
20	08/16/04	Failed	5.00	0.03	0.020	40
21	08/23/04	1092	7.87	0.41	0.100	80
22	08/30/04	2924	11.14	0.67	0.030	192
23	09/07/04	16328	10.31	0.41	0.077	75
24	09/13/04	292	5.62	0.28	0.077	45
25	09/21/04	97	5.54	0.22	0.075	36
26	09/27/04	113	4.78	0.22	0.100	46
27	10/04/04	152	5.33	0.31	0.030	42
28	10/11/04	161	4.65	0.49	0.050	37
29	10/18/04	162	5.63	0.14	0.100	23
30	10/25/04	387	5.65	0.20	0.030	43
	Max.	16328	23.92	0.67	0.360	386
	Min.	16	4.65	0.03	0.008	22
	Avg.	1913	8.18	0.27	0.089	76

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen n
TSS = Total Suspended Solids mg/l

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City of Fort Wayne
River Survey 2005
St. Joseph River @ Tennessee Street

Wk	Date	Depth(ft)	ECOLI	DO	Temp(F)	pH	PHOS	NH3-N	TSS
1	04/04/05	12.09	19	12.45	47.5	6.76	0.20	0.020	7
2	04/11/05	11.74	20	10.84	57.3	7.27	0.08	0.020	14
3	04/18/05	8.39	40	12.45	57.8	7.84	0.06	0.100	28
4	04/25/05	12.74	387	12.29	47.1	6.62	0.01	0.030	16
5	05/02/05	11.11	70	12.49	51.0	6.62	0.09	0.020	14
6	05/09/05	8.50	18	11.18	62.8	7.46	0.08	0.020	13
7	05/18/05	8.89	110	9.93	59.0	7.56	0.10	0.100	25
8	05/23/05	9.38	111	6.45	62.4	8.06	0.10	0.020	22
9	05/31/05	7.94	192	5.54	65.5	8.23	0.05	0.026	20
10	06/06/05	7.11	5200	No Data	69.8	7.87	0.09	0.045	26
11	06/13/05	8.44	1986	No Data	76.7	7.48	0.10	0.103	8
12	06/20/05	6.96	109	8.01	69.7	8.03	0.09	0.100	24
13	06/27/05	10.53	50	14.38	82.3	8.37	0.02	0.020	8
14	07/05/05	6.59	87	5.41	76.7	7.85	0.05	0.002	18
15	07/11/05	5.05	157	6.02	77.5	7.82	0.16	0.002	32
16	07/18/05	10.73	210	7.08	78.5	8.13	0.13	0.002	20
17	07/25/05	11.21	34	9.78	81.9	7.98	0.13	0.100	12
18	08/01/05	10.94	99	6.07	76.1	7.88	0.14	0.148	38
19	08/08/05	10.14	921	8.41	79.9	8.66	0.09	0.100	14
20	08/15/05	6.51	249	No Data	77.6	7.78	0.14	0.100	11
21	08/22/05	10.70	140	7.44	77.3	7.93	0.11	0.100	17
22	08/29/05	10.17	45	7.20	76.5	8.18	0.11	0.100	14
23	09/06/05	10.50	35	8.79	73.5	7.92	0.26	0.421	12
24	09/13/05	10.43	14	12.71	75.8	8.16	0.11	0.100	13
25	09/19/05	10.89	28	8.58	70.1	8.00	0.10	0.100	8
26	09/26/05	11.54	1300	8.50	70.7	8.82	0.19	0.100	72
27	10/03/05	11.26	68	9.13	71.6	8.95	0.07	0.100	18
28	10/10/05	11.23	40	8.16	60.8	7.16	0.12	0.100	15
29	10/17/05	11.20	67	10.29	58.4	8.19	0.09	0.100	20
30	10/24/05	10.34	199	8.41	53.2	7.78	0.08	0.103	21
31	10/31/05	11.29	16	11.77	50.7	7.49	0.02	0.100	12
	Max.	12.74	5200	14.38	81.90	8.82	0.260	0.421	72
	Min.	5.05	14	5.41	47.10	6.62	0.01	0.002	7
	Avg.	9.82	388	9.28	67.60	7.83	0.10	0.081	19

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l, DO = Dissolved Oxygen mg/l
TSS = Total Suspended Solids mg/l

1215713v1

City of Fort Wayne
River Survey 2005
St. Marys River @ Spy Run Avenue

Wk	Date	Depth(ft)	ECOLI	DO	Temp(F)	pH	PHOS	NH3-N	TSS
1	04/04/05	9.51	345	11.51	45.9	6.47	0.21	0.038	46
2	04/11/05	9.16	61	11.45	58.3	7.09	0.23	0.020	44
3	04/18/05	6.12	35	22.31	60.9	7.78	0.13	0.100	49
4	04/25/05	10.43	6890	11.51	42.6	6.45	0.58	1.010	166
5	05/02/05	8.77	192	10.11	50.2	6.28	0.28	0.042	47
6	05/09/05	6.22	73	14.50	64.2	7.38	0.12	0.050	29
7	05/18/05	6.67	291	11.99	59.3	7.40	0.21	0.300	29
8	05/23/05	7.28	291	6.58	62.9	7.98	0.28	0.020	22
9	05/31/05	5.57	77	7.84	67.0	8.35	0.13	0.020	32
10	06/06/05	4.82	1733	7.57	73.6	7.80	0.13	0.020	44
11	06/13/05	6.05	46110	No Data	73.8	7.86	0.23	0.114	53
12	06/20/05	4.84	613	8.27	68.7	7.89	0.23	0.100	55
13	06/27/05	8.51	727	18.85	82.8	8.69	0.05	0.002	16
14	07/05/05	4.53	326	6.84	77.2	7.76	0.31	0.002	51
15	07/11/05	3.11	461	11.04	76.3	7.96	0.26	0.002	70
16	07/18/05	8.47	1120	No Data	77.7	7.59	0.16	0.002	19
17	07/25/05	8.68	118	5.95	83.8	8.39	0.36	0.100	19
18	08/01/05	9.20	344	7.75	77.0	8.48	0.21	0.025	31
19	08/08/05	8.20	37	7.91	81.1	8.56	0.23	0.147	24
20	08/15/05	8.31	866	5.44	76.3	7.57	0.26	0.200	18
21	08/22/05	8.64	365	8.04	78.2	7.91	0.14	0.100	21
22	08/29/05	8.26	50	6.11	76.9	8.16	0.18	0.100	19
23	09/06/05	8.56	59	5.91	70.9	7.59	0.42	0.015	37
24	09/13/05	8.34	17	10.81	74.7	7.96	0.14	0.100	16
25	09/19/05	8.54	194	11.54	69.6	8.30	0.23	0.200	22
26	09/26/05	9.45	>2420	5.80	68.1	7.20	0.26	0.114	68
27	10/03/05	9.10	345	7.19	63.1	7.26	0.37	0.100	84
28	10/10/05	8.76	161	7.81	58.9	6.95	0.20	0.100	29
29	10/17/05	8.95	111	9.38	57.7	7.78	0.19	0.100	31
30	10/24/05	8.37	115	9.43	52.9	7.69	0.19	0.100	30
31	10/31/05	8.58	93	10.36	47.1	6.96	0.29	0.100	36
	Max.	10.43	46110	22.31	83.8	8.69	0.580	1.010	166
	Min.	3.11	17	5.44	42.6	6.28	0.05	0.002	16
	Avg.	7.74	2007	9.65	67.0	7.66	0.23	0.111	40

E.Coli = colonies per 100 mls, yellow indicates >235

PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l, DO = Dissolved Oxygen mg/l

TSS = Total Suspended Solids mg/l

City of Fort Wayne
River Survey 2005
Maumee River @ Anthony Boulevard

Wk	Date	Depth(ft)	ECOLI	DO	Temp(F)	pH	PHOS	NH3-N	TSS
1	04/04/05	4.26	102	12.40	46.8	6.15	0.17	0.020	26
2	04/11/05	2.76	41	10.91	57.5	6.77	0.17	0.020	32
3	04/18/05	1.98	19	13.11	58.9	7.14	0.08	0.100	50
4	04/25/05	9.01	1733	12.14	43.2	6.43	0.58	0.898	154
5	05/02/05	3.95	145	10.89	50.4	6.11	0.30	0.028	39
6	05/09/05	2.13	40	12.78	62.5	6.92	0.08	0.020	26
7	05/18/05	2.18	179	9.60	59.0	7.10	0.14	0.100	40
8	05/23/05	2.65	152	5.79	62.7	7.79	0.18	0.020	32
9	05/31/05	1.59	50	5.49	66.3	8.57	0.13	0.024	38
10	06/06/05	1.64	4220	6.33	73.1	7.89	0.11	0.020	26
11	06/13/05	2.30	22820	No Data	75.8	7.81	0.12	0.061	27
12	06/20/05	1.74	345	8.64	70.4	8.00	0.15	0.100	50
13	06/27/05	1.06	96	10.02	78.6	7.77	0.07	0.085	12
14	07/05/05	1.37	365	7.54	77.6	7.69	0.01	0.002	39
15	07/11/05	0.89	76	10.82	77.9	7.69	0.19	0.002	34
16	07/18/05	1.45	548	6.43	78.9	7.89	0.14	0.002	24
17	07/25/05	1.40	105	5.43	83.3	8.09	0.15	0.100	17
18	08/01/05	1.97	260	6.01	76.7	7.49	0.15	0.154	40
19	08/08/05	0.90	45	6.08	78.2	7.83	0.11	0.184	17
20	08/15/05	1.27	2203	5.35	77.1	7.67	0.14	0.200	12
21	08/22/05	1.32	228	8.06	78.2	7.84	0.17	0.100	12
22	08/29/05	0.93	31	5.15	75.6	7.58	0.15	0.100	21
23	09/06/05	1.08	29	8.73	71.7	7.86	0.24	0.034	18
24	09/13/05	0.55	18	6.38	73.6	6.99	0.11	0.100	17
25	09/19/05	0.85	365	7.71	69.3	7.32	0.15	0.200	13
26	09/26/05	4.57	>2420	8.52	69.3	7.39	0.12	0.100	26
27	10/03/05	3.41	517	9.02	63.3	7.26	0.32	0.100	119
28	10/10/05	0.99	135	8.88	60.5	6.84	0.16	0.100	27
29	10/17/05	1.15	161	9.86	58.6	7.77	0.11	0.100	28
30	10/24/05	0.62	>2420	9.22	54.6	7.41	0.14	0.176	34
31	10/31/05	1.50	54	11.43	47.5	6.99	0.27	0.100	35
	Max.	9.01	22820	13.11	83.3	8.57	0.580	0.898	154
	Min.	0.55	18	5.15	43.2	6.11	0.01	0.002	12
	Avg.	2.05	1132	8.62	67.0	7.42	0.16	0.108	35

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l, DO = Dissolved Oxygen mg/l
TSS = Total Suspended Solids mg/l

City of Fort Wayne
River Survey 2005
Maumee River @ Landin Road

Wk	Date	Depth(ft)	ECOLI	DO	Temp(F)	pH	PHOS	NH3-N	TSS
1	04/04/05	7.68	84	12.35	47.7	6.98	0.17	0.243	24
2	04/11/05	6.74	47	10.93	57.2	7.27	0.17	0.026	35
3	04/18/05	5.90	13	14.94	60.4	7.91	0.14	0.100	46
4	04/25/05	12.59	4430	11.95	43.7	6.96	0.56	0.961	184
5	05/02/05	7.74	111	11.08	50.6	7.03	0.26	0.034	44
6	05/09/05	6.09	23	12.84	62.3	7.47	0.18	0.020	24
7	05/18/05	6.30	435	10.52	60.0	7.58	0.16	0.100	40
8	05/23/05	6.60	238	5.49	63.4	8.04	0.17	0.020	36
9	05/31/05	5.43	40	No Data	66.6	8.29	0.12	0.022	32
10	06/06/05	5.35	345	5.68	72.5	7.89	0.25	0.020	38
11	06/13/05	6.40	10760	No Data	75.4	7.67	0.11	0.132	28
12	06/20/05	4.97	192	9.05	70.5	7.98	0.18	0.100	34
13	06/27/05	4.30	61	8.74	79.9	7.93	0.07	0.036	16
14	07/05/05	5.02	144	6.53	77.4	7.81	0.05	0.021	21
15	07/11/05	4.06	84	10.99	78.3	8.04	0.18	0.002	32
16	07/18/05	5.71	866	5.69	78.0	7.83	0.27	0.002	28
17	07/25/05	5.08	261	8.67	82.8	7.68	0.38	0.100	14
18	08/01/05	5.51	488	5.48	75.9	7.57	0.19	0.167	43
19	08/08/05	3.83	178	6.12	79.5	7.51	0.15	0.191	18
20	08/15/05	4.87	1986	5.09	75.7	7.42	0.39	0.200	12
21	08/22/05	4.08	308	6.59	76.1	7.42	0.18	0.295	14
22	08/29/05	4.45	147	6.99	75.6	7.52	0.21	0.165	30
23	09/06/05	4.37	138	6.49	72.8	7.63	0.25	0.098	29
24	09/13/05	4.13	126	6.02	74.0	7.22	0.28	0.100	32
25	09/19/05	4.30	517	6.25	69.7	7.25	0.19	0.200	21
26	09/26/05	8.11	>2420	5.99	69.1	7.41	0.34	0.195	66
27	10/03/05	6.71	387	8.56	63.9	7.51	0.39	0.100	76
28	10/10/05	4.71	166	8.29	60.7	7.32	0.25	0.130	26
29	10/17/05	4.54	82	9.22	58.0	7.82	0.17	0.100	19
30	10/24/05	4.41	727	9.28	53.7	7.67	0.13	0.268	26
31	10/31/05	5.65	91	10.79	48.5	7.39	0.29	0.100	43
	Max.	12.59	10760	14.94	82.8	8.29	0.560	0.961	184
	Min.	3.83	13	5.09	43.7	6.96	0.05	0.002	12
	Avg.	5.66	757	8.50	67.1	7.58	0.220	0.137	36

E.Coli = colonies per 100 mls, yellow indicates >235
PHOS = Total Phosphorus mg/l, NH3-N = Ammonia-Nitrogen mg/l, DO = Dissolved Oxygen mg/l
TSS = Total Suspended Solids mg/l

1215713v1

City of Fort Wayne
River Survey 2006
St. Joseph River @ Tennessee Street

Wk	Date	Depth(ft)	pH	DO	Temp(F)	ECOLI	NH3-N	PHOS	TSS
1	04/03/06	11.56	7.25	12.19	50.28	517	0.05	0.05	30
2	04/10/06	10.66	7.43	11.51	51.09	70	0.05	0.11	42
3	04/17/06	12.9	7.48	10.40	60.07	866	0.05	0.10	28
4	04/24/06	9.92	7.51	9.69	60.61	100	0.05	0.14	37
5	05/01/06	8.48	7.43	9.67	57.68	308	0.05	0.18	28
6	05/08/06	9.32	8.07	10.45	62.44	45	0.05	0.31	28
7	05/15/06	13.97	7.38	10.60	52.80	687	0.24	0.29	54
8	05/22/06	12.78	7.47	10.28	59.29	86	0.05	0.12	46
9	05/30/06	11.02	7.99	9.65	73.64	86	0.05	0.03	21
10	06/05/06	11.14	7.21	8.80	68.74	184	0.05	0.06	28
11	06/12/06	10.97	7.49	8.65	67.46	126	0.05	0.06	20
12	06/19/06	10.81	7.61	6.84	73.81	228	0.05	0.90	16
13	06/26/06	11.54	7.28	7.51	74.57	122	0.05	0.19	34
14	07/06/06	10.89	7.91	9.88	73.45	66	0.05	0.25	31
15	07/10/06	11.48	7.36	7.53	74.55	45	0.05	0.10	42
16	07/17/06	12.56	7.12	8.16	76.76	372	0.05	0.21	59
17	07/24/06	10.19	7.56	7.48	75.88	96	0.05	0.14	24
18	07/31/06	11.35	7.49	7.74	78.00	488	0.05	0.19	35
19	08/07/06	8.29	7.19	7.10	78.86	81	0.05	0.16	40
20	08/14/06	5.24	7.84	6.66	73.73	58	0.05	0.21	27
21	08/21/06	6.92	7.91	7.37	73.73	365	0.05	0.13	18
22	08/28/06	4.19	7.67	6.27	75.03	240	0.05	0.09	33
23	09/05/06	6.50	7.27	8.64	69.15	133	0.05	0.08	23
24	09/11/06	5.62	7.53	8.96	67.34	201	0.05	0.16	35
25	09/18/06	7.61	7.60	8.06	68.09	3000	0.05	0.10	36
26	09/26/06	10.75	7.80	11.27	61.14	261	0.05	0.10	31
27	10/02/06	11.48	7.50	10.99	60.40	2420	0.05	0.16	29
28	10/09/06	11.13	7.17	9.58	57.94	205	0.05	0.62	34
29	10/16/06	11.44	7.08	11.55	49.70	411	0.05	0.15	52
30	10/23/06	12.30	6.87	11.03	49.20	36	0.05	0.19	46
	Max.	13.97	8.07	12.19	78.86	3000	0.24	0.90	59
	Min.	4.19	6.87	6.27	49.20	36	0.05	0.03	16
	Avg.	10.10	7.48	9.15	65.85	397	0.06	0.18	34

DO = Dissolved Oxygen mg/l, E.Coli = colonies per 100 mls (yellow indicates >235)
NH3-N = Ammonia Nitrogen mg/l, PHOS = Total Phosphorus mg/l
TSS = Total Suspended Solids mg/l

1215713v1

City of Fort Wayne
River Survey 2006
St. Marys River @ Spy Run Avenue

Wk	Date	Depth(ft)	pH	DO	Temp(F)	ECOLI	NH3-N	PHOS	TSS
1	04/03/06	9.24	7.07	10.46	49.92	11530	0.29	0.68	368
2	04/10/06	8.15	7.37	10.77	52.64	201	0.05	0.21	56
3	04/17/06	11.04	6.80	8.11	56.60	16160	0.20	0.70	312
4	04/24/06	7.84	7.07	8.10	60.17	100	0.05	0.21	60
5	05/01/06	6.36	7.32	12.77	56.16	4080	0.35	0.58	53
6	05/08/06	8.91	7.88	13.21	61.33	99	0.05	0.33	40
7	05/15/06	11.71	7.35	9.38	53.08	6400	0.33	0.34	194
8	05/22/06	10.19	7.22	8.95	57.23	166	0.05	0.28	92
9	05/30/06	8.66	7.66	6.77	72.06	816	0.05	0.11	70
10	06/05/06	8.92	7.12	7.03	65.70	866	0.05	0.25	105
11	06/12/06	8.47	7.29	7.61	63.47	1553	0.38	0.62	120
12	06/19/06	9.16	7.56	7.43	73.54	758	0.05	0.21	40
13	06/26/06	9.18	7.19	5.88	73.15	365	0.15	0.30	54
14	07/06/06	8.78	7.92	13.61	74.09	210	0.05	0.23	37
15	07/10/06	9.18	7.18	12.11	76.15	88	0.05	0.10	66
16	07/17/06	10.49	6.92	5.94	78.88	548	0.05	0.28	65
17	07/24/06	8.33	7.06	6.07	75.65	488	0.05	0.31	63
18	07/31/06	9.16	7.21	6.03	79.15	548	0.05	0.33	48
19	08/07/06	5.99	6.58	5.92	78.97	649	0.05	0.36	100
20	08/14/06	3.46	7.53	5.84	72.96	228	0.05	0.34	61
21	08/21/06	4.56	7.62	3.60	74.48	613	0.20	0.30	35
22	08/28/06	4.60	7.45	4.10	75.35	1986	0.05	0.13	60
23	09/05/06	4.58	7.11	5.52	67.42	1414	0.15	0.34	99
24	09/11/06	3.70	7.27	6.17	67.16	435	0.13	0.30	80
25	09/18/06	5.05	7.34	6.82	68.47	81640	0.20	0.28	62
26	09/26/06	8.57	7.69	11.86	61.45	816	0.05	0.21	38
27	10/02/06	9.05	7.32	12.77	59.47	2420	0.05	0.29	20
28	10/09/06	8.87	7.17	9.95	57.11	261	0.05	0.11	30
29	10/16/06	9.24	7.11	7.85	49.00	82	0.05	0.25	8
30	10/23/06	9.85	6.74	8.17	49.90	248	0.05	0.54	52
	Max.	11.71	7.88	13.61	79.15	81640	0.38	0.70	368
	Min.	3.46	6.58	3.60	49.00	82	0.05	0.10	8
	Avg.	8.04	7.27	8.29	65.36	4526	0.11	0.32	83

DO = Dissolved Oxygen mg/l, E.Coli = colonies per 100 mls (yellow indicates >235)
NH3-N = Ammonia Nitrogen mg/l, PHOS = Total Phosphorus mg/l
TSS = Total Suspended Solids mg/l
Low DOs are associated with oil in groundwater from the NIPSCO site on Superior Street.

1215713v1

City of Fort Wayne
River Survey 2006
Maumee River @ Anthony Boulevard

Wk	Date	Depth(ft)	pH	DO	Temp(F)	ECOLI	NH3-N	PHOS	TSS
1	04/03/06	5.01	7.03	11.84	50.29	8690	0.17	0.37	200
2	04/10/06	3.17	7.08	11.24	51.83	107	0.05	0.18	50
3	04/17/06	9.69	6.69	9.23	57.67	12740	0.20	0.64	290
4	04/24/06	3.01	6.88	8.97	61.22	100	0.05	0.20	52
5	05/01/06	1.67	7.26	10.82	57.40	1986	0.05	0.20	46
6	05/08/06	1.63	7.72	11.27	62.71	55	0.05	0.33	36
7	05/15/06	10.97	7.29	10.40	53.00	3495	0.29	0.21	77
8	05/22/06	6.04	7.12	10.74	58.88	122	0.05	0.20	97
9	05/30/06	3.69	7.81	8.30	72.91	649	0.05	0.03	40
10	06/05/06	4.15	7.09	8.29	67.63	579	0.05	0.19	79
11	06/12/06	3.39	7.33	8.65	65.20	613	0.15	0.17	65
12	06/19/06	1.74	7.42	8.35	73.79	649	0.05	0.14	35
13	06/26/06	2.18	7.53	8.30	75.48	248	0.05	0.23	52
14	07/06/06	1.53	7.67	10.00	73.94	99	0.05	0.21	30
15	07/10/06	1.79	6.84	8.03	75.21	70	0.05	0.16	49
16	07/17/06	6.32	7.10	8.59	77.59	435	0.05	0.20	61
17	07/24/06	2.91	7.10	7.76	76.55	172	0.05	0.23	57
18	07/31/06	4.05	7.45	7.47	78.03	378	0.05	0.23	57
19	08/07/06	2.09	6.62	6.54	78.97	172	0.05	0.24	67
20	08/14/06	1.16	7.54	8.03	75.63	73	0.05	0.16	47
21	08/21/06	1.37	8.01	7.49	75.11	866	0.05	0.17	48
22	08/28/06	1.57	7.53	6.62	76.33	2420	0.05	0.17	50
23	09/05/06	1.20	7.19	7.23	67.40	816	0.05	0.28	67
24	09/11/06	0.66	7.21	7.70	68.46	345	0.05	0.15	54
25	09/18/06	1.16	7.23	8.11	69.19	15650	0.05	0.20	46
26	09/26/06	1.44	7.58	9.93	61.18	150	0.05	0.12	33
27	10/02/06	4.68	7.29	10.64	60.15	2420	0.05	0.30	28
28	10/09/06	1.95	7.36	10.24	57.88	210	0.05	0.10	44
29	10/16/06	4.38	7.00	11.80	48.10	152	0.05	0.12	50
30	10/23/06	5.58	6.48	10.71	49.90	249	0.05	0.47	59
	Max.	10.97	8.01	11.84	78.97	15650	0.29	0.64	290
	Min.	1.16	6.48	6.54	48.10	55	0.05	0.03	28
	Avg.	3.34	7.25	9.11	65.92	1824	0.07	0.22	66

DO = Dissolved Oxygen mg/l, E.Coli = colonies per 100 mls (yellow indicates >235)
NH3-N = Ammonia Nitrogen mg/l, PHOS = Total Phosphorus mg/l
TSS = Total Suspended Solids mg/l

1215713v1

City of Fort Wayne
River Survey 2006
Maumee River @ Landin Road

Wk	Date	Depth(ft)	pH	DO	Temp(F)	ECOLI	NH3-N	PHOS	TSS
1	04/03/06	9.34	7.31	10.90	50.66	14140	0.21	0.45	172
2	04/10/06	7.10	7.30	10.86	51.53	127	0.05	0.18	54
3	04/17/06	13.37	7.27	8.98	58.11	4200	0.20	0.66	298
4	04/24/06	7.07	7.53	8.99	61.23	100	0.05	0.20	54
5	05/01/06	5.84	7.34	10.68	57.85	1300	0.05	0.31	45
6	05/08/06	5.33	7.93	10.30	61.58	44	0.05	0.33	38
7	05/15/06	14.58	7.29	10.10	53.15	3310	0.34	0.31	136
8	05/22/06	9.66	7.43	10.26	58.96	127	0.05	0.24	89
9	05/30/06	7.57	7.74	8.15	72.93	118	0.05	0.07	43
10	06/05/06	7.94	7.16	8.10	68.32	687	0.05	0.15	82
11	06/12/06	7.41	7.41	8.19	65.70	727	0.05	0.47	60
12	06/19/06	5.84	7.56	6.94	72.51	272	0.05	0.19	36
13	06/26/06	6.53	7.31	7.19	74.24	225	0.05	0.03	45
14	07/06/06	4.81	7.57	8.00	72.14	119	0.11	0.32	30
15	07/10/06	5.55	7.25	6.78	75.61	60	0.05	0.31	47
16	07/17/06	9.81	7.05	7.78	78.31	308	0.05	0.27	78
17	07/24/06	6.54	7.27	7.37	75.35	142	0.05	0.22	42
18	07/31/06	8.06	7.29	7.06	78.41	435	0.05	0.24	54
19	08/07/06	6.02	6.98	6.73	79.33	161	0.05	0.25	59
20	08/14/06	4.63	7.37	6.52	74.36	130	0.05	0.19	43
21	08/21/06	5.07	7.81	6.07	74.34	365	0.05	0.22	33
22	08/28/06	5.45	7.47	5.10	75.26	2420	0.13	0.14	39
23	09/05/06	4.70	7.08	7.20	67.60	548	0.10	0.23	54
24	09/11/06	4.78	7.09	6.52	67.48	238	0.10	0.23	36
25	09/18/06	5.32	7.42	7.65	69.13	2420	0.05	0.22	45
26	09/26/06	5.14	7.56	10.32	60.87	261	0.05	0.17	45
27	10/02/06	5.25	7.09	9.12	61.59	2420	0.05	0.28	38
28	10/09/06	5.60	6.87	9.51	57.85	194	0.05	1.17	44
29	10/16/06	7.77	7.29	11.65	48.90	313	0.05	0.16	70
30	10/23/06	9.15	6.70	10.51	50.10	236	0.05	0.44	65
	Max.	14.58	7.93	10.90	79.33	14140	0.34	1.17	298
	Min.	4.63	6.70	5.10	48.90	44	0.05	0.03	30
	Avg.	7.04	7.32	8.45	65.78	1205	0.08	0.29	66

DO = Dissolved Oxygen mg/l, E.Coli = colonies per 100 mls (yellow indicates >235)
NH3-N = Ammonia Nitrogen mg/l, PHOS = Total Phosphorus mg/l
TSS = Total Suspended Solids mg/l

Jim Cornell Feb 2007

1215713v1

APPENDIX G: Data Set for St. Joseph River @ Tennessee Avenue

Box and Whiskers Graph

St. Joseph @ Tennessee Avenue - 1970s Fecal Coliform		St. Joseph @ Tennessee Avenue - 1980s Fecal Coliform		St. Joseph @ Tennessee Avenue - 1990s E. Coli		St. Joseph @ Tennessee Avenue - 2000s E. Coli		
Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
280	Coliform	180	Coliform	2400	E. coli	60	E. coli	(235 cfu/100 mL
170	Coliform	140	Coliform	70	E. coli	50	E. coli	(235 cfu/100 mL
30	Coliform	290	Coliform	1300	E. coli	220	E. coli	(235 cfu/100 mL
320	Coliform	1200	Coliform	60	E. coli	260	E. coli	(235 cfu/100 mL
100	Coliform	10	Coliform	900	E. coli	110	E. coli	(235 cfu/100 mL
120	Coliform	1600	Coliform	230	E. coli	140	E. coli	(235 cfu/100 mL
1200	Coliform	440	Coliform	190	E. coli	20	E. coli	(235 cfu/100 mL
710	Coliform	2000	Coliform	500	E. coli	48	E. coli	(235 cfu/100 mL
220	Coliform	2900	Coliform	10000	E. coli	32	E. coli	(235 cfu/100 mL
220	Coliform	2000	Coliform	1100	E. coli	500	E. coli	(235 cfu/100 mL
10	Coliform	40	Coliform	150	E. coli	540	E. coli	(235 cfu/100 mL
150	Coliform	240	Coliform	240	E. coli	370	E. coli	(235 cfu/100 mL
100	Coliform	350	Coliform	290	E. coli	100	E. coli	(235 cfu/100 mL
760	Coliform	210	Coliform	700	E. coli	100	E. coli	(235 cfu/100 mL
1000	Coliform	72	Coliform	200	E. coli	200	E. coli	(235 cfu/100 mL
100	Coliform	4400	Coliform	90	E. coli	144	E. coli	(235 cfu/100 mL
360	Coliform	1800	Coliform	180	E. coli	100	E. coli	(235 cfu/100 mL
130	Coliform	130	Coliform	150	E. coli	20	E. coli	(235 cfu/100 mL
2900	Coliform	30	Coliform	400	E. coli	80	E. coli	(235 cfu/100 mL
210	Coliform	1900	Coliform	200	E. coli	44	E. coli	(235 cfu/100 mL
120	Coliform	660	Coliform	300	E. coli	102	E. coli	(235 cfu/100 mL
10	Coliform	110	Coliform	90	E. coli	102	E. coli	(235 cfu/100 mL
70	Coliform	18000	Coliform	120	E. coli	480	E. coli	(235 cfu/100 mL
610	Coliform	100	Coliform	10	E. coli	450	E. coli	(235 cfu/100 mL
70	Coliform	250	Coliform	20	E. coli	210	E. coli	(235 cfu/100 mL
30	Coliform	40	Coliform	170	E. coli	1120	E. coli	(235 cfu/100 mL
2600	Coliform	270	Coliform	410	E. coli	160	E. coli	(235 cfu/100 mL
400	Coliform	50	Coliform	1700	E. coli	360	E. coli	(235 cfu/100 mL
570	Coliform	490	Coliform	480	E. coli	180	E. coli	(235 cfu/100 mL
80	Coliform	890	Coliform	60	E. coli	550	E. coli	(235 cfu/100 mL
150	Coliform	430	Coliform	100	E. coli	3200	E. coli	(235 cfu/100 mL
420	Coliform	190	Coliform	880	E. coli	270	E. coli	(235 cfu/100 mL
3200	Coliform	200	Coliform	20	E. coli	180	E. coli	(235 cfu/100 mL
150	Coliform	140	Coliform	120	E. coli	544	E. coli	(235 cfu/100 mL
870	Coliform	10	Coliform	80	E. coli	320	E. coli	(235 cfu/100 mL
40	Coliform	380	Coliform	50	E. coli	220	E. coli	(235 cfu/100 mL
290	Coliform	1600	Coliform	290	E. coli	200	E. coli	(235 cfu/100 mL
		30	Coliform	28000	E. coli	360	E. coli	(235 cfu/100 mL
		120	Coliform	300	E. coli	100	E. coli	(235 cfu/100 mL
		330	Coliform	20	E. coli	5600	E. coli	(235 cfu/100 mL

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
		800	Coliforn	250	E. coli (	100	E. coli (235 cfu/100 mL	
		540	Coliforn	690	E. coli (	100	E. coli (235 cfu/100 mL	
		250	Coliforn	330	E. coli (	140	E. coli (235 cfu/100 mL	
		120	Coliforn	250	E. coli (	290	E. coli (235 cfu/100 mL	
		590	Coliforn	10	E. coli (	140	E. coli (235 cfu/100 mL	
		10	Coliforn	450	E. coli (	240	E. coli (235 cfu/100 mL	
		30	Coliforn	110	E. coli (	240	E. coli (235 cfu/100 mL	
		10	Coliforn	120	E. coli (	210	E. coli (235 cfu/100 mL	
		750	Coliforn	1800	E. coli (	220	E. coli (235 cfu/100 mL	
		750	Coliforn	520	E. coli (	150	E. coli (235 cfu/100 mL	
		460	Coliforn	110	E. coli (	80	E. coli (235 cfu/100 mL	
		100	Coliforn	940	E. coli (	50	E. coli (235 cfu/100 mL	
		5000	Coliforn	4000	E. coli (	245	E. coli (235 cfu/100 mL	
		130	Coliforn	230	E. coli (	980	E. coli (235 cfu/100 mL	
		600	Coliforn	230	E. coli (	210	E. coli (235 cfu/100 mL	
		2000	Coliforn	10000	E. coli (	70	E. coli (235 cfu/100 mL	
		110	Coliforn	1600	E. coli (	50	E. coli (235 cfu/100 mL	
		250	Coliforn	2800	E. coli (	30	E. coli (235 cfu/100 mL	
		1900	Coliforn	60	E. coli (	320	E. coli (235 cfu/100 mL	
		90	Coliforn	80	E. coli (	415	E. coli (235 cfu/100 mL	
		220	Coliforn	90	E. coli (	100	E. coli (235 cfu/100 mL	
		40	Coliforn	890	E. coli (	10	E. coli (235 cfu/100 mL	
		11	Coliforn	230	E. coli (	75	E. coli (235 cfu/100 mL	
		750	Coliforn	220	E. coli (	150	E. coli (235 cfu/100 mL	
		150	Coliforn	10	E. coli (	8	E. coli (235 cfu/100 mL	
		600	Coliforn	4000	E. coli (	34	E. coli (235 cfu/100 mL	
		210	Coliforn	1800	E. coli (	5	E. coli (235 cfu/100 mL	
		500	Coliforn	930	E. coli (	3	E. coli (235 cfu/100 mL	
		110	Coliforn	20	E. coli (	12	E. coli (235 cfu/100 mL	
		4600	Coliforn	50	E. coli (	700	E. coli (235 cfu/100 mL	
		40	Coliforn	360	E. coli (	78	E. coli (235 cfu/100 mL	
		680	Coliforn	160	E. coli (	76	E. coli (235 cfu/100 mL	
		200	Coliforn	200	E. coli (	38	E. coli (235 cfu/100 mL	
		10	Coliforn	6600	E. coli (	80	E. coli (235 cfu/100 mL	
		300	Coliforn	10	E. coli (	130	E. coli (235 cfu/100 mL	
		470	Coliforn	160	E. coli (	40	E. coli (235 cfu/100 mL	
		190	Coliforn	200	E. coli (	190	E. coli (235 cfu/100 mL	
		10	Coliforn	30	E. coli (	360	E. coli (235 cfu/100 mL	
		150	Coliforn	20	E. coli (	500	E. coli (235 cfu/100 mL	
		100	Coliforn	390	E. coli (	440	E. coli (235 cfu/100 mL	
		60	Coliforn	360	E. coli (	60	E. coli (235 cfu/100 mL	
		800	Coliforn	120	E. coli (	640	E. coli (235 cfu/100 mL	
		2000	Coliforn	40	E. coli (	120	E. coli (235 cfu/100 mL	
		190	Coliforn	440	E. coli (	54	E. coli (235 cfu/100 mL	
		400	Coliforn	110	E. coli (	20	E. coli (235 cfu/100 mL	
				10	E. coli (	8	E. coli (235 cfu/100 mL	
				40	E. coli (	96	E. coli (235 cfu/100 mL	
				80	E. coli (	92	E. coli (235 cfu/100 mL	
				230	E. coli (	92	E. coli (235 cfu/100 mL	

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
				140	E. coli (	184	E. coli (	235 cfu/100 mL
				10	E. coli (	104	E. coli (	235 cfu/100 mL
				970	E. coli (	20	E. coli (	235 cfu/100 mL
				800	E. coli (	23	E. coli (	235 cfu/100 mL
				300	E. coli (	20	E. coli (	235 cfu/100 mL
				110	E. coli (	21	E. coli (	235 cfu/100 mL
				7900	E. coli (	14	E. coli (	235 cfu/100 mL
				110	E. coli (	36	E. coli (	235 cfu/100 mL
				20	E. coli (	1454	E. coli (	235 cfu/100 mL
				80	E. coli (	238	E. coli (	235 cfu/100 mL
				180	E. coli (	93	E. coli (	235 cfu/100 mL
				50	E. coli (	9680	E. coli (	235 cfu/100 mL
				370	E. coli (	6520	E. coli (	235 cfu/100 mL
						218	E. coli (	235 cfu/100 mL
						3309	E. coli (	235 cfu/100 mL
						126	E. coli (	235 cfu/100 mL
						190	E. coli (	235 cfu/100 mL
						20	E. coli (	235 cfu/100 mL
						1288	E. coli (	235 cfu/100 mL
						85	E. coli (	235 cfu/100 mL
						320	E. coli (	235 cfu/100 mL
						82	E. coli (	235 cfu/100 mL
						104	E. coli (	235 cfu/100 mL
						190	E. coli (	235 cfu/100 mL
						1488	E. coli (	235 cfu/100 mL
						840	E. coli (	235 cfu/100 mL
						82	E. coli (	235 cfu/100 mL
						85	E. coli (	235 cfu/100 mL
						66	E. coli (	235 cfu/100 mL
						110	E. coli (	235 cfu/100 mL
						58	E. coli (	235 cfu/100 mL
						39	E. coli (	235 cfu/100 mL
						613	E. coli (	235 cfu/100 mL
						19	E. coli (	235 cfu/100 mL
						20	E. coli (	235 cfu/100 mL
						40	E. coli (	235 cfu/100 mL
						387	E. coli (	235 cfu/100 mL
						70	E. coli (	235 cfu/100 mL
						18	E. coli (	235 cfu/100 mL
						110	E. coli (	235 cfu/100 mL
						111	E. coli (	235 cfu/100 mL
						192	E. coli (	235 cfu/100 mL
						5200	E. coli (	235 cfu/100 mL
						1986	E. coli (	235 cfu/100 mL
						109	E. coli (	235 cfu/100 mL
						50	E. coli (	235 cfu/100 mL
						87	E. coli (	235 cfu/100 mL
						157	E. coli (	235 cfu/100 mL
						210	E. coli (	235 cfu/100 mL

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
						34	E. coli	(235 cfu/100 mL
						99	E. coli	(235 cfu/100 mL
						921	E. coli	(235 cfu/100 mL
						249	E. coli	(235 cfu/100 mL
						140	E. coli	(235 cfu/100 mL
						45	E. coli	(235 cfu/100 mL
						35	E. coli	(235 cfu/100 mL
						14	E. coli	(235 cfu/100 mL
						28	E. coli	(235 cfu/100 mL
						1300	E. coli	(235 cfu/100 mL
						68	E. coli	(235 cfu/100 mL
						40	E. coli	(235 cfu/100 mL
						67	E. coli	(235 cfu/100 mL
						199	E. coli	(235 cfu/100 mL
						16	E. coli	(235 cfu/100 mL
						517	E. coli	(235 cfu/100 mL
						70	E. coli	(235 cfu/100 mL
						866	E. coli	(235 cfu/100 mL
						100	E. coli	(235 cfu/100 mL
						308	E. coli	(235 cfu/100 mL
						45	E. coli	(235 cfu/100 mL
						687	E. coli	(235 cfu/100 mL
						86	E. coli	(235 cfu/100 mL
						86	E. coli	(235 cfu/100 mL
						184	E. coli	(235 cfu/100 mL
						126	E. coli	(235 cfu/100 mL
						228	E. coli	(235 cfu/100 mL
						122	E. coli	(235 cfu/100 mL
						66	E. coli	(235 cfu/100 mL
						45	E. coli	(235 cfu/100 mL
						372	E. coli	(235 cfu/100 mL
						96	E. coli	(235 cfu/100 mL
						488	E. coli	(235 cfu/100 mL
						81	E. coli	(235 cfu/100 mL
						58	E. coli	(235 cfu/100 mL
						365	E. coli	(235 cfu/100 mL
						240	E. coli	(235 cfu/100 mL
						133	E. coli	(235 cfu/100 mL
						201	E. coli	(235 cfu/100 mL
						3000	E. coli	(235 cfu/100 mL
						261	E. coli	(235 cfu/100 mL
						2420	E. coli	(235 cfu/100 mL
						205	E. coli	(235 cfu/100 mL
						411	E. coli	(235 cfu/100 mL
						36	E. coli	(235 cfu/100 mL

Summary Range				
	St. Joseph @ Tennessee Avenue - 1970s	St. Joseph @ Tennessee Avenue - 1980s	St. Joseph @ Tennessee Avenue - 1990s	St. Joseph @ Tennessee Avenue - 2000s
Minimum:	10	10	10	3
5th Percentile:	26	10	11	18
25th Percentile:	100	110	83	60
Median:	210	250	200	120
75th Percentile:	570	680	495	280
95th Percentile:	2,660	2,720	4,000	1,485
Maximum:	3,200	18,000	28,000	9,680

Chart Data				
	St. Joseph @ Tennessee Avenue - 1970s Fecal Coliform	St. Joseph @ Tennessee Avenue - 1980s Fecal Coliform	St. Joseph @ Tennessee Avenue - 1990s E. Coli	St. Joseph @ Tennessee Avenue - 2000s E. Coli
Series 1	10	10	10	3
Series 2	16	-	1	15
Series 3	74	100	72	42
Series 4	110	140	118	60
Series 5	360	430	295	160
Series 6	2,090	2,040	3,505	1,205
Series 7	540	15,280	24,000	8,195

APPENDIX H: Data Set for St. Marys River @ Spy Run

Box and Whiskers Graph

St. Marys @ Spy Run - 1980s Fecal Coliform		St. Marys @ Spy Run - 1990s E. Coli		St. Marys @ Spy Run - 2000s E. Coli		
Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
2500	Coliform	2400	E. coli	970	E. coli	(235 cfu/100 mL)
930	Coliform	600	E. coli	870	E. coli	(235 cfu/100 mL)
2700	Coliform	16000	E. coli	1600	E. coli	(235 cfu/100 mL)
4800	Coliform	30	E. coli	600	E. coli	(235 cfu/100 mL)
800	Coliform	30000	E. coli	1200	E. coli	(235 cfu/100 mL)
5700	Coliform	540	E. coli	900	E. coli	(235 cfu/100 mL)
800	Coliform	530	E. coli	70	E. coli	(235 cfu/100 mL)
29000	Coliform	240	E. coli	32	E. coli	(235 cfu/100 mL)
1700	Coliform	18000	E. coli	90	E. coli	(235 cfu/100 mL)
4900	Coliform	2300	E. coli	520	E. coli	(235 cfu/100 mL)
1300	Coliform	200	E. coli	600	E. coli	(235 cfu/100 mL)
5000	Coliform	470	E. coli	1480	E. coli	(235 cfu/100 mL)
10	Coliform	600	E. coli	2920	E. coli	(235 cfu/100 mL)
340	Coliform	500	E. coli	1000	E. coli	(235 cfu/100 mL)
940	Coliform	2900	E. coli	848	E. coli	(235 cfu/100 mL)
10	Coliform	1600	E. coli	450	E. coli	(235 cfu/100 mL)
10000	Coliform	1700	E. coli	3000	E. coli	(235 cfu/100 mL)
1600	Coliform	130	E. coli	260	E. coli	(235 cfu/100 mL)
3600	Coliform	700	E. coli	3000	E. coli	(235 cfu/100 mL)
80	Coliform	1300	E. coli	1450	E. coli	(235 cfu/100 mL)
12000	Coliform	440	E. coli	500	E. coli	(235 cfu/100 mL)
440	Coliform	260	E. coli	360	E. coli	(235 cfu/100 mL)
100	Coliform	40	E. coli	4600	E. coli	(235 cfu/100 mL)
8800	Coliform	200	E. coli	4000	E. coli	(235 cfu/100 mL)
8300	Coliform	240	E. coli	700	E. coli	(235 cfu/100 mL)
3000	Coliform	1900	E. coli	4250	E. coli	(235 cfu/100 mL)
230	Coliform	2500	E. coli	1160	E. coli	(235 cfu/100 mL)
		4600	E. coli	6000	E. coli	(235 cfu/100 mL)
		700	E. coli	600	E. coli	(235 cfu/100 mL)
		290	E. coli	620	E. coli	(235 cfu/100 mL)
		1600	E. coli	3000	E. coli	(235 cfu/100 mL)
		1000	E. coli	1800	E. coli	(235 cfu/100 mL)
		120	E. coli	380	E. coli	(235 cfu/100 mL)
		1800	E. coli	884	E. coli	(235 cfu/100 mL)
		2900	E. coli	740	E. coli	(235 cfu/100 mL)
		350	E. coli	660	E. coli	(235 cfu/100 mL)
		600	E. coli	680	E. coli	(235 cfu/100 mL)
		3500	E. coli	3740	E. coli	(235 cfu/100 mL)
		1200	E. coli	1000	E. coli	(235 cfu/100 mL)
		40	E. coli	5400	E. coli	(235 cfu/100 mL)
		450	E. coli	500	E. coli	(235 cfu/100 mL)
		840	E. coli	2700	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
		370	E. coli (	560	E. coli	(235 cfu/100 mL)
		580	E. coli (	1400	E. coli	(235 cfu/100 mL)
		50	E. coli (	420	E. coli	(235 cfu/100 mL)
		490	E. coli (	360	E. coli	(235 cfu/100 mL)
		1900	E. coli (	220	E. coli	(235 cfu/100 mL)
		1500	E. coli (	300	E. coli	(235 cfu/100 mL)
		540	E. coli (	380	E. coli	(235 cfu/100 mL)
		370	E. coli (	170	E. coli	(235 cfu/100 mL)
		60	E. coli (	270	E. coli	(235 cfu/100 mL)
		20000	E. coli (	740	E. coli	(235 cfu/100 mL)
		220	E. coli (	55	E. coli	(235 cfu/100 mL)
		4300	E. coli (	130	E. coli	(235 cfu/100 mL)
		1800	E. coli (	1600	E. coli	(235 cfu/100 mL)
		2000	E. coli (	60	E. coli	(235 cfu/100 mL)
		250	E. coli (	240	E. coli	(235 cfu/100 mL)
		120	E. coli (	250	E. coli	(235 cfu/100 mL)
		250	E. coli (	220	E. coli	(235 cfu/100 mL)
		910	E. coli (	260	E. coli	(235 cfu/100 mL)
		90	E. coli (	600	E. coli	(235 cfu/100 mL)
		50	E. coli (	190	E. coli	(235 cfu/100 mL)
		200	E. coli (	160	E. coli	(235 cfu/100 mL)
		330	E. coli (	32	E. coli	(235 cfu/100 mL)
		180	E. coli (	8	E. coli	(235 cfu/100 mL)
		3100	E. coli (	20	E. coli	(235 cfu/100 mL)
		740	E. coli (	8	E. coli	(235 cfu/100 mL)
		210	E. coli (	8	E. coli	(235 cfu/100 mL)
		140	E. coli (	2000	E. coli	(235 cfu/100 mL)
		510	E. coli (	249	E. coli	(235 cfu/100 mL)
		310	E. coli (	88	E. coli	(235 cfu/100 mL)
		1400	E. coli (	36	E. coli	(235 cfu/100 mL)
		200	E. coli (	20	E. coli	(235 cfu/100 mL)
		70	E. coli (	300	E. coli	(235 cfu/100 mL)
		380	E. coli (	260	E. coli	(235 cfu/100 mL)
		530	E. coli (	620	E. coli	(235 cfu/100 mL)
		80	E. coli (	250	E. coli	(235 cfu/100 mL)
		2000	E. coli (	500	E. coli	(235 cfu/100 mL)
		3400	E. coli (	200	E. coli	(235 cfu/100 mL)
		460	E. coli (	20	E. coli	(235 cfu/100 mL)
		330	E. coli (	800	E. coli	(235 cfu/100 mL)
		740	E. coli (	340	E. coli	(235 cfu/100 mL)
		890	E. coli (	29	E. coli	(235 cfu/100 mL)
		1400	E. coli (	67	E. coli	(235 cfu/100 mL)
		70	E. coli (	24	E. coli	(235 cfu/100 mL)
		130	E. coli (	34	E. coli	(235 cfu/100 mL)
		17000	E. coli (	3	E. coli	(235 cfu/100 mL)
		22000	E. coli (	5	E. coli	(235 cfu/100 mL)
		2700	E. coli (	64	E. coli	(235 cfu/100 mL)
		1400	E. coli (	18	E. coli	(235 cfu/100 mL)
		210	E. coli (	56	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
		2200	E. coli (	1	E. coli	(235 cfu/100 mL)
		8100	E. coli (	159	E. coli	(235 cfu/100 mL)
		290	E. coli (	41	E. coli	(235 cfu/100 mL)
		600	E. coli (	25	E. coli	(235 cfu/100 mL)
		120000	E. coli (	365	E. coli	(235 cfu/100 mL)
		15000	E. coli (	3972	E. coli	(235 cfu/100 mL)
		10	E. coli (	9676	E. coli	(235 cfu/100 mL)
		90	E. coli (	189	E. coli	(235 cfu/100 mL)
		800	E. coli (	1844	E. coli	(235 cfu/100 mL)
		690	E. coli (	8220	E. coli	(235 cfu/100 mL)
		1600	E. coli (	452	E. coli	(235 cfu/100 mL)
				7754	E. coli	(235 cfu/100 mL)
				798	E. coli	(235 cfu/100 mL)
				325	E. coli	(235 cfu/100 mL)
				264	E. coli	(235 cfu/100 mL)
				8212	E. coli	(235 cfu/100 mL)
				84	E. coli	(235 cfu/100 mL)
				816	E. coli	(235 cfu/100 mL)
				840	E. coli	(235 cfu/100 mL)
				1352	E. coli	(235 cfu/100 mL)
				576	E. coli	(235 cfu/100 mL)
				6510	E. coli	(235 cfu/100 mL)
				12262	E. coli	(235 cfu/100 mL)
				238	E. coli	(235 cfu/100 mL)
				160	E. coli	(235 cfu/100 mL)
				299	E. coli	(235 cfu/100 mL)
				169	E. coli	(235 cfu/100 mL)
				60	E. coli	(235 cfu/100 mL)
				126	E. coli	(235 cfu/100 mL)
				365	E. coli	(235 cfu/100 mL)
				345	E. coli	(235 cfu/100 mL)
				61	E. coli	(235 cfu/100 mL)
				35	E. coli	(235 cfu/100 mL)
				6890	E. coli	(235 cfu/100 mL)
				192	E. coli	(235 cfu/100 mL)
				73	E. coli	(235 cfu/100 mL)
				291	E. coli	(235 cfu/100 mL)
				291	E. coli	(235 cfu/100 mL)
				77	E. coli	(235 cfu/100 mL)
				1733	E. coli	(235 cfu/100 mL)
				46110	E. coli	(235 cfu/100 mL)
				613	E. coli	(235 cfu/100 mL)
				727	E. coli	(235 cfu/100 mL)
				326	E. coli	(235 cfu/100 mL)
				461	E. coli	(235 cfu/100 mL)
				1120	E. coli	(235 cfu/100 mL)
				118	E. coli	(235 cfu/100 mL)
				344	E. coli	(235 cfu/100 mL)
				37	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. Coli
				866	E. coli	(235 cfu/100 mL)
				365	E. coli	(235 cfu/100 mL)
				50	E. coli	(235 cfu/100 mL)
				59	E. coli	(235 cfu/100 mL)
				17	E. coli	(235 cfu/100 mL)
				194	E. coli	(235 cfu/100 mL)
				>2420	E. coli	(235 cfu/100 mL)
				345	E. coli	(235 cfu/100 mL)
				161	E. coli	(235 cfu/100 mL)
				111	E. coli	(235 cfu/100 mL)
				115	E. coli	(235 cfu/100 mL)
				93	E. coli	(235 cfu/100 mL)
				11530	E. coli	(235 cfu/100 mL)
				201	E. coli	(235 cfu/100 mL)
				16160	E. coli	(235 cfu/100 mL)
				100	E. coli	(235 cfu/100 mL)
				4080	E. coli	(235 cfu/100 mL)
				99	E. coli	(235 cfu/100 mL)
				6400	E. coli	(235 cfu/100 mL)
				166	E. coli	(235 cfu/100 mL)
				816	E. coli	(235 cfu/100 mL)
				866	E. coli	(235 cfu/100 mL)
				1553	E. coli	(235 cfu/100 mL)
				758	E. coli	(235 cfu/100 mL)
				365	E. coli	(235 cfu/100 mL)
				210	E. coli	(235 cfu/100 mL)
				88	E. coli	(235 cfu/100 mL)
				548	E. coli	(235 cfu/100 mL)
				488	E. coli	(235 cfu/100 mL)
				548	E. coli	(235 cfu/100 mL)
				649	E. coli	(235 cfu/100 mL)
				228	E. coli	(235 cfu/100 mL)
				613	E. coli	(235 cfu/100 mL)
				1986	E. coli	(235 cfu/100 mL)
				1414	E. coli	(235 cfu/100 mL)
				435	E. coli	(235 cfu/100 mL)
				81640	E. coli	(235 cfu/100 mL)
				816	E. coli	(235 cfu/100 mL)
				2420	E. coli	(235 cfu/100 mL)
				261	E. coli	(235 cfu/100 mL)
				82	E. coli	(235 cfu/100 mL)
				248	E. coli	(235 cfu/100 mL)

Summary Range			
	St. Marys @ Spy Run - 1980s Fecal	St. Marys @ Spy Run - 1990s E. Coli	St. Marys @ Spy Run - 2000s E. Coli
Minimum:	10	10	1
5th Percentile:	31	51	20
25th Percentile:	620	240	145
Median:	1,700	590	365
75th Percentile:	4,950	1,800	935
95th Percentile:	11,400	16,950	6,976
Maximum:	29,000	120,000	81,640

Chart Data			
	St. Marys @ Spy Run - 1980s Fecal Coliform	St. Marys @ Spy Run - 1990s E. Coli	St. Marys @ Spy Run - 2000s E. Coli
Series 1	10	10	1
Series 2	21	41	19
Series 3	589	190	125
Series 4	1,080	350	221
Series 5	3,250	1,210	570
Series 6	6,450	15,150	6,041
Series 7	17,600	103,050	74,664

APPENDIX I: Data Set for Maumee River @ Anthony Boulevard

Box and Whiskers Graph

Maumee @ Anthony Boulevard - 1970s Fecal Coliform		Maumee @ Anthony Boulevard - 1980s Fecal Coliform		Maumee @ Anthony Boulevard - 2000s E. Coli		
Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. coli
750	Coliform	190	Coliform	560	E. coli	(235 cfu/100 mL)
3600	Coliform	2100	Coliform	340	E. coli	(235 cfu/100 mL)
520	Coliform	100	Coliform	1320	E. coli	(235 cfu/100 mL)
1200	Coliform	5500	Coliform	1000	E. coli	(235 cfu/100 mL)
2200	Coliform	1800	Coliform	20	E. coli	(235 cfu/100 mL)
570	Coliform	120	Coliform	44	E. coli	(235 cfu/100 mL)
1300	Coliform	5000	Coliform	26	E. coli	(235 cfu/100 mL)
4800	Coliform	910	Coliform	432	E. coli	(235 cfu/100 mL)
2700	Coliform	780	Coliform	590	E. coli	(235 cfu/100 mL)
380	Coliform	760	Coliform	1000	E. coli	(235 cfu/100 mL)
710	Coliform	180	Coliform	570	E. coli	(235 cfu/100 mL)
2200	Coliform	150	Coliform	230	E. coli	(235 cfu/100 mL)
5600	Coliform	8100	Coliform	1600	E. coli	(235 cfu/100 mL)
670	Coliform	9900	Coliform	150	E. coli	(235 cfu/100 mL)
260	Coliform	190	Coliform	980	E. coli	(235 cfu/100 mL)
110	Coliform	20	Coliform	60	E. coli	(235 cfu/100 mL)
470	Coliform	30	Coliform	980	E. coli	(235 cfu/100 mL)
390	Coliform	3400	Coliform	810	E. coli	(235 cfu/100 mL)
50	Coliform	280	Coliform	330	E. coli	(235 cfu/100 mL)
1000	Coliform	5200	Coliform	110	E. coli	(235 cfu/100 mL)
440	Coliform	690	Coliform	6000	E. coli	(235 cfu/100 mL)
210	Coliform	5400	Coliform	1080	E. coli	(235 cfu/100 mL)
510	Coliform	540	Coliform	260	E. coli	(235 cfu/100 mL)
20	Coliform	140	Coliform	2400	E. coli	(235 cfu/100 mL)
240	Coliform	360	Coliform	8000	E. coli	(235 cfu/100 mL)
50	Coliform	460	Coliform	20000	E. coli	(235 cfu/100 mL)
600	Coliform	2600	Coliform	460	E. coli	(235 cfu/100 mL)
5900	Coliform	770	Coliform	440	E. coli	(235 cfu/100 mL)
790	Coliform	270	Coliform	3200	E. coli	(235 cfu/100 mL)
3200	Coliform	840	Coliform	700	E. coli	(235 cfu/100 mL)
810	Coliform	130	Coliform	220	E. coli	(235 cfu/100 mL)
270	Coliform	50	Coliform	616	E. coli	(235 cfu/100 mL)
140	Coliform	2200	Coliform	1040	E. coli	(235 cfu/100 mL)
3700	Coliform	2100	Coliform	460	E. coli	(235 cfu/100 mL)
46	Coliform	2600	Coliform	360	E. coli	(235 cfu/100 mL)
570	Coliform	440	Coliform	4440	E. coli	(235 cfu/100 mL)
330	Coliform	2900	Coliform	300	E. coli	(235 cfu/100 mL)
260	Coliform	42000	Coliform	4300	E. coli	(235 cfu/100 mL)
80	Coliform	1800	Coliform	100	E. coli	(235 cfu/100 mL)
750	Coliform	4000	Coliform	1100	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. coli
320	Coliform	9600	Coliform	540	E. coli	(235 cfu/100 mL)
120	Coliform	1100	Coliform	330	E. coli	(235 cfu/100 mL)
1600	Coliform	1000	Coliform	260	E. coli	(235 cfu/100 mL)
520	Coliform	620	Coliform	430	E. coli	(235 cfu/100 mL)
400	Coliform	40	Coliform	540	E. coli	(235 cfu/100 mL)
1800	Coliform	8800	Coliform	290	E. coli	(235 cfu/100 mL)
560	Coliform	2200	Coliform	70	E. coli	(235 cfu/100 mL)
150	Coliform	1200	Coliform	470	E. coli	(235 cfu/100 mL)
2500	Coliform	190	Coliform	60	E. coli	(235 cfu/100 mL)
1800	Coliform	38000	Coliform	270	E. coli	(235 cfu/100 mL)
1800	Coliform	520	Coliform	600	E. coli	(235 cfu/100 mL)
530	Coliform	6400	Coliform	400	E. coli	(235 cfu/100 mL)
830	Coliform	3200	Coliform	2400	E. coli	(235 cfu/100 mL)
680	Coliform	1600	Coliform	110	E. coli	(235 cfu/100 mL)
880	Coliform	2800	Coliform	50	E. coli	(235 cfu/100 mL)
		13000	Coliform	90	E. coli	(235 cfu/100 mL)
				900	E. coli	(235 cfu/100 mL)
				310	E. coli	(235 cfu/100 mL)
				220	E. coli	(235 cfu/100 mL)
				70	E. coli	(235 cfu/100 mL)
				115	E. coli	(235 cfu/100 mL)
				800	E. coli	(235 cfu/100 mL)
				80	E. coli	(235 cfu/100 mL)
				9	E. coli	(235 cfu/100 mL)
				13	E. coli	(235 cfu/100 mL)
				28	E. coli	(235 cfu/100 mL)
				1100	E. coli	(235 cfu/100 mL)
				146	E. coli	(235 cfu/100 mL)
				84	E. coli	(235 cfu/100 mL)
				40	E. coli	(235 cfu/100 mL)
				44	E. coli	(235 cfu/100 mL)
				495	E. coli	(235 cfu/100 mL)
				320	E. coli	(235 cfu/100 mL)
				400	E. coli	(235 cfu/100 mL)
				250	E. coli	(235 cfu/100 mL)
				300	E. coli	(235 cfu/100 mL)
				140	E. coli	(235 cfu/100 mL)
				10	E. coli	(235 cfu/100 mL)
				760	E. coli	(235 cfu/100 mL)
				230	E. coli	(235 cfu/100 mL)
				42	E. coli	(235 cfu/100 mL)
				26	E. coli	(235 cfu/100 mL)
				10	E. coli	(235 cfu/100 mL)
				14	E. coli	(235 cfu/100 mL)
				3	E. coli	(235 cfu/100 mL)
				5	E. coli	(235 cfu/100 mL)
				104	E. coli	(235 cfu/100 mL)
				80	E. coli	(235 cfu/100 mL)
				136	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. coli
				15	E. coli	(235 cfu/100 mL)
				82	E. coli	(235 cfu/100 mL)
				31	E. coli	(235 cfu/100 mL)
				17	E. coli	(235 cfu/100 mL)
				291	E. coli	(235 cfu/100 mL)
				3972	E. coli	(235 cfu/100 mL)
				4480	E. coli	(235 cfu/100 mL)
				166	E. coli	(235 cfu/100 mL)
				9680	E. coli	(235 cfu/100 mL)
				6260	E. coli	(235 cfu/100 mL)
				406	E. coli	(235 cfu/100 mL)
				5178	E. coli	(235 cfu/100 mL)
				436	E. coli	(235 cfu/100 mL)
				153	E. coli	(235 cfu/100 mL)
				126	E. coli	(235 cfu/100 mL)
				9222	E. coli	(235 cfu/100 mL)
				85	E. coli	(235 cfu/100 mL)
				728	E. coli	(235 cfu/100 mL)
				808	E. coli	(235 cfu/100 mL)
				710	E. coli	(235 cfu/100 mL)
				602	E. coli	(235 cfu/100 mL)
				8704	E. coli	(235 cfu/100 mL)
				9768	E. coli	(235 cfu/100 mL)
				218	E. coli	(235 cfu/100 mL)
				187	E. coli	(235 cfu/100 mL)
				84	E. coli	(235 cfu/100 mL)
				105	E. coli	(235 cfu/100 mL)
				57	E. coli	(235 cfu/100 mL)
				84	E. coli	(235 cfu/100 mL)
				411	E. coli	(235 cfu/100 mL)
				102	E. coli	(235 cfu/100 mL)
				41	E. coli	(235 cfu/100 mL)
				19	E. coli	(235 cfu/100 mL)
				1733	E. coli	(235 cfu/100 mL)
				145	E. coli	(235 cfu/100 mL)
				40	E. coli	(235 cfu/100 mL)
				179	E. coli	(235 cfu/100 mL)
				152	E. coli	(235 cfu/100 mL)
				50	E. coli	(235 cfu/100 mL)
				4220	E. coli	(235 cfu/100 mL)
				22820	E. coli	(235 cfu/100 mL)
				345	E. coli	(235 cfu/100 mL)
				96	E. coli	(235 cfu/100 mL)
				365	E. coli	(235 cfu/100 mL)
				76	E. coli	(235 cfu/100 mL)
				548	E. coli	(235 cfu/100 mL)
				105	E. coli	(235 cfu/100 mL)
				260	E. coli	(235 cfu/100 mL)
				45	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard for E. coli
				2203	E. coli	(235 cfu/100 mL)
				228	E. coli	(235 cfu/100 mL)
				31	E. coli	(235 cfu/100 mL)
				29	E. coli	(235 cfu/100 mL)
				18	E. coli	(235 cfu/100 mL)
				365	E. coli	(235 cfu/100 mL)
				2420	E. coli	(235 cfu/100 mL)
				517	E. coli	(235 cfu/100 mL)
				135	E. coli	(235 cfu/100 mL)
				161	E. coli	(235 cfu/100 mL)
				2420	E. coli	(235 cfu/100 mL)
				54	E. coli	(235 cfu/100 mL)
				8690	E. coli	(235 cfu/100 mL)
				107	E. coli	(235 cfu/100 mL)
				12740	E. coli	(235 cfu/100 mL)
				100	E. coli	(235 cfu/100 mL)
				1986	E. coli	(235 cfu/100 mL)
				55	E. coli	(235 cfu/100 mL)
				3495	E. coli	(235 cfu/100 mL)
				122	E. coli	(235 cfu/100 mL)
				649	E. coli	(235 cfu/100 mL)
				579	E. coli	(235 cfu/100 mL)
				613	E. coli	(235 cfu/100 mL)
				649	E. coli	(235 cfu/100 mL)
				248	E. coli	(235 cfu/100 mL)
				99	E. coli	(235 cfu/100 mL)
				70	E. coli	(235 cfu/100 mL)
				435	E. coli	(235 cfu/100 mL)
				172	E. coli	(235 cfu/100 mL)
				378	E. coli	(235 cfu/100 mL)
				172	E. coli	(235 cfu/100 mL)
				73	E. coli	(235 cfu/100 mL)
				866	E. coli	(235 cfu/100 mL)
				2420	E. coli	(235 cfu/100 mL)
				816	E. coli	(235 cfu/100 mL)
				345	E. coli	(235 cfu/100 mL)
				15650	E. coli	(235 cfu/100 mL)
				150	E. coli	(235 cfu/100 mL)
				2420	E. coli	(235 cfu/100 mL)
				210	E. coli	(235 cfu/100 mL)
				152	E. coli	(235 cfu/100 mL)
				249	E. coli	(235 cfu/100 mL)

Summary Range			
	Maumee @ Anthony Boulevard -	Maumee @ Anthony Boulevard -	Maumee @ Anthony Boulevard -
Minimum:	20	20	3
5th Percentile:	50	48	18
25th Percentile:	295	278	95
Median:	570	1,050	291
75th Percentile:	1,450	3,250	770
95th Percentile:	4,030	10,675	8,034
Maximum:	5,900	42,000	22,820

Chart Data			
	Maumee @ Anthony Boulevard - 1970s Fecal Coliform	Maumee @ Anthony Boulevard - 1980s Fecal Coliform	Maumee @ Anthony Boulevard - 2000s E. Coli
Series 1	20	20	3
Series 2	30	28	15
Series 3	245	230	77
Series 4	275	773	196
Series 5	880	2,200	480
Series 6	2,580	7,425	7,264
Series 7	1,870	31,325	14,786

APPENDIX J: Data Set for Maumee River @ Landin Road

Box and Whiskers Graph

Maumee @ Landin Road - 1990s E. Coli		Maumee @ Landin Road - 2000s E. Coli		
Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable standard for E. coli
2900	E. coli (	730	E. coli	(235 cfu/100 mL)
1600	E. coli (	240	E. coli	(235 cfu/100 mL)
340	E. coli (	770	E. coli	(235 mpn/100 mL)
30	E. coli (	600	E. coli	(235 cfu/100 mL)
330	E. coli (	270	E. coli	(235 cfu/100 mL)
90	E. coli (	390	E. coli	(235 cfu/100 mL)
150	E. coli (	480	E. coli	(235 cfu/100 mL)
6200	E. coli (	10	E. coli	(235 cfu/100 mL)
5200	E. coli (	44	E. coli	(235 cfu/100 mL)
2200	E. coli (	64	E. coli	(235 cfu/100 mL)
10	E. coli (	308	E. coli	(235 cfu/100 mL)
430	E. coli (	650	E. coli	(235 cfu/100 mL)
340	E. coli (	600	E. coli	(235 cfu/100 mL)
400	E. coli (	360	E. coli	(235 cfu/100 mL)
210	E. coli (	170	E. coli	(235 cfu/100 mL)
10	E. coli (	1024	E. coli	(235 cfu/100 mL)
550	E. coli (	200	E. coli	(235 cfu/100 mL)
6300	E. coli (	800	E. coli	(235 cfu/100 mL)
780	E. coli (	60	E. coli	(235 cfu/100 mL)
360	E. coli (	830	E. coli	(235 cfu/100 mL)
220	E. coli (	1020	E. coli	(235 cfu/100 mL)
730	E. coli (	440	E. coli	(235 cfu/100 mL)
40	E. coli (	60	E. coli	(235 cfu/100 mL)
450	E. coli (	3200	E. coli	(235 cfu/100 mL)
380	E. coli (	920	E. coli	(235 cfu/100 mL)
5400	E. coli (	200	E. coli	(235 cfu/100 mL)
1200	E. coli (	2240	E. coli	(235 cfu/100 mL)
3500	E. coli (	1460	E. coli	(235 cfu/100 mL)
18000	E. coli (	8000	E. coli	(235 cfu/100 mL)
190	E. coli (	500	E. coli	(235 cfu/100 mL)
10	E. coli (	1020	E. coli	(235 cfu/100 mL)
810	E. coli (	4600	E. coli	(235 cfu/100 mL)
130	E. coli (	620	E. coli	(235 cfu/100 mL)
70	E. coli (	1020	E. coli	(235 cfu/100 mL)
150	E. coli (	768	E. coli	(235 cfu/100 mL)
150	E. coli (	440	E. coli	(235 cfu/100 mL)
290	E. coli (	400	E. coli	(235 cfu/100 mL)
20	E. coli (	300	E. coli	(235 cfu/100 mL)
170	E. coli (	5000	E. coli	(235 cfu/100 mL)
2200	E. coli (	400	E. coli	(235 cfu/100 mL)
790	E. coli (	5400	E. coli	(235 cfu/100 mL)
50	E. coli (	300	E. coli	(235 cfu/100 mL)
110	E. coli (	1800	E. coli	(235 cfu/100 mL)
400	E. coli (	200	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable standard for E. coli
540	E. coli (	470	E. coli	(235 cfu/100 mL)
160	E. coli (	250	E. coli	(235 cfu/100 mL)
340	E. coli (	660	E. coli	(235 cfu/100 mL)
200	E. coli (	430	E. coli	(235 cfu/100 mL)
330	E. coli (	420	E. coli	(235 cfu/100 mL)
150	E. coli (	400	E. coli	(235 cfu/100 mL)
870	E. coli (	130	E. coli	(235 cfu/100 mL)
90	E. coli (	160	E. coli	(235 cfu/100 mL)
1700	E. coli (	65	E. coli	(235 cfu/100 mL)
2600	E. coli (	620	E. coli	(235 cfu/100 mL)
320	E. coli (	1480	E. coli	(235 cfu/100 mL)
120	E. coli (	420	E. coli	(235 cfu/100 mL)
630	E. coli (	560	E. coli	(235 cfu/100 mL)
50	E. coli (	370	E. coli	(235 cfu/100 mL)
2900	E. coli (	640	E. coli	(235 cfu/100 mL)
170	E. coli (	680	E. coli	(235 cfu/100 mL)
170	E. coli (	220	E. coli	(235 cfu/100 mL)
3300	E. coli (	130	E. coli	(235 cfu/100 mL)
59000	E. coli (	105	E. coli	(235 cfu/100 mL)
1800	E. coli (	270	E. coli	(235 cfu/100 mL)
40	E. coli (	32	E. coli	(235 cfu/100 mL)
30	E. coli (	36	E. coli	(235 cfu/100 mL)
2600	E. coli (	7	E. coli	(235 cfu/100 mL)
8800	E. coli (	48	E. coli	(235 cfu/100 mL)
540	E. coli (	28	E. coli	(235 cfu/100 mL)
150	E. coli (	1000	E. coli	(235 cfu/100 mL)
21000	E. coli (	152	E. coli	(235 cfu/100 mL)
310	E. coli (	64	E. coli	(235 cfu/100 mL)
30	E. coli (	352	E. coli	(235 cfu/100 mL)
1400	E. coli (	296	E. coli	(235 cfu/100 mL)
590	E. coli (	500	E. coli	(235 cfu/100 mL)
220	E. coli (	340	E. coli	(235 cfu/100 mL)
870	E. coli (	500	E. coli	(235 cfu/100 mL)
		200	E. coli	(235 cfu/100 mL)
		1500	E. coli	(235 cfu/100 mL)
		140	E. coli	(235 cfu/100 mL)
		15	E. coli	(235 cfu/100 mL)
		840	E. coli	(235 cfu/100 mL)
		250	E. coli	(235 cfu/100 mL)
		78	E. coli	(235 cfu/100 mL)
		22	E. coli	(235 cfu/100 mL)
		8	E. coli	(235 cfu/100 mL)
		20	E. coli	(235 cfu/100 mL)
		1	E. coli	(235 cfu/100 mL)
		7	E. coli	(235 cfu/100 mL)
		24	E. coli	(235 cfu/100 mL)
		78	E. coli	(235 cfu/100 mL)
		84	E. coli	(235 cfu/100 mL)
		52	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable standard for E. coli
		51	E. coli	(235 cfu/100 mL)
		27	E. coli	(235 cfu/100 mL)
		16	E. coli	(235 cfu/100 mL)
		411	E. coli	(235 cfu/100 mL)
		4840	E. coli	(235 cfu/100 mL)
		630	E. coli	(235 cfu/100 mL)
		110	E. coli	(235 cfu/100 mL)
		9680	E. coli	(235 cfu/100 mL)
		7740	E. coli	(235 cfu/100 mL)
		366	E. coli	(235 cfu/100 mL)
		5767	E. coli	(235 cfu/100 mL)
		500	E. coli	(235 cfu/100 mL)
		186	E. coli	(235 cfu/100 mL)
		786	E. coli	(235 cfu/100 mL)
		1024	E. coli	(235 cfu/100 mL)
		63	E. coli	(235 cfu/100 mL)
		456	E. coli	(235 cfu/100 mL)
		700	E. coli	(235 cfu/100 mL)
		424	E. coli	(235 cfu/100 mL)
		1092	E. coli	(235 cfu/100 mL)
		2924	E. coli	(235 cfu/100 mL)
		16328	E. coli	(235 cfu/100 mL)
		292	E. coli	(235 cfu/100 mL)
		97	E. coli	(235 cfu/100 mL)
		113	E. coli	(235 cfu/100 mL)
		152	E. coli	(235 cfu/100 mL)
		161	E. coli	(235 cfu/100 mL)
		162	E. coli	(235 cfu/100 mL)
		387	E. coli	(235 cfu/100 mL)
		84	E. coli	(235 cfu/100 mL)
		47	E. coli	(235 cfu/100 mL)
		13	E. coli	(235 cfu/100 mL)
		4430	E. coli	(235 cfu/100 mL)
		111	E. coli	(235 cfu/100 mL)
		23	E. coli	(235 cfu/100 mL)
		435	E. coli	(235 cfu/100 mL)
		238	E. coli	(235 cfu/100 mL)
		40	E. coli	(235 cfu/100 mL)
		345	E. coli	(235 cfu/100 mL)
		10760	E. coli	(235 cfu/100 mL)
		192	E. coli	(235 cfu/100 mL)
		61	E. coli	(235 cfu/100 mL)
		144	E. coli	(235 cfu/100 mL)
		84	E. coli	(235 cfu/100 mL)
		866	E. coli	(235 cfu/100 mL)
		261	E. coli	(235 cfu/100 mL)
		488	E. coli	(235 cfu/100 mL)
		178	E. coli	(235 cfu/100 mL)
		1986	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable standard for E. coli
		308	E. coli	(235 cfu/100 mL)
		147	E. coli	(235 cfu/100 mL)
		138	E. coli	(235 cfu/100 mL)
		126	E. coli	(235 cfu/100 mL)
		517	E. coli	(235 cfu/100 mL)
		2420	E. coli	(235 cfu/100 mL)
		387	E. coli	(235 cfu/100 mL)
		166	E. coli	(235 cfu/100 mL)
		82	E. coli	(235 cfu/100 mL)
		727	E. coli	(235 cfu/100 mL)
		91	E. coli	(235 cfu/100 mL)
		14140	E. coli	(235 cfu/100 mL)
		127	E. coli	(235 cfu/100 mL)
		4200	E. coli	(235 cfu/100 mL)
		100	E. coli	(235 cfu/100 mL)
		1300	E. coli	(235 cfu/100 mL)
		44	E. coli	(235 cfu/100 mL)
		3310	E. coli	(235 cfu/100 mL)
		127	E. coli	(235 cfu/100 mL)
		118	E. coli	(235 cfu/100 mL)
		687	E. coli	(235 cfu/100 mL)
		727	E. coli	(235 cfu/100 mL)
		272	E. coli	(235 cfu/100 mL)
		225	E. coli	(235 cfu/100 mL)
		119	E. coli	(235 cfu/100 mL)
		60	E. coli	(235 cfu/100 mL)
		308	E. coli	(235 cfu/100 mL)
		142	E. coli	(235 cfu/100 mL)
		435	E. coli	(235 cfu/100 mL)
		161	E. coli	(235 cfu/100 mL)
		130	E. coli	(235 cfu/100 mL)
		365	E. coli	(235 cfu/100 mL)
		2420	E. coli	(235 cfu/100 mL)
		548	E. coli	(235 cfu/100 mL)
		238	E. coli	(235 cfu/100 mL)
		2420	E. coli	(235 cfu/100 mL)
		261	E. coli	(235 cfu/100 mL)
		2420	E. coli	(235 cfu/100 mL)
		194	E. coli	(235 cfu/100 mL)
		313	E. coli	(235 cfu/100 mL)
		236	E. coli	(235 cfu/100 mL)

Summary Range		
	Maumee @ Landin Road - 1990s E. Coli	Maumee @ Landin Road - 2000s E. Coli
Minimum:	10	1
5th Percentile:	28	22
25th Percentile:	150	123
Median:	340	308
75th Percentile:	1,400	694
95th Percentile:	6,800	4,816
Maximum:	59,000	16,328

Chart Data		
	Maumee @ Landin Road - 1990s E. Coli	Maumee @ Landin Road - 2000s E. Coli
Series 1	10	1
Series 2	18	21
Series 3	122	100
Series 4	190	186
Series 5	1,060	386
Series 6	5,400	4,123
Series 7	52,200	11,512

APPENDIX K: Data Set for Maumee River @ SR 101

Box and Whiskers Graph

Maumee @ SR101 - 1970s Fecal Coliform		Maumee @ SR101 - 1980s Fecal Coliform		Maumee @ SR101 - 1990s E. Coli		
Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard (E. coli)
1100	Coliform	150	Coliform	11000	E. coli	(235 cfu/100 mL)
1200	Coliform	180	Coliform	110	E. coli	(235 cfu/100 mL)
420	Coliform	260	Coliform	40	E. coli	(235 cfu/100 mL)
1200	Coliform	3300	Coliform	1200	E. coli	(235 cfu/100 mL)
1300	Coliform	20	Coliform	27000	E. coli	(235 cfu/100 mL)
1200	Coliform	6000	Coliform	220	E. coli	(235 cfu/100 mL)
2300	Coliform	5500	Coliform	370	E. coli	(235 cfu/100 mL)
180	Coliform	150	Coliform	410	E. coli	(235 cfu/100 mL)
5500	Coliform	1200	Coliform	6000	E. coli	(235 cfu/100 mL)
90	Coliform	2000	Coliform	290	E. coli	(235 cfu/100 mL)
720	Coliform	160	Coliform	1400	E. coli	(235 cfu/100 mL)
1200	Coliform	340	Coliform	1500	E. coli	(235 cfu/100 mL)
1100	Coliform	190	Coliform	270	E. coli	(235 cfu/100 mL)
1600	Coliform	160	Coliform	200	E. coli	(235 cfu/100 mL)
50	Coliform	35000	Coliform	4300	E. coli	(235 cfu/100 mL)
240	Coliform	54000	Coliform	700	E. coli	(235 cfu/100 mL)
800	Coliform	640	Coliform	680	E. coli	(235 cfu/100 mL)
220	Coliform	72000	Coliform	230	E. coli	(235 cfu/100 mL)
240	Coliform	3700	Coliform	100	E. coli	(235 cfu/100 mL)
130	Coliform	460	Coliform	160	E. coli	(235 cfu/100 mL)
1200	Coliform	4300	Coliform	1400	E. coli	(235 cfu/100 mL)
70	Coliform	910	Coliform	210	E. coli	(235 cfu/100 mL)
780	Coliform	130	Coliform	80	E. coli	(235 cfu/100 mL)
30	Coliform	14000	Coliform	170	E. coli	(235 cfu/100 mL)
480	Coliform	19000	Coliform	170	E. coli	(235 cfu/100 mL)
30	Coliform	140	Coliform	1400	E. coli	(235 cfu/100 mL)
670	Coliform	920	Coliform	630	E. coli	(235 cfu/100 mL)
860	Coliform	3700	Coliform	280	E. coli	(235 cfu/100 mL)
720	Coliform	110	Coliform	460	E. coli	(235 cfu/100 mL)
430	Coliform	980	Coliform	2800	E. coli	(235 cfu/100 mL)
40	Coliform	730	Coliform	860	E. coli	(235 cfu/100 mL)
2800	Coliform	540	Coliform	10	E. coli	(235 cfu/100 mL)
450	Coliform	310	Coliform	50	E. coli	(235 cfu/100 mL)
10	Coliform	2300	Coliform	840	E. coli	(235 cfu/100 mL)
50	Coliform	240	Coliform	170	E. coli	(235 cfu/100 mL)
3300	Coliform	10	Coliform	250	E. coli	(235 cfu/100 mL)
740	Coliform	500	Coliform	530	E. coli	(235 cfu/100 mL)
80	Coliform	1800	Coliform	3100	E. coli	(235 cfu/100 mL)
10	Coliform	1000	Coliform	1600	E. coli	(235 cfu/100 mL)
4400	Coliform	150	Coliform	130	E. coli	(235 cfu/100 mL)
500	Coliform	230	Coliform	60	E. coli	(235 cfu/100 mL)
600	Coliform	370	Coliform	310	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard (E. coli)
200	Coliform	150	Coliform	2100	E. coli	(235 cfu/100 mL)
20	Coliform	240	Coliform	330	E. coli	(235 cfu/100 mL)
4400	Coliform	550	Coliform	1700	E. coli	(235 cfu/100 mL)
2300	Coliform	1800	Coliform	700	E. coli	(235 cfu/100 mL)
2300	Coliform	220	Coliform	450	E. coli	(235 cfu/100 mL)
140	Coliform	30	Coliform	550	E. coli	(235 cfu/100 mL)
270	Coliform	10	Coliform	120	E. coli	(235 cfu/100 mL)
770	Coliform	3700	Coliform	1300	E. coli	(235 cfu/100 mL)
		1100	Coliform	30	E. coli	(235 cfu/100 mL)
		80	Coliform	390	E. coli	(235 cfu/100 mL)
		100	Coliform	250	E. coli	(235 cfu/100 mL)
		130	Coliform	180	E. coli	(235 cfu/100 mL)
		100	Coliform	2500	E. coli	(235 cfu/100 mL)
		95000	Coliform	210	E. coli	(235 cfu/100 mL)
		390	Coliform	39000	E. coli	(235 cfu/100 mL)
		2600	Coliform	630	E. coli	(235 cfu/100 mL)
		1900	Coliform	50	E. coli	(235 cfu/100 mL)
		340	Coliform	780	E. coli	(235 cfu/100 mL)
		800	Coliform	10	E. coli	(235 cfu/100 mL)
		2400	Coliform	50	E. coli	(235 cfu/100 mL)
		380	Coliform	20	E. coli	(235 cfu/100 mL)
		3200	Coliform	150	E. coli	(235 cfu/100 mL)
		200	Coliform	20	E. coli	(235 cfu/100 mL)
		3900	Coliform	270	E. coli	(235 cfu/100 mL)
		430	Coliform	10	E. coli	(235 cfu/100 mL)
		12000	Coliform	80	E. coli	(235 cfu/100 mL)
		790	Coliform	13000	E. coli	(235 cfu/100 mL)
		5300	Coliform	970	E. coli	(235 cfu/100 mL)
		190	Coliform	40	E. coli	(235 cfu/100 mL)
		1000	Coliform	140	E. coli	(235 cfu/100 mL)
		520	Coliform	400	E. coli	(235 cfu/100 mL)
		10	Coliform	800	E. coli	(235 cfu/100 mL)
		10	Coliform	280	E. coli	(235 cfu/100 mL)
		2200	Coliform	110	E. coli	(235 cfu/100 mL)
		920	Coliform	130	E. coli	(235 cfu/100 mL)
		120	Coliform	270	E. coli	(235 cfu/100 mL)
		90	Coliform	100	E. coli	(235 cfu/100 mL)
		130	Coliform	1200	E. coli	(235 cfu/100 mL)
		70	Coliform	30	E. coli	(235 cfu/100 mL)
		2600	Coliform	3300	E. coli	(235 cfu/100 mL)
		3600	Coliform	800	E. coli	(235 cfu/100 mL)
		1600	Coliform	120	E. coli	(235 cfu/100 mL)
		70	Coliform	240	E. coli	(235 cfu/100 mL)
				590	E. coli	(235 cfu/100 mL)
				350	E. coli	(235 cfu/100 mL)
				380	E. coli	(235 cfu/100 mL)
				60	E. coli	(235 cfu/100 mL)
				40	E. coli	(235 cfu/100 mL)
				1200	E. coli	(235 cfu/100 mL)

Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Result (cfu/100 mL)	Indicator Organism	Applicable Standard (E. coli)
				4900	E. coli	(235 cfu/100 mL)
				3300	E. coli	(235 cfu/100 mL)
				420	E. coli	(235 cfu/100 mL)
				190	E. coli	(235 cfu/100 mL)
				1700	E. coli	(235 cfu/100 mL)
				11000	E. coli	(235 cfu/100 mL)
				560	E. coli	(235 cfu/100 mL)
				110	E. coli	(235 cfu/100 mL)
				89000	E. coli	(235 cfu/100 mL)
				530	E. coli	(235 cfu/100 mL)
				40	E. coli	(235 cfu/100 mL)
				530	E. coli	(235 cfu/100 mL)
				440	E. coli	(235 cfu/100 mL)
				160	E. coli	(235 cfu/100 mL)
				710	E. coli	(235 cfu/100 mL)
				150	E. coli	(235 cfu/100 mL)
				310	E. coli	(235 mpn/100 mL)

Summary Range			
	Maumee @ SR101 - 1970s Fecal Coliform	Maumee @ SR101 - 1980s Fecal Coliform	Maumee @ SR101 - 1990s E. Coli
Minimum:	10	10	10
5th Percentile:	25	22	30
25th Percentile:	150	150	138
Median:	635	520	340
75th Percentile:	1,200	2,300	888
95th Percentile:	3,905	18,000	9,250
Maximum:	5,500	95,000	89,000

Chart Data			
	Maumee @ SR101 - 1970s Fecal Coliform	Maumee @ SR101 - 1980s Fecal Coliform	Maumee @ SR101 - 1990s E. Coli
Series 1	10	10	10
Series 2	15	12	20
Series 3	126	128	108
Series 4	485	370	203
Series 5	565	1,780	548
Series 6	2,705	15,700	8,362
Series 7	1,595	77,000	79,750

	Maumee @ SR101 - 1970s Fecal Coliform	Maumee @ SR101 - 1980s Fecal Coliform	Maumee @ SR101 - 1990s E. Coli

APPENDIX L: Substantial and Widespread Economic and Social Impact – Supporting Information

The City of Fort Wayne's original 2005 Financial Capability Analysis (Original FCA) is contained in Section 3.5 of the Long Term Control Plan (LTCP). The Municipal Preliminary Screener (MPS) analysis presented in this Updated UAA is based on updated information through the year 2018. Supporting information to the Updated UAA MPS analysis and comparisons to the Original UAA are summarized below.

Section 1 – Annual Operation and Maintenance (O&M) Cost Information

Original FCA analysis

- Annual O&M costs for the existing system were projected to increase at an average annual rate of 2.5 percent from the year 2005 baseline, plus additional costs for increases in the operation and maintenance of new facilities constructed as part of the LTCP and wastewater capital plans. The indexed annual costs were synchronized with the capital program implementation schedule and were compared to historical expenses and published rates for accuracy and consistency.
    - The 2005 annual O&M expense in the original FCA for sewer was $16,305,000. In addition to that O&M expense, there was an additional expense of $1,793,000 for Payment in Lieu of Taxes (PILOT).
    - The estimated annual O&M expense for the year 2017 projected in the original FCA was $27,116,000 with an additional estimated PILOT payment of $5,401,000.

Updated UAA MPS analysis

- Actual 2017 O&M expenses for sewer were used in the updated analysis and in some MPS analysis scenarios 2017 actual stormwater O&M expenses were also used. 2017 Sewer O&M is **$26,404,190** and 2017 Stormwater O&M is **$5,323,261.** Although the City believes PILOT is a legitimate part of its O&M expense for the Utility, PILOT was not included in the updated calculations, but is noted below. The following are a breakdown of O&M costs:

Wastewater Utility (excluding depreciation)		
Operating Expenses:		
Personnel services	$	9,028,357
Contractual services	$	4,288,511
Utilities	$	1,856,846
Chemicals	$	721,152
Administrative services	$	6,773,185
Other supplies and services	$	3,736,139
TOTAL O&M EXPENSE (EXCLUDING PILOT)	**$**	**26,404,190**
PILOT	$	4,670,166
TOTAL O&M EXPENSE (WITH PILOT)	$	31,074,356

Stormwater Utility (excluding depreciation)				
	Operating Expenses:			
		Personnel services		$ 1,980,449
		Contractual services		$ 244,868
		Administrative services		$ 2,546,941
		Other supplies and services		$ 551,003
	TOTAL O&M EXPENSE (EXCLUDING PILOT)			**$ 5,323,261**
		PILOT		$1,233,469
	TOTAL O&M EXPENSE (WITH PILOT)			$ 6,556,730

- The City continues to assume an average annual increase of 2.5% in total annual O&M costs is a reasonable projection.

Section 2 - Debt Service Information and Payment Requirements

Original FCA analysis

- Consistent with revenue bond requirements, the City assumed it would set rates to comply with a debt service coverage of 130 percent.
- City assumed 2% debt acquisition costs, 6% for average interest rates and a bond duration of 20 years
- Stormwater cost were not included

Updated UAA MPS analysis

- Consistent with revenue bond requirements, the City continues to assume it will maintain rates to comply with a debt service coverage of 130 percent.
- City continues to assume 2% debt acquisition costs, 6% for average interest rates and a bond duration of 20 years
- Stormwater costs were included in some MPS analysis scenarios
- The average annual debt service payment for existing debt (through 2018) is based on the average of 2019-2025 payments per the bond amortization schedules. This resulted in total annual average payment for sewer of **$43,839,865** and for stormwater **$2,145,057**

Bond Issues and Debt Service Requirements

	Principal Outstanding		Annual Debt Service Payment							
Sewer										
Year	Principal		2019	2020	2021	2022	2023	2024	2025	
2009A	3,443,758	SRF	248,944	248,945	248,945	248,945	248,946	248,944	248,945	
2009B	22,692,236	SRF	2,171,004	2,171,004	2,171,004	2,171,004	2,171,004	2,171,004	2,171,004	
2011A	30,280,000	Revenue	3,486,640	3,483,520	3,483,300	3,495,840	3,510,720	3,527,800	3,556,940	
2011B	26,667,000	SRF	2,120,715	2,120,533	2,120,526	2,120,673	2,120,949	2,120,332	2,120,822	
2012A	8,603,000	SRF	622,277	622,626	622,815	622,844	622,712	622,421	622,969	
2012B	12,515,000	Revenue	1,308,750	1,312,750	1,316,250	1,319,250	1,326,750	1,333,650	1,333,100	
2012	12,375,000	Revenue	2,166,293	2,166,640	2,166,553	2,171,030				
2013	2,765,000	Revenue								
2013A	27,140,000	Revenue	4,067,428	4,071,838	4,079,785	4,071,173	4,111,293	4,139,170		
2013B	42,260,000	Revenue	1,492,125	1,492,125	1,492,125	1,492,125	1,492,125	1,492,125	5,657,125	
2014A	15,543,000	SRF	1,119,400	1,119,835	1,119,823	1,119,365	1,119,461	1,120,086	1,119,218	
2014B	60,247,000	SRF	2,535,033	2,552,746	2,539,230	2,545,407	4,665,661	4,629,978	4,577,604	
2014C	4,820,000	SRF	350,563	348,954	352,192	350,121	352,897	350,366	352,681	
2016	35,125,000	Revenue	4,265,750	4,268,650	4,270,900	4,265,000	4,261,100	4,261,700	4,261,300	
2016A	108,000,000	SRF	6,223,700	6,225,800	6,221,200	6,225,000	6,222,000	6,222,300	6,225,800	
2016B	138,583,000	SRF	5,870,195	6,271,089	7,493,108	7,489,325	7,491,099	7,488,025	7,489,927	
2017A	16,700,000	Revenue	1,577,144	1,567,416	1,562,183	1,556,317	1,554,818	1,552,561	1,544,544	
2017B	16,700,000	Revenue	1,582,017	1,572,163	1,561,803	1,560,937	1,554,312	1,547,055	1,544,165	
2018A	742,584	SRF	757,687							
2018B	21,722,416	SRF	599,202	1,428,759	1,428,836	1,428,646	1,428,579	1,428,311	1,428,828	avg
			42,564,864	43,045,392	44,250,577	44,253,001	44,254,426	44,255,828	44,254,971	43,839,865
Stormwater										avg
SW 2017	27,320,000	Revenue	2,195,000	2,193,550	2,186,550	2,104,400	2,107,800	2,110,550	2,117,550	2,145,057

Section 3 - Capital Improvement Program Information

Original FCA analysis

- The City's capital improvement program (CIP) assumed that the City would move forward during the 2008-2025 year forecast period with the following plans and projects: the LTCP and sanitary sewer discharge elimination plans, sewer repair and replacement program, collection system and treatment master plans, as well as other projected wastewater improvements and maintenance needs within the collection system and at the City's treatment plant. The estimated cost of the total sewer CIP including the LTCP was approximately:

Original LTCP 2008-2025 Capital Program	**2005 Dollar Value**	**Inflated Dollar Value**
LTCP	$239.4 million	$361.7 million
Wastewater Improvements CIP	$454.6 million	$566.0 million
TOTAL	**$694.0 million**	**$927.7 million**

- Capital costs were projected to increase at an average annual rate of 3.5 percent. Thus, the estimated Inflated Dollar Value of the Capital Program, as noted in the table above, was calculated based upon each project's cost being inflated at 3.5 percent per year from 2005 up to the year it was scheduled to be completed.
- The City's repair, replacement, and capital maintenance activities were assumed to increase over time, reflecting the increased attention the systems will require as they age.
- Increases in future operating and maintenance costs for new infrastructure were incorporated based on projects that would directly result in new system components or improved performance.
- Stormwater capital improvement costs were not included

Updated UAA MPS analysis

- Actual CIP costs were used through 2018, with remaining sewer capital costs projected to increase at an average annual rate of 3.5 percent for 2019-2025. The results of actual costs and the remaining projected costs through 2025 are shown in the tables below.

Current LTCP 2008-2025 Capital Program	**2005 Dollar Value**	**Actual to Date & Projected Dollar Value**
LTCP	$339.9 million	$494.6 million
Wastewater Improvements CIP	$326.6 million	$471.7 million
TOTAL	**$666.5 million**	**$966.6 million**

- The City's sewer repair, replacement, and capital maintenance activities are assumed to continue to increase over time, reflecting the increased attention the systems will require as they age.
- The City's sewer capital improvement program assumes that the City will continue to move forward during the remaining period with projects from the LTCP and sanitary sewer overflow elimination plans, sewer repair and replacement program, collection system and treatment

master plans, as well as other projected wastewater improvements and maintenance needs within the collection system and at the City's treatment plant The current estimated cost of this capital improvement program is approximately:

- To implement complete capture and full control of all CSOs, the infrastructure would need to be significantly upsized, and the CIP estimated cost would be increased to approximately:

Full Control 2008-2025 Capital Program	**2005 Dollar Value**	**Actual to Date & Projected Dollar Value**
Full Control	$703.3 million	$1,080.0 million
Wastewater Improvements CIP	$326.6 million	$471.7 million
TOTAL	**$1029.9 million**	**$1551.7 million**

- A comparison and breakdown of the above noted 2008-2025 Current LTCP and Full Control cost estimates are provided in the following Exhibits, as well as more details on actual costs expended to date.
  - **Exhibit L-1**: Summary of all years 2008-2025 capital costs (in both 2005 dollar and inflated dollar value) as well as LTCP capital costs expended 2008-2018
- Stormwater capital improvement costs were included in some MPS analysis scenarios
- The City's stormwater capital improvement program assumes that the City will continue to move forward during the remaining period with projects for water quality improvements, capacity and repair and replacement programs, as well as other projected stormwater improvements and maintenance needs within the stormwater system.
- The following attachments provide additional or more detailed information on the Capital Programs used in the Updated analysis
  - **Exhibit L-2**: Summary of remaining years 2019-2025 Sewer Utility capital and O&M costs for CURRENT LTCP scenario
    - Average Annual Revenue funded CIP - **$16,483,614**
    - Expected increase in O&M from CIP - **$5,374,641**
    - Remaining LTCP Cost - **$241,724,068**
    - Remaining other Sewer CIP Costs - **$239,470,850**
    - Total CIP funded by Revenue - **$115,385,295**
    - Total CIP funded by Existing Bonds and Reimbursements - **$154,794,141**
  - **Exhibit L-3:** Summary of remaining years 2019-2025 Sewer Utility capital and O&M costs for FULL CONTROL scenario
    - Average Annual Revenue funded CIP - **$27,346,166**
    - Expected increase in O&M from CIP - **$13,709,020**
    - Remaining LTCP Cost - **$827,167,360**
    - Remaining other Sewer CIP Costs - **$239,470,850**
    - Total CIP funded by Revenue - **$191,423,165**
    - Total CIP funded by Existing Bonds and Reimbursements - **$154,794,141**
  - **Exhibit L-4:** Summary of remaining years 2019-2025 Stormwater Utility capital and O&M costs

- Average Annual Revenue funded CIP - **$7,240,610**
- Expected increase in O&M from CIP - **$384,577**
- Remaining Stormwater Cost - **$61,160,863**
- Total CIP funded by Revenue - **$50,681,610**
- Total CIP funded by Existing Bonds and Reimbursements - **$16,479,253**

Section 4 - Residential Flow Share

Original FCA analysis

- The Residential share of total wastewater flow in 2005 was estimated to be 60% based on a projection that the residential share of sewer flow increasing over time, as well as hydraulic modeling, land use information, infrastructure records and infiltration and inflow information at that time.

Updated UAA MPS analysis

- The Residential share of total wastewater flow currently is estimated to be **66.4%.**
  - The primary difference between the original projection and the current calculation appears to be due improved hydraulic modeling information for the combined area flows and updated GIS information on the allocation of inflow and infiltration.

Residential Flow Analysis - WPCP Annual Treatment Breakdown

2017

Flow Characterization	Total (MG)	Residential Share (MG)	Comment on Calculation / Source of Information
Billed Flow / Customer Consumption	**8,057.3**	3,664.2	per customer metering / billing records - 45.5% residential
Non-Billed Flow Breakdown			
Recycled discharge from Biosolids Facility*	1,100.0	500.2	per customer metering/billing records - 45.5% residential
Combined Sewer Area Stormwater	1,341.3	831.6	per modeling and GIS analysis of land use and runoff area of combined area - 62% residential
Public Pipe & Manhole Leakage Allowance	1,751.9	1576.3	per GIS pipe and manhole records for public pipe, design standards for leakage, portioned by customer count/billing records - 90% residential
Private Pipe & Manhole Leakage Allowance	628.4	487.1	per GIS pipe and manhole records for private pipe, design standards for leakage, portioned by GIS records - 77.5% residential
Collection System Inflow & Infiltration	6,348.4	5,712.2	general allocation of remaining I&I - distributed per customer count/billing records - 90% residential
Total Flow to Wastewater Treatment Plant**	**19,227.3**	**12,771.7**	
		66.4%	

* Biosolids Facility receives lime sludge water from water Filtration Plant and anerobic sludge water from WPCP, which is placed in ponds and decant water returned to WPCP

** Matches 2017 WPCP Influent Meter Records

Section 5 - Residential Customer Count

Original FCA analysis

- The City's residential customer count based on billing information was 71,496 in 2005

2005 CUSTOMER COUNT			
	Retail		**TOTAL**
		Residential	71,946
		Commercial	4,991
		Institutional	532
		Governmentl	160
		Industrial	319
		Sub-total Retail	77,948
	Wholesale		
		Contract	13
		Sub-total Wholesale	13
		TOTAL	**77,961**

Updated UAA MPS analysis

- The City's residential customer count based on current billing information is **81,796**

2017 CUSTOMER COUNT			
	Retail		**TOTAL**
		Residential	81,796
		Multi-Family	1,631
		Lg Multi-Family	793
		Sm Commercial	4,339
		Lg Commercial	1,196
		Institutional	637
		Governmentl	106
		Civil City	124
		Inter-Dept	9
		Industrial	276
		Sub-total Retail	90,906
	Wholesale		
		Contract	20
		Sub-total Wholesale	20
		TOTAL	**90,926**

Section 6 - Median Household Income

Original FCA analysis

- 1999 Median Household Income (MHI) was calculated by identifying each census tract in the service area and weighting it by population according to the formula prescribed by the guidance document. MHI was then inflated to 2005 by using the countywide rate of change from 1999 MHI, as reported in the 2000 census, to 2005 MHI, as reported in the 2005 American Community Survey (ACS). For future projections, MHI was forecasted to grow by 2.2% per year.
    - The 2005 MHI in the original FCA was $42,791
    - Forecasted to 2017, the MHI per the original FCA would been calculated to be $55,560

Updated UAA MPS analysis

- An MHI value of **$48,039** is used for the sewer service area. This figure is derived from the 2017 American Community Survey (ACS) 5-Year Estimates, which generates such financial data in years other than census years.
- An MHI value of **$35,881** is used to calculate the MPS for Wayne Township. This figure comes from the 2017 American Community Survey (ACS) 1-Year Estimates.
    - **Exhibit L-5:** Provides details on the calculation of MHI for the Sewer Service Area and Wayne Township

Section 7 - Residential Indicator / Municipal Preliminary Screener Values

Original FCA analysis

- The Residential Indicator calculation in the 2005 FCA for the original approved LTCP, was calculated for the peak year to be:
    - All of Sewer Service Area - 1.80%
    - Only Wayne Township - 2.49%

Updated UAA MPS analysis

- The details of the MPS calculations in the Updated UAA Table 5.5-5, using the updated information noted in Section 5.5 and the information in this Appendix L, can be found in the following Exhibits:
    - **Exhibit L-6:** Calculation of MPS for Full Control/WQS Compliance costs (sewer only costs) for:
        - All of Sewer Service Area - **2.96%**
        - Only Wayne Township - **3.97%**
    - **Exhibit L-7:** Calculation of MPS for Full Control/WQS Compliance costs (sewer and stormwater costs) for:
        - All of Sewer Service Area - **3.22%**
        - Only Wayne Township - **4.31%**
    - **Exhibit L-8:** Calculation of MPS for Current LTCP Compliance costs (sewer only costs) for:
        - All of Sewer Service Area - **1.87%**
        - Only Wayne Township - **2.51%**

- **Exhibit L-9:** Calculation of MPS for Current LTCP costs (sewer and stormwater costs) for:
  - All of Sewer Service Area - **2.13%**
  - Only Wayne Township - **2.85%**

Exhibit L-1: Comparison of Current LTCP and Full Control CIP's 2008-2025

Exhibit L-1
Comparison of Current LTCP and Full Control CIP's 2008-2025

FORT WAYNE LTCP - CSO CONTROL MEASURE COST SUMMARY COMPARISON

As of Jan 1, 2019

			CURRENT APPROVED LTCP	FULL CONTROL		CURRENT APPROVED LTCP	FULL CONTROL
			CURRENT / INFLATED $ VALUE			2005 $ VALUE	
CSOCM No.	Projects / Category of Work	Capital Cost Completed 2008-2018	Total Capital Cost 2008-2025	Total Capital Cost 2008-2025	Capital Cost Completed 2008-2018	Total Capital Cost 2008-2025	Total Capital Cost 2008-2025
1	Plant Phase II - Primaries	$-	$-	$-	$-	$-	$-
2	Plant Phase III - Increase Peak Flow	$22,317,154	$22,317,154	$22,317,154	$17,425,431	$17,425,431	$17,425,431
3	Early Floatable Control	$1,986,029	$1,986,029	$1,986,029	$1,777,987	$1,777,987	$1,777,987
4	CSSCIP - Phase I	$9,516,501	$9,516,501	$9,516,501	$8,041,892	$8,041,892	$8,041,892
5	WW Ponds Storage & Dewatering	$41,655,946	$41,655,946	$41,655,946	$34,025,743	$34,025,743	$34,025,743
6	CSSCIP - Phase II	$31,181,322	$33,691,322	$33,691,322	$24,100,919	$25,760,313	$25,760,313
7 & 8	St. Joe River Relief Sewers	$6,738,182	$6,738,182	$21,164,698	$5,132,693	$5,132,693	$14,392,331
9	CSO 61 & 62 Relief Sewer, CSO 54 Storage	$7,583,500	$9,193,500	$21,567,722	$5,337,913	$6,374,564	$14,316,940
10	Morton Street to WW Ponds	$10,401,510	$15,146,510	$24,959,262	$7,126,821	$10,263,804	$16,562,104
11	3RPORT Tunnel, Sewers, Pump Station	$121,376,924	$333,810,992	$839,248,006	$84,316,220	$219,349,083	$534,521,093
12	Foster Park Relief Sewer	$89,621	$18,574,621	$25,313,276	$69,068	$10,624,879	$14,487,795
13	Late Floatable Control	$-	$740,000	$740,000	$-	$409,723	$409,723
14	CSO 64 Satellite Storage	$-	$1,200,000	$7,516,901	$-	$684,346	$4,286,798
15	WW Ponds High Rate Treatment	$-	$-	$30,337,232	$-	$-	$17,298,000
	Total - LTCP	$252,846,689	$494,570,758	$1,080,014,049	$187,354,686	$339,870,457	$703,306,150
	Capital Costs Remaining (Years 2019-2025)		$241,724,068	$827,167,360		$152,515,770	$515,951,463

See Exhibit L-2 for breakdown

See Exhibit L-3 for breakdown

Exhibit L-2: Current LTCP and All Sewer CIP Costs 2019-2025

Exhibit L-2
Current LTCP and All Sewer CIP Costs 2019-2025

2019 - 2025 Capital Budget: SEWER UTILITY - CURRENT LTCP

DESCRIPTION	FUNDING SOURCE	2019 BUDGET	2020 BUDGET	2021 BUDGET	2022 BUDGET	2023 BUDGET	2024 BUDGET	2025 BUDGET	TOTAL	O&M Increases from New TOTAL
LTCP		84,364,068	52,770,000	30,780,000	40,010,000	18,540,000	8,610,000	6,650,000	241,724,068	3,254,294
WPC PLANT TOTALS		6,608,526	13,235,000	7,595,000	6,235,000	6,445,000	5,580,000	16,045,000	61,743,526	937,706
BIOSOLIDS TOTALS		618,679	870,000	160,000	160,000	1,875,000	1,785,000	370,000	5,838,679	12,070
WET WEATHER PUMPING & STORAGE TOTALS		2,697,473	995,000	465,000	325,000	1,140,000	3,400,000	1,630,000	10,652,473	130,079
COLLECTION SYSTEM PUMPING & STORAGE TOTALS		1,538,139	2,140,000	1,250,000	1,120,000	1,280,000	1,120,000	1,160,000	9,608,139	92,656
COLLECTION SYSTEMS TOTALS		9,823,236	28,500,000	20,505,000	14,805,000	14,995,000	22,825,000	33,865,000	145,318,236	870,719
WPC MAINTENANCE TOTALS		1,534,797	1,415,000	690,000	640,000	650,000	680,000	700,000	6,309,797	77,116
TOTAL SEWER UTILITY		107,184,918	99,925,000	61,445,000	63,295,000	44,925,000	44,000,000	60,420,000	481,194,918	5,374,641
	Revenue Funded	5,395,295	16,905,000	17,360,000	17,860,000	18,355,000	19,960,000	19,550,000	115,385,295	
								Avg per Year	16,483,614	
	Existing Bonds, Reimbursements, Etc. Funds	100,704,141	42,590,000	11,000,000	-	500,000	-	-	154,794,141	
	Future Bond 1	1,085,481	40,430,000						41,515,481	
	Future Bond 2			33,085,000	45,435,000	26,070,000			104,590,000	
	Future Bond 3						24,040,000	40,870,000	64,910,000	
									211,015,481	
Total LTCP Projects		84,364,068	52,770,000	30,780,000	40,010,000	18,540,000	8,610,000	6,650,000	241,724,068	3,254,294
Non LTCP Projects		22,820,850	47,155,000	30,665,000	23,285,000	26,385,000	35,390,000	53,770,000	239,470,850	2,120,346
Total Projects		107,184,918	99,925,000	61,445,000	63,295,000	44,925,000	44,000,000	60,420,000	481,194,918	5,374,641

Remaining LTCP Capital Costs

Remaining Other Wastewater Capital Costs

Estimated increase in O&M

Exhibit L-3: Full Control and All Sewer CIP Costs 2019-2025

Attachment L-3
Full Control and All Sewer
CIP Costs 2019-2025

2019 - 2025 Capital Budget: SEWER UTILITY - FULL CONTROL

DESCRIPTION	FUNDING SOURCE	2019 BUDGET	2020 BUDGET	2021 BUDGET	2022 BUDGET	2023 BUDGET	2024 BUDGET	2025 BUDGET	TOTAL	O&M Increases from New TOTAL
LTCP-FULL CONTROL		84,364,068	290,443,459	167,428,893	179,036,488	55,523,455	35,683,127	14,687,870	827,167,360	11,588,674
WPC PLANT TOTALS		6,608,526	13,235,000	7,595,000	6,235,000	6,445,000	5,580,000	16,045,000	61,743,526	937,706
BIOSOLIDS TOTALS		618,679	870,000	160,000	160,000	1,875,000	1,785,000	370,000	5,838,679	12,070
WET WEATHER PUMPING & STORAGE TOTALS		2,697,473	995,000	465,000	325,000	1,140,000	3,400,000	1,630,000	10,652,473	130,079
COLLECTION SYSTEM PUMPING & STORAGE TOTALS		1,538,139	2,140,000	1,250,000	1,120,000	1,280,000	1,120,000	1,160,000	9,608,139	92,656
COLLECTION SYSTEMS TOTALS		9,823,236	28,500,000	20,505,000	14,805,000	14,995,000	22,825,000	33,865,000	145,318,236	870,719
WPC MAINTENANCE TOTALS		1,534,797	1,415,000	690,000	640,000	650,000	680,000	700,000	6,309,797	77,116
TOTAL SEWER UTILITY		107,184,918	337,598,459	198,093,893	202,321,488	81,908,455	71,073,127	68,457,870	1,066,638,209	13,709,020
	Revenue Funded	5,395,295	24,905,000	32,360,000	32,860,000	33,355,000	34,960,000	27,587,870	191,423,165	
								Avg per Year	27,346,166	
	Existing Bonds, Reimbursements, Etc. Funds	100,704,141	42,590,000	11,000,000	-	500,000	-	-	154,794,141	
	Future Bond 1	1,085,481	270,103,459						271,188,940	
	Future Bond 2			154,733,893	169,461,488	48,053,455			372,248,835	
	Future Bond 3						36,113,127	40,870,000	76,983,127	
									720,420,902	
Total LTCP Projects		84,364,068	290,443,459	167,428,893	179,036,488	55,523,455	35,683,127	14,687,870	827,167,360	11,588,674
Non LTCP Projects		22,820,850	47,155,000	30,665,000	23,285,000	26,385,000	35,390,000	53,770,000	239,470,850	2,120,346
Total Projects		107,184,918	337,598,459	198,093,893	202,321,488	81,908,455	71,073,127	68,457,870	1,066,638,209	13,709,020

Remaining LTCP Capital Costs

Remaining Other Wastewater Capital Costs

Estimated increase in O&M

Exhibit L-4: Stormwater CIP Costs 2019-2025

Exhibit L-4 Stormwater CIP Costs 2019-2025

2019 - 2025 Capital Budget: STORMWATER

DESCRIPTION	FUNDING SOURCE	2019 BUDGET	2020 BUDGET	2021 BUDGET	2022 BUDGET	2023 BUDGET	2024 BUDGET	2025 BUDGET	TOTAL	O&M Increases from New TOTAL
STREAMS, DITCHES, DRAINS TOTALS		2,675,965	1,210,000	720,000	430,000	820,000	1,200,000	1,230,000	8,285,965	29,500
STORMWATER PUMPING & STORAGE TOTALS		277,133	90,000	60,000	60,000	120,000	120,000	130,000	857,133	15,020
FLOOD MANAGEMENT TOTALS		906,365	830,000	-	630,000	820,000	300,000	310,000	3,796,365	43,864
DRAINAGE SYSTEMS TOTALS		11,100,523	9,920,000	6,980,000	5,160,000	4,940,000	5,090,000	5,270,000	48,460,523	226,193
STORM MAINTENANCE TOTALS		1,030,877	720,000	590,000	810,000	840,000	870,000	900,000	5,760,877	70,000
TOTAL STORMWATER UTILITY		15,990,863	12,770,000	8,350,000	7,090,000	7,540,000	7,580,000	7,840,000	67,160,863	384,577
TOTAL SEWER UTILITY		0	0	0	0	0	0	0	-	
	Revenue Funded	5,311,610	7,880,000	7,440,000	7,090,000	7,540,000	7,580,000	7,840,000	50,681,610	
								Avg per Year	7,240,230	
	Existing Bonds, Reimbursements, Etc. Funds	10,679,253	4,890,000	910,000	-	-	-	-	16,479,253	
	Future Bond 1	-	-	-	-	-	-	-	-	

Remaining Other Stormwater Capital Costs

Estimated increase in O&M

Exhibit L-5: Sewer Service Area and Wayne Township Median Household Income

MEDIAN INCOME IN THE PAST 12 MONTHS (IN 2017 INFLATION-ADJUSTED DOLLARS)
2013-2017 American Community Survey 5-Year Estimates

Exhibit L-5 pg 1 of 2

Sewer Service Area Median Household Income

Geography	MHI	MHI Margin of Error	Households	HH Margin of Error	Weighted MHI
Census Tract 1, Allen County, Indiana	$45,000	8418	1128	43	$490.52
Census Tract 3, Allen County, Indiana	$52,109	15304	1327	81	$668.21
Census Tract 4, Allen County, Indiana	$43,946	4151	1213	92	$515.12
Census Tract 5, Allen County, Indiana	$27,418	8638	1284	103	$340.20
Census Tract 6, Allen County, Indiana	$32,500	4388	702	75	$220.47
Census Tract 7.01, Allen County, Indiana	$35,227	3473	1274	98	$433.69
Census Tract 7.04, Allen County, Indiana	$34,665	3290	1270	85	$425.43
Census Tract 8, Allen County, Indiana	$41,763	2516	1795	104	$724.41
Census Tract 9, Allen County, Indiana	$33,404	3375	1292	79	$417.05
Census Tract 10, Allen County, Indiana	$35,729	9973	469	63	$161.93
Census Tract 11, Allen County, Indiana	$36,631	2499	943	81	$333.80
Census Tract 12, Allen County, Indiana	$20,417	8683	618	59	$121.93
Census Tract 13, Allen County, Indiana	$26,215	10725	631	54	$159.85
Census Tract 16, Allen County, Indiana	$23,209	3754	799	69	$179.20
Census Tract 17, Allen County, Indiana	$19,694	3388	698	83	$132.84
Census Tract 20, Allen County, Indiana	$27,581	5886	1296	123	$345.42
Census Tract 21, Allen County, Indiana	$27,788	6157	836	88	$224.49
Census Tract 22, Allen County, Indiana	$38,310	3971	1754	131	$649.34
Census Tract 23, Allen County, Indiana	$23,981	3936	1867	133	$432.66
Census Tract 25, Allen County, Indiana	$46,250	7692	1301	108	$581.46
Census Tract 26, Allen County, Indiana	$39,110	7862	1214	119	$458.81
Census Tract 28, Allen County, Indiana	$27,097	7907	776	72	$203.20
Census Tract 29, Allen County, Indiana	$23,924	4217	905	65	$209.22
Census Tract 30, Allen County, Indiana	$25,981	6117	1258	128	$315.84
Census Tract 31, Allen County, Indiana	$24,736	4595	1047	79	$250.27
Census Tract 32, Allen County, Indiana	$53,342	8703	2045	160	$1,054.13
Census Tract 33.01, Allen County, Indiana	$42,543	7855	1183	51	$486.34
Census Tract 33.04, Allen County, Indiana	$38,703	4501	1602	108	$599.15
Census Tract 34, Allen County, Indiana	$46,691	8113	1853	97	$836.06
Census Tract 35, Allen County, Indiana	$25,313	3061	1756	111	$429.54
Census Tract 36, Allen County, Indiana	$32,129	5493	2679	176	$831.77
Census Tract 37, Allen County, Indiana	$38,000	7153	1114	72	$409.07
Census Tract 38, Allen County, Indiana	$29,375	2362	1659	103	$470.93
Census Tract 39.01, Allen County, Indiana	$48,393	10970	1462	89	$683.69
Census Tract 39.02, Allen County, Indiana	$38,281	9761	1330	70	$492.00
Census Tract 40, Allen County, Indiana	$34,367	5693	1202	103	$399.19
Census Tract 41.01, Allen County, Indiana	$42,381	9370	930	58	$380.88
Census Tract 41.03, Allen County, Indiana	$46,181	10790	2618	170	$1,168.33
Census Tract 43, Allen County, Indiana	$20,972	3557	982	77	$199.01
Census Tract 44, Allen County, Indiana	$22,917	5001	1190	121	$263.53
Census Tract 103.04, Allen County, Indiana	$79,917	7519	2647	147	$2,044.20
Census Tract 106.01, Allen County, Indiana	$66,995	5068	1405	121	$909.60
Census Tract 106.02, Allen County, Indiana	$50,818	4666	1506	107	$739.56
Census Tract 106.03, Allen County, Indiana	$54,464	9350	718	40	$377.89
Census Tract 106.04, Allen County, Indiana	$27,839	4208	1142	96	$307.22
Census Tract 107.05, Allen County, Indiana	$57,933	8720	2200	116	$1,231.63
Census Tract 107.06, Allen County, Indiana	$60,000	3622	1860	93	$1,078.44
Census Tract 107.07, Allen County, Indiana	$68,078	10752	2349	120	$1,545.33
Census Tract 108.03, Allen County, Indiana	$60,217	6632	1996	77	$1,161.48
Census Tract 108.04, Allen County, Indiana	$53,377	5783	1764	63	$909.88
Census Tract 108.07, Allen County, Indiana	$53,456	3722	1762	92	$910.19
Census Tract 108.08, Allen County, Indiana	$78,945	7548	1929	84	$1,471.59
Census Tract 108.09, Allen County, Indiana	$50,741	8863	2094	126	$1,026.75
Census Tract 108.11, Allen County, Indiana	$65,383	15865	2165	175	$1,367.90
Census Tract 108.12, Allen County, Indiana	$65,011	4369	1779	75	$1,117.62
Census Tract 108.13, Allen County, Indiana	$56,169	9308	1683	97	$913.51
Census Tract 108.15, Allen County, Indiana	$75,659	6018	1811	99	$1,324.07
Census Tract 108.16, Allen County, Indiana	$78,568	7469	1907	94	$1,447.86
Census Tract 108.17, Allen County, Indiana	$57,819	9166	1520	72	$849.27
Census Tract 108.19, Allen County, Indiana	$40,745	7015	2308	116	$908.74
Census Tract 108.21, Allen County, Indiana	$36,954	7035	1986	122	$709.20
Census Tract 113.02, Allen County, Indiana	$33,571	9141	2052	186	$665.69
Census Tract 113.03, Allen County, Indiana	$36,071	16168	794	61	$276.76
Census Tract 115.01, Allen County, Indiana	$40,216	4884	1930	104	$750.04
Census Tract 115.02, Allen County, Indiana	$47,072	14760	1295	80	$589.07
Census Tract 9800.01, Allen County, Indiana	$12,500	2331	58	26	$7.01
Census Tract 9800.02, Allen County, Indiana					$0.00
Block Group 3, Census Tract 102.01, Allen County, Indi	$71,397	40443	479	89	$330.48
Block Group 4, Census Tract 102.01, Allen County, Indi	$88,237	8531	463	85	$394.79
Block Group 2, Census Tract 103.05, Allen County, Indi	$118,897	14130	819	102	$940.99
Block Group 4, Census Tract 103.05, Allen County, Indi	$102,500	62381	562	95	$556.66
Block Group 1, Census Tract 103.07, Allen County, Indi	$91,842	16969	410	71	$363.88
Block Group 2, Census Tract 103.07, Allen County, Indi	$83,574	5962	1101	101	$889.18
Block Group 1, Census Tract 103.08, Allen County, Indi	$90,962	10291	1482	143	$1,302.68
Block Group 1, Census Tract 113.04, Allen County, Indi	$56,065	12146	901	116	$488.14
Block Group 2, Census Tract 113.04, Allen County, Indi	$11,748	1515	717	123	$81.40
Block Group 2, Census Tract 116.07, Allen County, Indi	$62,019	9882	587	94	$351.80
Total, Service Area			103,483		$48,039.49
US					$57,652
Indiana					$52,182
Allen County					$51,091

Exhibit L-5 pg 2 of 2
Wayne Township
Median Household Income

S19

// Search / Tables / S1901

INCOME IN THE PAST 12 MONTHS (IN 2017 INFLATION-ADJUSTED DOLLARS)

Survey/Program: American Community Survey TableID: S1901 Product: 2017: ACS 1-Year Estimates Subject Tables

Data Notes | Selections | 1 Geography | Years | Topic | 1 Survey | Code | Hide | Filter | Sort | Transpose Table | Margin of Error | Restore Layout | Download | Print | Share | More Data | More

Wayne township, Allen County, Indiana

	Households		Families		Marrie
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Total	43,687	+/-1,887	22,494	+/-1,538	
Less than $10,000	8.2%	+/-2.0	6.3%	+/-2.8	
$10,000 to $14,999	8.1%	+/-2.0	5.7%	+/-2.5	
$15,000 to $24,999	18.3%	+/-3.2	14.4%	+/-4.0	
$25,000 to $34,999	13.9%	+/-2.8	9.1%	+/-2.8	
$35,000 to $49,999	15.2%	+/-2.4	16.5%	+/-3.3	
$50,000 to $74,999	18.4%	+/-2.9	24.9%	+/-4.5	
$75,000 to $99,999	11.2%	+/-2.1	14.1%	+/-3.2	
$100,000 to $149,999	5.0%	+/-1.6	6.4%	+/-2.3	
$150,000 to $199,999	1.1%	+/-0.5	1.7%	+/-1.0	
$200,000 or more	0.6%	+/-0.4	0.8%	+/-0.7	
Median income (dollars)	35,881	+/-2,664	47,818	+/-5,812	62,41
Mean income (dollars)	45,005	+/-2,634	52,977	+/-3,926	
PERCENT ALLOCATED					
Household income in ...	29.8%	(X)	(X)	(X)	
Family income in the ...	(X)	(X)	30.7%	(X)	
Nonfamily income in t...	(X)	(X)	(X)	(X)	

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Exhibit L-6: Full Control No Stormwater Costs

Exhibit L-6 pg 1 of 3 Full Control
No Stormwater Costs

Assumes a portion of projects are rate funded and does not include stormwater projects

City of Fort Wayne
EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 1: CALCULATION OF COST PER HOUSEHOLD
(2017 $ Value and FULL CONTROL SCENARIO)

See Section 1 of Appendix L

Description			Amount	EPA Line No.	Source
Current and Projected Wastewater Treatment and Wet-Weather Control Costs:					
Current WWT and Wet-Weather Control Costs:					
Annual O&M Expense - Sewer (excluding Depreciation)			$26,404,190	100	From 2017 Source: Comparative Statement of Revenues, Expenses, and Changes in Net Position
Annual Debt Service (Principal & Interest)			43,839,865	101	Based on the average debt service for the 7 years (2019-2025).Note, it excludes stormwater bonds
Subtotal			70,244,055	102	Calculation
Projected WWT and Wet-Weather Control Costs:					
Annual Rate Funded Capital Projects			27,346,166		Calculated as an average of sewer capital improvements
Expected increase in O&M due to new assets (as a % of capital assets)			13,709,020		Calculated as a percentage of capital assets - See Capital Projects Schedules. $13,709,020 from Sewer.
Annual Incremental O&M Expense without STORM			41,055,186	103	
Capital Cost of LTCP	$827,167,360				Capital Projects Schedules
Capital Cost of Wastewater Improvement CIP	239,470,850				Capital Projects Schedules
Subtotal	1,066,638,210				
Less: Total Rate Funded Wastewater Improvements	(191,423,165)				Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	(154,794,141)				
Subtotal	720,420,904				
Plus: 2.00% Acquisition Costs (Wastewater)	14,408,418				See Assumptions
Projected Debt Service (Wastewater)		64,065,828			Assumed $734,830,000 bond at 6.00% interest amortized over 20 Years.Assumed increments of $5,000
Capital Cost of Stormwater Improvement CIP	Not Included				See Capital Projects Schedules
Less: Total Rate Funded Stormwater Improvements	Not Included				See Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	Not Included				
Subtotal	Not Included				
2.00% Acquisition Costs (StormWater)	Not Included				See Assumptions
Projected Debt Service (StormWater)		Not Included			Stormwater is not included in current calculation.
					Calculation
Total Projected Debt Service (Principal & Interest)			64,065,828	104	
Subtotal			105,121,014	105	Calculation
Total Current and Projected WWT and Wet-Weather Control Costs without STORM			$175,365,069	106	Calculation
Allocation of WWT and Wet-Weather Costs to Residential Customers:					
Residential Flow as a Percentage of Total Flow			66.40%		Per Utility Analysis
Residential Share of Total WWT and Wet-Weather Control Costs			$116,442,406	107	Calculation
Determination of WWT and Wet-Weather Cost Per Household:					
Total Number of Residential Accounts in Service Area			81,796	108	Per Utility Customer Records
Cost Per Household - Sewer. No stormwater included.			$1,424	109	Calculation

See Section 2 of Appendix L

See Section 3 of Appendix L and Exhibit L-3 for Annual Costs and O&M Increase

See Section 3 of Appendix L and Exhibit L-3 for Capital Costs and Funding Breakdown

See Section 4 of Appendix L

See Section 5 of Appendix L

Exhibit L-6 pg 2 of 3 Full Control - No Stormwater MPS-WQS (Service Area)

Assumes a portion of projects are rate funded and does not include stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and FULL CONTROL SCENARIO)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI: Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$48,039	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) without STORM	$1,424	204	Calculation
Residential Indicator: (CPH as % of MHI)	**2.96%**	205	Calculation
Analysis of the Residential Indicator	**High**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

Exhibit L-6 pg 3 of 3 Full Control - No Stormwater MPS-WQS (Wayne only)

Assumes a portion of projects are rate funded and does not include stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and FULL CONTROL SCENARIO)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI:			
Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$35,881	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) without STORM	$1,424	204	Calculation
Residential Indicator: (CPH as % of MHI)	**3.97%**	205	Calculation
Analysis of the Residential Indicator	**High**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

Exhibit L-7: Full Control Includes Stormwater Costs

Exhibit L-7 pg 1 of 3 Full Control Includes Stormwater Costs

Assumes a portion of projects are rate funded and includes stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 1: CALCULATION OF COST PER HOUSEHOLD

(2017 $ Value and FULL CONTROL SCENARIO)

See Section 1 of Appendix L

Description		Amount	EPA Line No.	Source
Current and Projected Wastewater Treatment and Wet-Weather Control Costs:				
Current WWT and Wet-Weather Control Costs:				
Annual O&M Expense - Sewer and Storm (excluding Depreciation)		$31,727,451	100	From 2017 Source: Comparative Statement of Revenues, Expenses, and Changes in Net Position
Annual Debt Service (Principal & Interest)		45,984,922	101	Based on the average debt service for the 7 years (2019-2025).
Subtotal		77,712,373	102	Calculation
Projected WWT and Wet-Weather Control Costs:				
Annual Rate Funded Capital Projects		34,586,396		Calculated as an average of sewer capital improvements + average of stormwater capital improvements
Expected increase in O&M due to new assets (as a % of capital assets)		14,093,597		Calculated as a percentage of capital assets - See Capital Projects Schedules. $13,709,020 from Sewer and $384,577 from Storm.
Annual Incremental O&M Expense with STORM		48,679,993	103	
Capital Cost of LTCP	$827,167,360			Capital Projects Schedules
Capital Cost of Wastewater Improvement CIP	239,470,850			Capital Projects Schedules
Subtotal	1,066,638,210			
Less: Total Rate Funded Wastewater Improvements	(191,423,165)			Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	(154,794,141)			
Subtotal	720,420,904			
Plus: 2.00% Acquisition Costs (Wastewater)	14,408,418			See Assumptions
Projected Debt Service (Wastewater)		64,065,828		Assumed $734,830,000 bond at 6.00% interest amortized over 20 Years.Assumed increments of $5,000
Capital Cost of Stormwater Improvement CIP	67,160,863			See Capital Projects Schedules
Less: Total Rate Funded Stormwater Improvements	(50,681,610)			See Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	(16,479,253)			
Subtotal	0			
2.00% Acquisition Costs (StormWater)	0			See Assumptions
Projected Debt Service (StormWater)		0		Projects less allowances are assumed rate funded.
Total Projected Debt Service (Principal & Interest)		64,065,828	104	Calculation
Subtotal		112,745,821	105	Calculation
Total Current and Projected WWT and Wet-Weather Control Costs with STORM		$190,458,194	106	Calculation
Allocation of WWT and Wet-Weather Costs to Residential Customers:				
Residential Flow as a Percentage of Total Flow		66.40%		Per Utility Analysis
Residential Share of Total WWT and Wet-Weather Control Costs		$126,464,241	107	Calculation
Determination of WWT and Wet-Weather Cost Per Household:				
Total Number of Residential Accounts in Service Area		81,796	108	Per Utility Customer Records
Cost Per Household - Sewer and Storm		$1,546	109	Calculation

See Section 2 of Appendix L

See Section 3 of Appendix L and Exhibit L-3 for Annual Costs and O&M Increase

See Section 3 of Appendix L and Exhibit L-3 for Capital Costs and Funding Breakdown

See Section 3 of Appendix L and Exhibit L-4 for Capital Costs and Funding Breakdown

See Section 4 of Appendix L

See Section 5 of Appendix L

Exhibit L-7 pg 2 of 3 Full Control - w/ Stormwater MPS-WQS (Service Area)

Assumes a portion of projects are rate funded and includes stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and FULL CONTROL SCENARIO)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI: Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$48,039	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) with STORM	$1,546	204	Calculation
Residential Indicator: (CPH as % of MHI)	**3.22%**	205	Calculation
Analysis of the Residential Indicator	**High**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

Exhibit L-7 pg 3 of 3 Full Control - w/ Stormwater MPS-WQS (Wayne only)

Assumes a portion of projects are rate funded and includes stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and FULL CONTROL SCENARIO)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI: Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$35,881	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) with STORM	$1,546	204	Calculation
Residential Indicator: (CPH as % of MHI)	**4.31%**	205	Calculation
Analysis of the Residential Indicator	**High**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

Exhibit L-8: Approved LTCP No Stormwater Costs

Exhibit L-8 pg 1 of 3
Approved LTCP
No Stormwater Costs

Assumes a portion of projects are rate funded and does not include stormwater projects

City of Fort Wayne
EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 1: CALCULATION OF COST PER HOUSEHOLD
(2017 $ Value and APPROVED LTCP)

See Section 1 of Appendix L

Description			Amount	EPA Line No.	Source
Current and Projected Wastewater Treatment and Wet-Weather Control Costs:					
Current WWT and Wet-Weather Control Costs:					
Annual O&M Expense - Sewer (excluding Depreciation)			$26,404,190	100	From 2017 Source: Comparative Statement of Revenues, Expenses, and Changes in Net Position
Annual Debt Service (Principal & Interest)			43,839,865	101	Based on the average debt service for the 7 years (2019-2025).Note, it excludes stormwater bonds
Subtotal			70,244,055	102	Calculation
Projected WWT and Wet-Weather Control Costs:					
Annual Rate Funded Capital Projects			16,483,614		Calculated as an average of sewer capital improvements
Expected increase in O&M due to new assets (as a % of capital assets)			5,374,641		Calculated as a percentage of capital assets - See Capital Projects Schedules. $5,374,641 from Sewer.
Annual Incremental O&M Expense without STORM			21,858,255	103	
Capital Cost of LTCP	$241,724,068				Capital Projects Schedules
Capital Cost of Wastewater Improvement CIP	239,470,850				Capital Projects Schedules
Subtotal	481,194,918				
Less: Total Rate Funded Wastewater Improvements	(115,385,295)				Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	(154,794,141)				
Subtotal	211,015,482				
Plus: 2.00% Acquisition Costs (Wastewater)	4,220,310				See Assumptions
Projected Debt Service (Wastewater)		18,765,604			Assumed $215,240,000 bond at 6.00% interest amortized over 20 Years.Assumed increments of $5,000
Capital Cost of Stormwater Improvement CIP	Not Included				See Capital Projects Schedules
Less: Total Rate Funded Stormwater Improvements	Not Included				See Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	Not Included				
Subtotal	Not Included				
2.00% Acquisition Costs (StormWater)	Not Included				See Assumptions
Projected Debt Service (StormWater)		Not Included			Stormwater is not included in current calculation.
Total Projected Debt Service (Principal & Interest)			18,765,604	104	Calculation
Subtotal			40,623,859	105	Calculation
Total Current and Projected WWT and Wet-Weather Control Costs without STORM			$110,867,914	106	Calculation
Allocation of WWT and Wet-Weather Costs to Residential Customers:					
Residential Flow as a Percentage of Total Flow			66.40%		Per Utility Analysis
Residential Share of Total WWT and Wet-Weather Control Costs			$73,616,295	107	Calculation
Determination of WWT and Wet-Weather Cost Per Household:					
Total Number of Residential Accounts in Service Area			81,796	108	Per Utility Customer Records
Cost Per Household - Sewer. No stormwater included.			$900	109	Calculation

See Section 2 of Appendix L

See Section 3 of Appendix L and Exhibit L-2 for Annual Costs and O&M Increase

See Section 3 of Appendix L and Exhibit L-2 for Capital Costs and Funding Breakdown

See Section 4 of Appendix L

See Section 5 of Appendix L

Exhibit L-8 pg 2 of 3 L
TCP - No Stormwater
MPS-LTCP (Service Area)

Assumes a portion of projects are rate funded and does not include stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and APPROVED LTCP)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI: Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$48,039	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) without STORM	$900	204	Calculation
Residential Indicator: (CPH as % of MHI)	**1.87%**	205	Calculation
Analysis of the Residential Indicator	**Mid-Range**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	**1.0-2.0 Percent of MHI**
High	Greater than 2.0 Percent of MHI

Exhibit L-8 pg 3 of 3 L
TCP - No Stormwater
MPS-LTCP (Wayne only)

Assumes a portion of projects are rate funded and does not include stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and APPROVED LTCP)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI: Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$35,881	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) without STORM	$900	204	Calculation
Residential Indicator: (CPH as % of MHI)	2.51%	205	Calculation
Analysis of the Residential Indicator	High		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

Exhibit L-9: Approved LTCP Includes Stormwater Costs

Exhibit L-9 pg 1 of 3
Approved LTCP Includes Stormwater Costs

Assumes a portion of projects are rate funded and includes stormwater projects

City of Fort Wayne
EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 1: CALCULATION OF COST PER HOUSEHOLD
(2017 $ Value and APPROVED LTCP)

See Section 1 of Appendix L

Description			Amount	EPA Line No.	Source
Current and Projected Wastewater Treatment and Wet-Weather Control Costs:					
Current WWT and Wet-Weather Control Costs:					
Annual O&M Expense - Sewer and Storm (excluding Depreciation)			$31,727,451	100	From 2017 Source: Comparative Statement of Revenues, Expenses, and Changes in Net Position
Annual Debt Service (Principal & Interest)			45,984,922	101	Based on the average debt service for the 7 years (2019-2025).
Subtotal			77,712,373	102	Calculation
Projected WWT and Wet-Weather Control Costs:					
Annual Rate Funded Capital Projects			23,723,844		Calculated as an average of sewer capital improvements + average of stormwater capital improvements
Expected increase in O&M due to new assets (as a % of capital assets)			5,759,218		Calculated as a percentage of capital assets - See Capital Projects Schedules. $5,374,641 from Sewer and $384,577 from Storm.
Annual Incremental O&M Expense with STORM			29,483,062	103	
Capital Cost of LTCP	$241,724,068				Capital Projects Schedules
Capital Cost of Wastewater Improvement CIP	239,470,850				Capital Projects Schedules
Subtotal	481,194,918				
Less: Total Rate Funded Wastewater Improvements	(115,385,295)				Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	(154,794,141)				
Subtotal	211,015,482				
Plus: 2.00% Acquisition Costs (Wastewater)	4,220,310				See Assumptions
Projected Debt Service (Wastewater)		18,765,604			Assumed $215,240,000 bond at 6.00% interest amortized over 20 Years.Assumed increments of $5,000
Capital Cost of Stormwater Improvement CIP	67,160,863				See Capital Projects Schedules
Less: Total Rate Funded Stormwater Improvements	(50,681,610)				See Capital Projects Schedules
Less: Improvements Funded by Existing Bonds & Reimbursements	(16,479,253)				
Subtotal	0				
2.00% Acquisition Costs (StormWater)	0				See Assumptions
Projected Debt Service (StormWater)		0			Projects less allowances are assumed rate funded.
Total Projected Debt Service (Principal & Interest)			18,765,604	104	Calculation
Subtotal			48,248,666	105	Calculation
Total Current and Projected WWT and Wet-Weather Control Costs with STORM			$125,961,039	106	Calculation
Allocation of WWT and Wet-Weather Costs to Residential Customers:					
Residential Flow as a Percentage of Total Flow			66.40%		Per Utility Analysis
Residential Share of Total WWT and Wet-Weather Control Costs			$83,638,130	107	Calculation
Determination of WWT and Wet-Weather Cost Per Household:					
Total Number of Residential Accounts in Service Area			81,796	108	Per Utility Customer Records
Cost Per Household - Sewer and Storm			$1,023	109	Calculation

See Section 2 of Appendix L

See Section 3 of Appendix L and Exhibit L-2 for Annual Costs and O&M Increase

See Sect ion 3 of Appendix L and Exhibit L-2 for Capital Costs and Funding Breakdown

See Section 3 of Appendix L and Exhibit L- 4 for Capital Costs and Funding Breakdown

See Section 4 of Appendix L

See Section 5 of Appendix L

Exhibit L-9 pg 2 of 3
LTCP - w/ Stormwater
MPS-LTCP (Service Area)

Assumes a portion of projects are rate funded and includes stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and APPROVED LTCP)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI:			
Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$48,039	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) with STORM	$1,023	204	Calculation
Residential Indicator: (CPH as % of MHI)	**2.13%**	205	Calculation
Analysis of the Residential Indicator	**High**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

Exhibit L-9 pg 3 of 3 L
TCP - w/ Stormwater
MPS-LTCP (Wayne only)

Assumes a portion of projects are rate funded and includes stormwater projects

City of Fort Wayne

EPA CSO FINANCIAL CAPABILITY ASSESSMENT - PHASE 1 THE RESIDENTIAL INDICATOR

WORKSHEET 2: CALCULATION OF THE RESIDENTIAL INDICATOR

(2017 $ Value and APPROVED LTCP)

Description	Amount	EPA Line No.	Source
Adjusted Median Household Income Levels			
Using Weighted Average MHI: Census Year MHI	NA	201	Not Applicable
Adjustment Factor	NA	202	Not Applicable
Adjusted MHI	$35,881	203	Source: 2017 American Community Survey Estimate
Annual WWT and Wet-Weather Control Cost Per Household (CPH) with STORM	$1,023	204	Calculation
Residential Indicator: (CPH as % of MHI)	**2.85%**	205	Calculation
Analysis of the Residential Indicator	**High**		

See Section 6 of Appendix L

Financial Impact	Residential Indicator (CPH as % MHI)
Low	Less than 1.0 Percent of MHI
Mid-Range	1.0-2.0 Percent of MHI
High	Greater than 2.0 Percent of MHI

APPENDIX M: Precision of Cost Estimating for CSO Control Measures

Preliminary cost estimates were prepared for various CSO control measures as part of the LTCP development effort to serve as a selection criterion among prospective alternative control measures. For more detailed information on the cost estimating methodology, *see* Attachment 1 to the LTCP titled, "Cost Estimating Methodology." The primary method for cost-estimating was the use of parametric models, developed from a series of recent planning-level cost estimating analyses conducted in the Midwest along with USEPA and industry references.

The Association for the Advancement of Cost Engineering (AACE) International has developed a Cost Estimate Classification System, which is summarized as follows:

> *"The Cost Estimate Classification System provides guidelines for applying the general principles of estimate classification to asset project cost estimates. Asset project cost estimates typically involve estimates for capital investment and exclude operating and life-cycle evaluations. The Cost Estimate Classification System maps the phases and stages of asset cost estimating together with a generic maturity and quality matrix that can be applied across a wide variety of industries."*

AACE's Cost Estimate Classification System is shown below. Given the purpose and characteristics of the preliminary cost estimates developed for the LTCP, the City's cost estimates fall in AACE Class 4. The most accurate estimates in this Class are expected to range from approximately -15% to +20%, while some estimates in this Class could range from approximately -30% to +50%. These accuracy ranges are analogous to degrees of uncertainty in the City's cost estimates.

AACE Cost Estimate Classification System

	Primary Characteristic	*Secondary Characteristic*			
ESTIMATE CLASS	**LEVEL OF PROJECT DEFINITION** Expressed as % of complete definition	**END USAGE** Typical purpose of estimate	**METHODOLOGY** Typical estimating method	**EXPECTED ACCURACY RANGE** Typical variation in low and high ranges [a]	**PREPARATION EFFORT** Typical degree of effort relative to least cost index of 1 [b]
Class 5	0% to 2%	Concept Screening	Capacity Factored, Parametric Models, Judgment, or Analogy	L: -20% to -50% H: +30% to +100%	1
Class 4	1% to 15%	Study or Feasibility	Equipment Factored or Parametric Models	L: -15% to -30% H: +20% to +50%	2 to 4
Class 3	10% to 40%	Budget, Authorization, or Control	Semi-Detailed Unit Costs with Assembly Level Line Items	L: -10% to -20% H: +10% to +30%	3 to 10
Class 2	30% to 70%	Control or Bid/ Tender	Detailed Unit Cost with Forced Detailed Take-Off	L: -5% to -15% H: +5% to +20%	4 to 20
Class 1	50% to 100%	Check Estimate or Bid/Tender	Detailed Unit Cost with Detailed Take-Off	L: -3% to -10% H: +3% to +15%	5 to 100

Cost Estimate Classification System
(from AACE International Recommended Practices and Standards,

APPENDIX N-1: Public Participation Meetings February 17, 2010

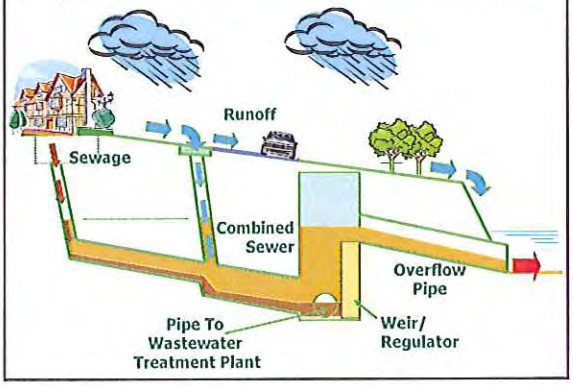
City of Fort Wayne
Use Attainability Analysis

February 17, 2010
Brandi Wallace
Justin Brugger
Todd Trinkle (IDEM)

Presentation Outline

- Water Quality Impacts of CSO Overflows
- Reducing Overflows
  - Long-Term Control Plan (LTCP)
  - Benefits of LTCP
- Request for Recreational Use Change in Water Quality Standards
- Basis for Use Attainability Analysis
- Next Steps

Why Our Combined Sewers Overflow



We Are Not Alone!

- Nationwide problem, especially in Midwest and Northeast

Where Sewers Overflow

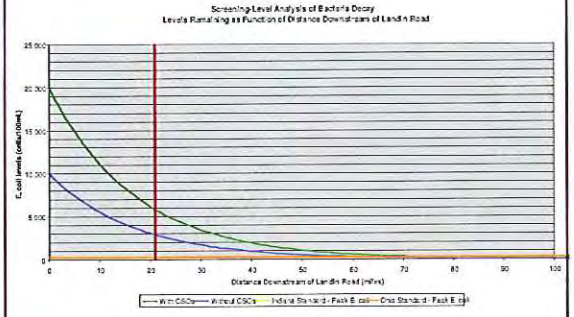
- Maumee
- St. Joseph
- St. Mary's
- Spy Run Creek
- Baldwin Ditch
- Other tributaries

Water Quality Problems

- Maumee River, St. Joseph River, St. Mary's River impaired by bacteria, according to IDEM
- On average, waterways exceed *E. coli* standards 85 days per year

- Many sources of waterborne bacteria: Combined sewer overflows, failing septic systems, urban stormwater, agricultural runoff and, rarely, overflows from sanitary sewers

Modeled Bacteria Decay



Plan (LTCP) Overview

Program Element	Cost (millions)
Combined Sewer Capacity (partial sewer separation)	$68.3
Interceptor sewers	$72.4
Satellite storage/treatment	$34.8
Combined sewer overflow pond storage improvements	$53.9
Treatment plant improvements	$10
Total Cost	**$239.4**

(All cost estimates based on 2005 dollar value)

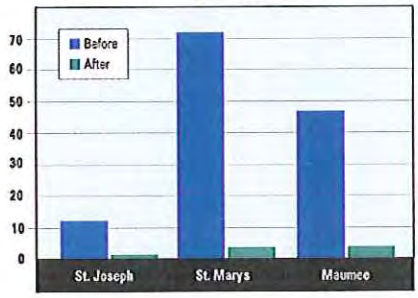
Benefits of City's Plan

- Reduced odors, untreated sewage and trash in our rivers and streams
- Reduces annual sewer overflow volume by 91 percent
- Reduces overflow frequency from 71 times in a typical year to:
  - 1 storm per year causing overflows to St. Joseph River*
  - 4 storms per year causing overflows to St. Mary's and Maumee rivers*
- Reduced bacteria in our waterways

*Predictions based on a year with average rainfall

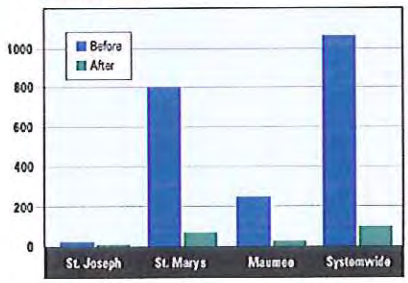
Benefits: Reduced Overflow Frequency

Annual Overflow Frequency in a Typical Year



Benefits: Reduced Overflow Volume

Annual Overflow Volume in a Typical Year (million gallons)



- Controls go beyond the point of diminishing returns from a cost-effectiveness perspective.
- Even if all CSOs were eliminated, Fort Wayne's receiving streams will not appear or be pristine. (Clay soils result in rivers appearing murky).
- Stormwater from the City and surrounding area will still run into waterways carrying pollutants, including bacteria, and sediment.

Use Designation

- All surface waters within Indiana's Great Lakes drainage basin are designated for full-body contact recreation (swimmable) by state water quality rules. 327 IAC 2-1.5-5(a)(1)
- This recreational use designation applies to the St. Joseph, St. Mary's and Maumee Rivers (and tributaries)
- Recreation Season includes April – Oct.
- Water Quality Criteria for recreation based on *E. Coli* bacteria as indicator organism (maximum of 235 colony-forming units per 100 milliliters)

Why is it necessary to change the designated use?

- Even after implementation of the City's costly LTCP, some overflows will still occur during the largest storms.
- High bacterial pollution levels from these infrequent storms will make the rivers unsuitable for swimming and other full body recreational contact at those times.
- State water quality rules allow no exceptions to compliance with bacterial criteria required for the current recreational use designation.

- 100% compliance with the water quality criteria for recreation would require additional CSO controls to capture overflows from the largest storms, which is not affordable.
- Recreation on area rivers during storm events occurs rarely, if at all.
- A revised use designation is needed that recognizes that recreation should not occur during times area rivers are impacted by overflows from the infrequent storms beyond the reach of the LTCP's control measures.
- Current Recreational Use Designation would apply except when LTCP's CSO controls cannot capture overflows from larger storms.

Federal and State Law for Use Designation Changes

- The U.S. EPA adopted rules many years ago to govern the establishment and revision of water quality standards, including use designations, for the nation's waters. 40 CFR Part 131, Subpart B.
- In 2005, the Indiana legislature created a CSO wet weather limited use designation for waters affected by CSOs where a community has agreed to implement an approved LTCP that reduces but cannot totally eliminate discharges from combined sewer systems due to affordability or other constraints.

UAA – a Prerequisite to Change in Use Designation

- Under the relevant federal and state law, a use designation, such as the current recreational use for waters impacted by the City's CSOs, cannot be changed without conducting a Use Attainability Analysis (UAA) to assess the feasibility of achieving the designated use.

What is a UAA

- A UAA is defined under federal law as a "structured, scientific assessment of the factors affecting the attainment of the use, which may include physical, chemical, biological, and economic factors as described in 40 CFR 131.10(g)".
- Six factors may be considered when conducting a UAA.

Basis of Draft UAA

- Fort Wayne's draft UAA is based upon the **substantial and widespread economic and social impacts** (factor six) that would be caused by a requirement to implement controls beyond those contained in the City's LTCP as approved by IDEM and U.S. EPA.

Substantial and Widespread Social and Economic Impacts

- Complete Control of CSOs would still not meet Water Quality Criteria for *E. Coli* due to other, non-point sources.
- Fort Wayne's approved LTCP provides the best environmental benefit for the dollar. It will eliminate most overflows and capture some stormwater that otherwise would have gone to the river.
- Complete Control of CSOs would increase capital costs for the LTCP by more than 100% and would be unaffordable for the City and its rate payers under applicable state and federal criteria.

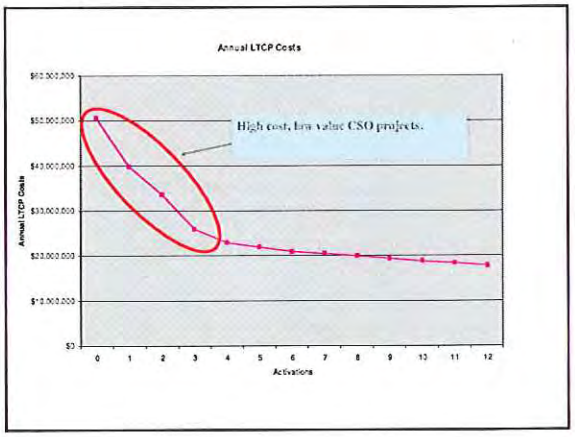
Substantial and Widespread Social and Economic Impacts

UAA Table 4.3-1

Capital Costs for CSO Control Measures for Complete Capture and Control of CSOs

Program Element	Cost (millions)
Combined Sewer Capacity (partial sewer separation)	$ 102.7
Interceptor sewers	213.1
Satellite storage/treatment	30.3
Combined sewer overflow pond storage improvements	170.5
Treatment plant improvements	75.8
Total Cost	**$592.4**

(All cost estimates based on 2005 dollar value and Typical Year Conditions)



Manufacturing Dependent

- Fort Wayne's economy remains highly dependent on manufacturing, which has been trending in a negative direction for over two decades.
- The area's largest employers:
  - General Motors – 2,484
  - ITT Corporation – 1,837
  - Raytheon Systems – 1,200
  - Navistar International Corp. – 1,150
  - B.A.E. Systems Platform Solutions – 1,000
  - Norfolk Southern Corp. – 983
  - Steel Dynamics Inc. – 914

Current Status for Change in Use Designation

- Approved LTCP (December 2007)
- Draft UAA complete and ready for submittal to IDEM for approval
- Fort Wayne is one of the first cities in Indiana to proceed with the UAA /use designation revision process.

Next Steps

- Indiana Water Pollution Control Board to conduct rulemaking to revise use designation for CSO-impacted waterways
- Approval by US EPA of UAA and Indiana rule to revise use designation to CSO wet weather limited use

Send Comments to:

Indiana Department of Environmental Management
c/o Todd Trinkle, Wet Weather Section
MC 65-42 IGCN 1255
100 N. Senate Avenue
Indianapolis, Indiana 46204-2251

Brandi Wallace
City Utilities Capital Asset Management
1 E. Main Street
Fort Wayne, Indiana 46802

Questions?

FORT WAYNE UAA PUBLIC MEETINGS SUMMARY
17 FEBRUARY 2010

- **INDIANA INSTITUTE OF TECHNOLOGY (FORT WAYNE, IN) – 1300**

Dick Beam – Sherwood Park

1. What will be the cost of LTCP implementation on average to a home owner?

   Response: The peak annual cost to residential customers, on average, is expected to be $1138/year as the total sewer bill. This peak is projected to occur in 2023.

2. When will work start in Sherwood Park and what streets will be affected?

   Response: Construction of the parallel interceptor is several years away. Partial sewer separation will be done in the first 10 years. The City is still evaluating that subbasin, but separation work will not start this year.

3. Will sewer separation work be done on individual properties or public properties?

   Response: The majority of work will be done on City property. The City may need to obtain easements, but work will not be done on private sewer laterals in yards or in re-plumbing homes.

4. How much will the costs of LTCP implementation (and I think it's necessary) take away from street improvements?

   Response: Different revenue streams apply to the two types of infrastructure improvements. Street improvements are funded from property taxes. LTCP projects are funded by user fees paid to the City sewer utility. As work is being done for LTCP purposes, some sidewalks and streets will be improved as part of the project.

5. Recommend that the City pass a law that says you can only fertilize the lawn 2 times a year. These pollutants have to be getting into the Maumee River. (His wife currently fertilizes 4 times a year and he feels it's unnecessary and harmful to the rivers.)

   Response: City representatives encouraged Mr. Beam to contact his City Council representative about his concern. (Although the State Chemist will not allow limits to be placed on fertilizers).

Dan Wire – River Advocate

1. I support this project; the LTCP will eliminate 90% of the overflows currently going to the rivers.

- The UAA before you has been developed fairly and responsibly with adequate public input;
- The UAA is realistic and compatible with goals in the community for river use;
- The UAA will help to reduce any devastating economic and social hardship that could be a result in increased effort in capturing CSOs from more severe storms; it applies common sense;
- The UAA realistically and responsibly addressees extreme wet weather that this region experiences;
- As it has been stated and proven that total elimination of CSOs would not put our rivers in compatibility with state water quality standards and would put an undue burden on the community
- I strongly support and encourage IDEM to accept this UAA before you.

FORT WAYNE UAA PUBLIC MEETINGS SUMMARY
17 FEBRUARY 2010

- **WOODLAN HIGH SCHOOL (WOODBURN, IN) – 1830**

Attendee Unknown

1. Concerned that Dekalb County is dumping their sewage into the St. Joseph River which flows through Fort Wayne. Will Dekalb be required to comply in the same manner as Fort Wayne? Is 2010 the year communities are supposed to eliminate overflows?

   Response: Yes, the largest communities are being targeted first for federal consent decrees, then smaller communities will most likely be under a State Judicial Agreement. IDEM's goal is to approve the remaining LTCPs by the end of 2010.

2. Is any of this being funded by Federal money?

   Response: Yes, some stimulus/recovery money is going to "clean water" infrastructure. Fort Wayne has received a $0.5 million grant and $3.5 million in low interest loans. This, however, hardly puts a dent in the $249 million capital cost of the LTCP.

Patrick Callahan – Aqua Indiana

1. What percent of Fort Wayne sewer utility revenue comes from industrial customers as opposed to residential?

   Response: City representatives do not have that information at the public meeting and will have to look into that. [Subsequent research indicates that the percentage of revenue deriving from residential customers is approximately 60%.]

2. Has any other community been granted suspension of Water Quality Standards by the Indiana Water Pollution Control Board?

   Response: No, not yet in Indiana. The first UAA from an Indiana community was submitted to IDEM and EPA by the City of Indianapolis but it has not gone through the entire process yet. State and federal law provide for approval of requests for relief from water quality standards subject to certain conditions being met.

3. Once Indiana approves the UAA, does it still go to EPA for approval under the Federal Rule?

   Response: Yes.

4. If approval of the UAA is not granted to Fort Wayne, then the federal Consent Decree requires the City to meet existing Water Quality Standards. Under that scenario, would the City have to go back and modify its LTCP to zero overflows?

   Response: That would be the worst case outcome. If the UAA were not approved, the City would be forced under terms of the Consent Decree to re-examine the Long-Term Control Plan for appropriate revisions. EPA could impress upon Fort Wayne a requirement to upgrade the wastewater treatment plant to result in zero overflows unless the City can convince EPA something less effective than that represents the limit of affordability. There would be a period of negotiations under such circumstances. However, the City anticipates EPA approval of the UAA.

5. Nationwide, has EPA approved anything like this?

   Response: EPA has approved the Indiana rule establishing the CSO subcategory designation. We are not sure if a UAA relating to changes in recreational use has been approved in other states. Indiana is leading the way on this issue.

Attendee Unknown

1. Is it possible to separate pollutants from farms and fields versus CSO runoff? What percent of pollutants in the river comes from such sources?

   Response: LTCP negotiations typically don't consider sources other than combined sewer overflows. Generally, the main focus is on the City's sewer system. There is a separate process called Total Maximum Daily Load (TMDL) that looks at all possible sources of pollution in a watershed. Few have been completed, they are even more complex than LTCPs and are difficult to establish.

Patrick Callahan – Aqua Indiana

1. How much of projected sewer rate the City is using here is for CSO cleanup and how much is for expansion of the City sewer system (as a "for instance," the 54 inch sewer being constructed on the north side)?

   Response: That sewer project is not part of the Long-Term Control Plan.

2. But is it part of the rate the City is using and saying it is unaffordable? How much is for growth and how much is for cleaning up CSOs? What percent is for normal sewage treatment and transportation?

   Response: 1/3 of the City's sewer system is combined and centrally located. As a general matter you could conclude that almost anything you do to the sewer system to improve it would incidentally improve capacity. The whole plan is addressed in containment and treatment of the CSO issue. No direct part of this LTCP or associated cost goes to expansion of capacity of the wastewater treatment plant.

3. Understood. The question is the rate you are using is 1.8% of MHI. How much of that rate is due to CSO improvement and how much is for normal sewer service? How much is the City spending expanding the sewer system to new customers as opposed to improving the existing system?

   Response: When new development requires new sewers, the developer/ homeowner is paying for that sewer infrastructure. An assessment is added to the sewer bill.

Attendee Unknown

1. I already have a $165/month sewer bill from the (Allen County) Regional Sewer District (whose sewage is pumped to New Haven, which in turn is a contract customer of Fort Wayne). It's just sewage, so will my bill increase under the LTCP as far as the portion I pay to the City?

   Response: That depends on what is negotiated between the City and the contract customer providing your sewer service in the future.

2. So, what the Regional Sewer Board negotiates with the City is not reflected here in these costs?

   Response: Part of the LTCP costs will be passed onto contract customers.

Brandi Wallace

From: Mailing Server on behalf of Mary Jane Slaton
Sent: Friday, February 12, 2010 11:40 AM
To: Sag Listserv
Subject: UAA public Meetings

All:

Submitting a Use Attainability Analysis to the EPA and IDEM is the next step in Fort Wayne's implementation of our long term control plan for combined sewer overflows. If approved by state and federal regulators, the UAA will provide an assurance that we will be in compliance with water quality mandates when the goals of our LTCP/Consent Decree are implemented.

As part of the UAA approval process, the City and IDEM are holding two public meetings during which the UAA will be explained and public comment will be accepted. The meetings will be held as follows:

Wednesday, February 17 at 1:00 PM
Indiana Tech University (Fort Wayne, IN)
Room 205 in Andorfer Commons
1600 East Washington Boulevard
Enter from parking lot on north side of the building

Wednesday, February 17 at 6:30 PM
Woodlan Jr/Sr High School (Woodburn, IN)
Presentation Room
17215 Woodburn Road
Enter through Door 6

Written comments may also be submitted by March 17, 2010 to the following

FORT WAYNE CITY UTILITIES
ONE EAST MAIN STREET, ROOM 280
FORT WAYNE, INDIANA 46802

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
C/O TODD TRINKLE, WET WEATHER SECTION
MC 65-42 IGCN 1255, 100 N. SENATE AVENUE
INDIANAPOLIS, IN 46204-2251

The UAA document is available for review at the office of the Fort Wayne Board of Public Works at 1 E. Main Street Room 420
from 8:30 AM - 4:45 PM, Monday through Friday.

Mary Jane Slaton
Fort Wayne City Utilities
(260) 427-2683

PUBLIC NOTICE

Notice is hereby given that the Board of Directors of the Allen County, Indiana Building Department will conduct a meeting, Thursday February 18, 2010 at 5:00 P.M. in the Conference room at 1 West Superior Street, Fort Wayne, Indiana to hear such matters as will be brought before it. Those persons who desire to be heard shall submit such request in writing to the Allen County, Indiana Building Department, 1 West Superior Street, Fort Wayne, Indiana 46802 not less than ten days prior to date of said meeting.

Phillip Shirmeyer
Chairman, Board of Directors
Allen County, Indiana Building Department.

2–5 792401

MF673

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of Allen Circuit Court of Allen County, Indiana, in Cause No. 02C01-0905-MF-673 wherein Deutsche Bank National Trust Company, as Trustee for First Franklin Mortgage Loan Trust 2006-FF8, Asset-Backed Certificates, Series 2006-FF8 was Plaintiff, and Caryn M. Nash was Defendant, required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, on the 24TH day of February, 2010, at the hour of 2:00pm, or as soon thereafter as is possible, at 715 South Calhoun Street, Allen County Courthouse/Room 100, Fort Wayne, IN 46802, the fee simple of the whole body of Real Estate in Allen County, Indiana.

Lot Number 17 and the East Half of Lot Number 18 in Kincade's Homestead Addition to the City of Fort Wayne, as recorded in Plat Record 7, page 103.

More commonly known as 1106 Lynn Ave, Fort Wayne, IN 46805-3550

Parcel No. 02-07-36-258-003.000-074

Together with rents, issues, income and profits thereof, said sale will be made without relief from valuation or appraisement laws.

Kenneth Fries, Sheriff

MARC J. ANCEL,
Plaintiff Attorney
Attorney # 23468-49
FEIWELL & HANNOY, P.C.
251 N. Illinois Street, Suite 1700
Indianapolis, IN 46204-1944
(317) 237-2727

Wayne Township

The Sheriff's Department does not warrant the accuracy of the street address published herein.

SERVICE DIRECTED TO:
Caryn M. Nash
1106 Lynn Ave
Fort Wayne, IN 46805-3550
Service Type: Serve By Sheriff

NOTICE: FEIWELL & HANNOY, P.C. IS A DEBT COLLECTOR.
1–22–29/2–5 790224

MF351

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of Allen Circuit Court of Allen County, Indiana, in Cause No. 02C01-0904-MF-351 wherein CitiMortgage, Inc. was Plaintiff, and Harry L. Hamilton a/k/a Harry Hamilton was Defendant, required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, on the 24TH day of February, 2010, at the hour of 2:00pm, or as soon thereafter as is possible, at the Allen County Sheriff's Department, 715 South Calhoun Street, Allen County Courthouse/Room 100, Fort Wayne, IN 46802, the fee simple of the whole body of Real Estate in Allen County, Indiana.

Lot Number 29, in Parkerdale, Section A, extended, according to the plat thereof, recorded in Plat Record 21, page 140, in the Office of the Recorder of Allen County, Indiana.

More commonly known as 4522 Derome Dr, Fort Wayne, IN 46835-1536

Parcel No. 02-08-17-226-001-000-072

Together with rents, issues, income and profits thereof, said sale will be made without relief from valuation or appraisement laws.

Kenneth Fries, Sheriff

MIRANDA D. BRAY,
Plaintiff Attorney
Attorney # 23766-30-A
FEIWELL & HANNOY, P.C.
251 N. Illinois Street, Suite 1700
Indianapolis, IN 46204-1944
(317) 237-2727

St. Joseph Township

The Sheriff's Department does not warrant the accuracy of the street address published herein.

SERVICE DIRECTED TO:
Harry L. Hamilton
a/k/a Harry Hamilton
4522 Derome Dr
Fort Wayne, IN 46835-1536
Service Type: Serve By Sheriff

NOTICE: FEIWELL & HANNOY, P.C. IS A DEBT COLLECTOR.
1–22–29/2–5 790165

MF636

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of Circuit Court of Allen County, Indiana, in Cause No. 02C01-0907-MF-636 wherein Nationstar Mortgage LLC was Plaintiff, and Kevin A. Rogers and Washington Mutual Bank f/k/a North America Mortgage Company were Defendant, requiring me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, on the 24TH day of February, 2010, at the hour of 2:00pm, or as soon thereafter as is possible, at the Allen County Sheriff's Department, 715 South Calhoun Street, Allen County Courthouse/Room 100, Fort Wayne, IN 46802, the fee simple of the whole body of Real Estate in Allen County, Indiana.

THE NORTH 1/2 OF LOTS NUMBERED 6 AND 7 IN KENWOOD PARK, AN ADDITION TO THE CITY OF FORT WAYNE, ALLEN COUNTY, INDIANA

MF733

ALLEN COUNTY SHERIFF'S OFFICE TO THE OWNERS OF THE WITHIN DESCRIBED REAL ESTATE AND ALL INTERESTED PARTIES

NOTICE OF SHERIFF'S SALE

Date of Sale: March 9, 2010
Sale Location: Room 100, Courthouse, Fort Wayne, IN 46802
Publisher's Name/County: Journal Gazette - Allen County
Judgment to be Satisfied: $141,214.86

By virtue of a certified copy of a decree to me directed from the Clerk of Superior Court of Allen County, Indiana, In Cause No. 02D01-0909-MF-733

Plaintiff: GMAC Mortgage, LLC

Defendant: Freddy J. Sprankles and Karen S. Sprankles, et al.

Required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, at the hour of 2:00 P.M. of said day as listed above, at, fee simple of the whole body of Real Estate in Allen County, Indiana:

LEGAL DESCRIPTION

LOT NO. 48 IN SUNNYBROOK ACRES SECOND ADDITION IN ST. JOSEPH TOWNSHIP, ALLEN COUNTY, INDIANA, ACCORDING TO THE RECORDED PLAT THEREOF. SUBJECT TO ALL LIENS, ENCUMBRANCES AND EASEMENTS OF RECORD. PARCEL NUMBER: 020809352007000072

COMMONLY KNOWN AS: 5045 ROTHMAN ROAD, FORT WAYNE, IN 46835

Together with rents, issues, income and profits thereof, said sale will be made without relief from valuation or appraisement laws. This Notice shall also represent service of Notice of Sale of the above-described real estate upon the owners, pursuant to requirements of IC 32-29-7-3.

Kenneth C. Fries
Sheriff of Allen County

Christina M. Dells (26016-10)
Bradley C. Crosley (28224-29)
Phyllis Carmer (20070-49)
Reisenfeld & Associates, LPA LLC
(513) 322-7000

St. Joe Township
5045 Rothman Road
Fort Wayne, IN 46835

The Sheriff's Department does not warrant the accuracy of the street address published herein.
2–5–12–19 794065

MF503

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of Allen Circuit Court of Allen County, Indiana, in Cause No. 02C01-0905-MF-503 wherein JPMorgan Chase Bank, N.A. was Plaintiff, and Eric D. Pennell aka Eric David Pennell, Amanda M. Davis aka Amanda Marie Pennell, Beneficial Indiana Inc., d/b/a Beneficial Mortgage Co. and Carrington Pointe were Defendants, required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, on the 24TH day of February, 2010, at the hour of 2:00pm, or as soon thereafter as is possible, at the Allen County Sheriff's Department, 715 South Calhoun Street, Allen County Courthouse/Room 100, Fort Wayne, IN 46802, the fee simple of the whole body of Real Estate in Allen County, Indiana.

Lot Numbered 237 and 238 in Bella'r Addition, an addition to the City of Fort Wayne, according to the plat thereof, recorded in Plat Record 17, page 52, in the Office of the Recorder of Allen County, Indiana.

More commonly known as 3410 Vance Ave, Fort Wayne, IN 46805-1634

Parcel No. 02-09-32-103-001.000-072 (Lot 238)02-09-32-103-002.000-072 (Lot 237)

Together with rents, issues, income and profits thereof, said sale will be made without relief from valuation or appraisement laws.

Kenneth Fries, Sheriff

ELYSSA M. MCCARTHY,
Plaintiff Attorney
Attorney # 25352-64A
FEIWELL & HANNOY, P.C.
251 N. Illinois Street, Suite 1700
Indianapolis, IN 46204-1944
(317) 237-2727

St. Joseph Township

The Sheriff's Department does not warrant the accuracy of the street address published herein.

SERVICE DIRECTED TO:
Eric D. Pennell
aka Eric David Pennell
3410 Vance Ave
Fort Wayne, IN 46805-1634
Service Type: Serve By Sheriff

Amanda M. Davis
aka Amanda Marie Pennell
3410 Vance Ave
Fort Wayne, IN 46805-1634
Service Type: Serve By Sheriff

NOTICE: FEIWELL & HANNOY, P.C. IS A DEBT COLLECTOR.
1–22–29/2–5 790167

MF13

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of Allen Circuit Court of Allen County, Indiana, in Cause No. 02C01-0901-MF-13 wherein Countrywide Home Loans Servicing, L.P. was Plaintiff, and Kathleen Coleman, US Bank National Association, as Trustee for MASTR Asset Backed Securities Trust, 2006-HE2 and Summit Account & Computer were Defendants, required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, on the 24TH day of February, 2010, at the hour of 2:00pm, or as soon thereafter as is possible, at the Allen County Sheriff's Department, 715 South Calhoun Street, Allen County Courthouse/Room 100, Fort Wayne, IN 46802, the fee simple of the whole body of Real Estate in Allen County, Indiana.

Lot 92 Camelot, Section II, a Subdivision in the West half of the Northwest Quarter of Section 28, Township 31 North, Range 13 East as recorded in Plat Record 30, pages 134 and 135.

NOTICE OF DECISION TO ENTER INTO LEASE AND EXECUTION OF LEASE

Pursuant to action taken on January 4, 2010, a Lease with the New Haven-Adams Township Park Facilities Corporation in the form submitted at said meeting was authorized and approved by the Park and Recreation Board of the City of New Haven Park District (the "Board"). The Lease in said form has now been executed on behalf of the Board.

Dated this 2nd day of February, 2010.

PARK AND RECREATION BOARD OF THE CITY OF NEW HAVEN, INDIANA
2–5–12 793944

NOTICE OF PUBLIC MEETINGS REGARDING FORT WAYNE'S USE ATTAINABILITY ANALYSIS (UAA) FOR CSO-IMPACTED WATERS

NOTICE IS HEREBY GIVEN THAT FORT WAYNE CITY UTILITIES WILL CONDUCT PUBLIC MEETINGS ON WEDNESDAY, FEBRUARY 17, 2010, AT 1:00 P.M. (LOCAL TIME) AT THE INDIANA INSTITUTE OF TECHNOLOGY ANDORFER COMMONS, 1600 EAST WASHINGTON BOULEVARD, FORT WAYNE, INDIANA AND ON WEDNESDAY, FEBRUARY 17, 2010, AT 6:30 PM (LOCAL TIME) IN THE PRESENTATION ROOM AT WOODLAN JUNIOR/SENIOR HIGH SCHOOL, 17215 WOODBURN ROAD, WOODBURN, INDIANA, CONCERNING FORT WAYNE'S PROPOSED SUBMITTAL OF A USE ATTAINABILITY ANALYSIS TO THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY TO SUPPORT THE PROPOSED REVISION OF USE DESIGNATION FOR THOSE WATERWAYS AFFECTED BY THE CITY'S CSO DISCHARGES TO A CSO WET WEATHER LIMITED USE DESIGNATION PURSUANT TO STATE AND FEDERAL LAW.

AN EXPLANATION OF THE UAA DOCUMENT WILL BE PROVIDED AND PUBLIC QUESTIONS OR COMMENT WILL BE ACCEPTED. COMMENTS MAY ALSO BE SUBMITTED BY MARCH 17, 2010 TO: FORT WAYNE CITY UTILITIES, ONE EAST MAIN STREET, ROOM 280, FORT WAYNE, INDIANA 46802 AND THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, C/O TODD TRINKLE, WET WEATHER SECTION, MC 65-42 IGCN 1255, 100 N. SENATE AVENUE, INDIANAPOLIS, IN 46204-2251.

THE DOCUMENT IS AVAILABLE FOR REVIEW IN THE OFFICE OF THE FORT WAYNE BOARD OF PUBLIC WORKS, FROM 8:30 A.M. UNTIL 4:45 P.M., MONDAY THROUGH FRIDAY AT ONE EAST MAIN STREET, ROOM 420, FORT WAYNE, INDIANA.

"REASONABLE ACCOMMODATION" FOR PERSONS WITH A KNOWN DISABLING CONDITION WILL BE CONSIDERED IN ACCORDANCE WITH STATE AND FEDERAL LAW. ANY PERSON NEEDING A "REASONABLE ACCOMMODATION" SHALL NOTIFY FORT WAYNE CITY UTILITIES AT (260) 427-1381, TTY (260) 427-1359, AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING.

KUMAR MENON DIRECTOR OF FORT WAYNE CITY UTILITIES
2–5–12 793547

MF495

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of Allen Circuit Court of Allen County, Indiana, in Cause No. 02C01-0905-MF-495 wherein Bank of America, N.A. successor by merger to LaSalle Bank, N.A. was Plaintiff, and Kenneth Harley, Sandap T. Harley a/k/a Sandap Harley, Melanie Rodgel, Mortgage Electronic Registration Systems, Inc. as nominee for GreenPoint Mortgage Funding, Inc. and City of Fort Wayne Neighborhood Code Enforcement were Defendants, required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, on the 24TH day of February, 2010, at the hour of 2:00pm, or as soon thereafter as is possible, at the Allen County Sheriff's Department, 715 South Calhoun Street, Allen County Courthouse/Room 100, Fort Wayne, IN 46802, the fee simple of the whole body of Real Estate in Allen County, Indiana.

THE LAND REFERRED TO IN THIS COMMITMENT IS SITUATED IN THE COUNTY OF ALLEN, STATE OF INDIANA, AND DESCRIBED AS FOLLOWS: LOTS NUMBERED 33 AND 34 IN BRANDRIFF AND MINER'S ADDITION TO SOUTH WAYNE, NOW IN THE CITY OF FORT WAYNE, AS RECORDED IN DEED RECORD 103, PAGES 624-625.

More commonly known as 919 Lincoln Ave, Fort Wayne, IN 46807-1145

Parcel No. 02-12-14-101-014.000-074

Together with rents, issues, income and profits thereof, said sale will be made without relief from valuation or appraisement laws.

Kenneth Fries, Sheriff

ADRIENNE M. HENNING,
Plaintiff Attorney
Attorney # 26839-49
FEIWELL & HANNOY, P.C.
251 N. Illinois Street, Suite 1700
Indianapolis, IN 46204-1944
(317) 237-2727

Wayne Township

The Sheriff's Department does not warrant the accuracy of the street address published herein.

SERVICE DIRECTED TO:
Kenneth Harley
1935 W Imperial Hwy
Los Angeles, CA 90047-5023
Service Type: Serve By Certified Mail

Sandap T. Harley
a/k/a Sandap Harley
1935 W Imperial Hwy
Los Angeles, CA 90047-5023
Service Type: Serve By Certified Mail

NOTICE: FEIWELL & HANNOY, P.C. IS A DEBT COLLECTOR.
1–22–29/2–5 790170

MF776

ALLEN COUNTY SHERIFF'S OFFICE TO THE OWNERS OF THE WITHIN DESCRIBED REAL ESTATE AND ALL INTERESTED PARTIES

NOTICE OF SHERIFF'S SALE

Date of Sale: March 9, 2010
Sale Location: Room 100, Courthouse, Fort Wayne, IN 46802
Publisher's Name/County: Journal Gazette - Allen County
Judgment to be Satisfied: $71,732.62

By virtue of a certified copy of a decree to me directed from the Clerk of Superior Court of Allen County, Indiana, in Cause No. 02C01-0805-MF-776

Plaintiff: Countrywide Home Loans, Inc.

Defendant: Antonia M. Dickerhoff and Michael D. Dickerhoff, et al.

Required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, at the hour of 2:00 P.M. of said day as listed above, at, fee simple of the whole body of Real Estate in Allen County, Indiana:

LEGAL DESCRIPTION

LOT NUMBER 31 IN VIOLET COURT ADDITION, AS RECORDED IN PLAT RECORD 8, PAGE 34, IN THE OFFICE OF THE RECORDER OF ALLEN COUNTY, INDIANA. SUBJECT TO EASEMENTS, COVENANTS, AND RESTRICTIONS OF RECORD. PARCEL NUMBER: 02.12.14.184-007.000-074

COMMONLY KNOWN AS: 439 VIOLET COURT, FT WAYNE, IN 46807

Required me to make the sum as provided for in said Decree with interest and cost, I will expose at public sale to the highest bidder, at the hour of 2:00 P.M. of said day as listed above, at, fee simple of the whole body of Real Estate in Allen County, Indiana:

Together with rents, issues, income and profits thereof, said sale will be made without relief from valuation or appraisement laws. This Notice shall also represent service of Notice of Sale of the above-described real estate upon the owners, pursuant to requirements of IC 32-29-7-3.

Kenneth C. Fries
Sheriff of Allen County

Christina M. Dells (26016-10)
Bradley C. Crosley (28224-29)
Phyllis Carmer (20070-49)
Reisenfeld & Associates, LPA LLC
(513) 322-7000

Wayne Township
439 Violet Court
Ft Wayne, IN 46807

The Sheriff's Department does not warrant the accuracy of the street address published herein.
2–5–12–19 794057

MF1305

NOTICE OF SHERIFF'S SALE

By virtue of a certified copy of a decree to me directed from the Clerk of the Circuit Court of Allen County, Indiana, in Cause No. 02C01-080[illegible] MF-1305, wherein BAC Home Loans Servicing, L.P. f/k/a Countrywide Home Loans Servicing, L.P. was Plaintiff, and Mohamed Bashir and Deutsche Bank National Trust, were the Defendants, requiring me to make the sum as provided for in said Decree with interest and costs, I will expose at public sale to the highest bidder, on the 9th day of March 2010, at 2:00 P.M. of said day, at the 100 Courthouse, 715 South Calhoun Street, Fort Wayne, IN 4680[illegible] 1893, the fee simple of the whole body of Real Estate in Allen County, Indiana:

Lot Number 29 in C. K. Fairfields Addition, an addition to the City of Fort Wayne, according to the plat thereof recorded in Deed Record 52, page 166, in the Office of the Recorder of Allen County, Indiana and commonly known as: 827 West Dewald Street, Fort Wayne, IN 46802. Parcel No. 02-12-11-310-005.000-074

Subject to all easements and restrictions of record not otherwise extinguished in the proceedings known as Cause # 02C01-0809-MF-1305 in the Circuit Court of the County of Allen Indiana, and subject to all real estate taxes, and assessments currently due, delinquent or which are to become a lien.

Said sale will be made without relief from valuation or appraisement laws. If the sale is set aside for any reason, the Purchaser at the sale shall be entitled only to a return of the deposit paid. The Purchaser shall have no further recourse against the Mortgagor, the Mortgagee, or the Mortgagee's Attorney.

Kenneth C. Fries
Allen County Sheriff

Craig D. Doyle (4783-49)
James L. Shoemaker (19562-49)
S. Brent Potter (10900-49)
Mark R. Galliher (8319-49)
Christina M. Bruno (27324-49)
Rayanna Alexander Binder 24776-4[illegible]
Jeffery R. Hoyn (27824-50)
Susan B. Klineman (17405-49)
DOYLE LEGAL CORPORATION, P.C.
41 E Washington St., Suite 400
Indianapolis, IN 46204
Telephone (317) 264-5000
Facsimile (317) 264-5400

Wayne Township
827 W. Dewald Street
Fort Wayne, IN 46802

SHERIFF PLEASE SERVE:
Occupant(s) of
827 West Dewald Street,
Fort Wayne, IN 46802
MANNER OF SERVICE: Sheriff

Mohamed Bashir
2024 Black Bear Drive
Fort Wayne, IN 46808
MANNER OF SERVICE: Sheriff
2–5–12–19 79407

ANNUAL FINANCIAL REPORT - INDIANA TOWNSHIPS
TOWNSHIP FORM 15 (REVISED 2009)
TOWNSHIP: Washington Township
COUNTY: Allen

PART 1 - STATEMENT OF RECEIPTS, DISBURSEMENTS, CASH BALANCES AND INVESTMENT BALANCES FOR THE YEAR ENDING 2009

FUNDS	Code	A Cash Balance at January 1, 2009	B Receipts	C Disbursements	D Cash Balance at December 31, 2009
Township	0101	67,249.56	91,550.83	60,369.57	98,430.82
Township Assistance	0840	110,193.57	111,318.17	122,945.65	98,566.09
Fire Fighting	1111	77,716.69	114,103.45	124,574.11	67,246.02
Cumulative Fire	1190	391,919.85	49,120.32	976.00	440,064.17
Park and Recreation	1301	13,776.49	5,062.55	3,753.83	15,085.21
Levy Excess	0108		4,065.00	4,065.00	0.00
Rainy Day	0061	981.24	2,263.68	0.00	3,244.92
EMS	1101	77,490.89	81,409.33	84,867.73	74,032.49
EMS Equipment	1102	15,110.12	5,458.33	3,199.58	17,368.87
Subtotals Cash		754,438.40	454,351.65	404,751.47	814,038.59
Transfers			Transfers In	Transfers Out	
			8,130.00	8,130.00	
Subtotals Transfers			8,130.00	8,130.00	
Investments		Investment Balance at January 1, 2009	Investments Purchased	Investments Sold	Investment Balance at December 31, 2009
		0.00	0.00	0.00	0.00
Subtotals Investments			0.00	0.00	0.00
Subtotal Cash and Investments		754,438.40	456,221.65	398,621.47	814,038.59
Grand Total Cash and Investments		754,438.40	456,221.65	398,621.47	814,038.59

PART 2 - RECEIPTS FOR THE YEAR ENDING 2009

	Code	Township Fund 101	Township Assistance Fund 0840	Fire Fighting Fund 1111	Cumulative Fire Fund 1190	Park and Recreation Fund 1301	Levy Excess Fund 0108	Rainy Day 0061	EMS FUND 1101	EMS Equip FUND 1102
General Property Taxes	0100	74,725.70	101,009.09	47,604.65	40,962.14	4,698.08			55,477.26	4,551.54
Financial Institution Tax	0201	98.00	131.00	101.00	87.00	6.00			118.00	10.00
Auto and Aircraft Excise Tax	0202	3,747.69	5,035.94	9,232.01	7,986.84	234.23			10,817.01	857.42
County Option Income Tax (COIT)	0212			46,992.75						
Commercial Vehicle Excise Tax (CVET)	0217	1,587.74	2,671.02	98.04	84.24	124.24			114.25	9.37
Interest Earned	6100	4,508.50								
Special State Distributions	1514							2,263.68		
Emergency Medical Service Fees	2504								14,832.81	
Refunds	5400	101.00	2,471.12							
Transfer of Funds	5204			4,065.00			4,065.00			
Miscellaneous Receipts	6500	6,382.20		5,960.00						
Total Receipts		91,550.83	111,318.17	114,103.45	49,120.32	5,052.55	4,065.00	2,263.68	81,409.33	5,458.33

PART 3B - DETAIL OF DISBURSEMENTS FOR THE YEAR ENDING 2009

TOWNSHIP FUND

To Whom Paid	Gross Amount
Personal Services:	
Robert E Arnold	15,000.00
Abner Crosby	4,500.00
Indiana Dept of Workforce	932.05
James Lefever	4,500.00
Liberty Mutual Ins Group	1,013.00
Susan M Richards	672.50
Douglas R Roderbeck	4,500.00
Tower Bank	2,231.66
Total Personal Services	33,349.21
Supplies:	
A/M Mail Center	129.00
Rex Bowlin	12.78
Boyce Forms	90.13
C&C Distributors, Inc	32.28
Janitor's Supply Co.	220.00
Lowe's	115.76
Meijer Store #124	130.00
Office Depot	222.24
White Swan Hardware	7.28
Tower Bank	54.00
Total Supplies	1,013.47
Other Services and Charges:	
Allen County Township Trustees Assoc	60.00
I&M Power	535.99
Board of Commissioners of Allen County	305.24
Capstone Ins Group	2,600.50
City Utilities	956.73
Fort Wayne Newspapers	863.34
Heck's Lawn Service	4,016.00
Indiana Township Assoc	755.00
Liberty Mutual Ins Group	4,077.00
Lowe's	44.75
Don Mourey	160.00
NIPSCO	473.75
Sheraton Indianapolis	327.00
Till Lawn Care, LLC	90.00
Treasurer of Allen (Ditch Tax)	10.20
Verizon Wireless	153.60
Waste Management of Indiana	1,390.10
Total Other Services and Charges	16,860.60
Capital Outlays:	
All Weather Exteriors, Inc	7,846.59
Lowe's	1,299.70
Total Capital Outlay	9,146.29

TOWNSHIP ASSISTANCE FUND - Con't

To Whom Paid	Gross Amount
Medical, Hospital and Burial Assistance:	
Covington Memorial Gardens	375.00
Greenlawn Memorial Park and Mausoleum	375.00
Highland Park Cemetery	375.00
Klaehn, Fahl, & Melton Funeral Home	975.00
D.O. McComb & Sons	850.00
Meijer Pharmacy #124	516.14
Northern Indiana Crematory Corp	125.00
C M Sloan & Sons Funeral Home	140.00
Walmart Pharmacy 10-430	1,733.46
Total Medical, Hospital and Burial Assistance	5,489.60
Other Direct Assistance:	
America Best Value Inn	399.52
Bank of America	557.39
Brandy Chase Apartments	1,350.00
Cambridge Square Apartments	5,071.00
Carrington Pointe	6,973.66
City Utilities	412.82
Coldwater Crossing Apartments	2,159.00
Janice Deck	1,050.00
John Eby	550.00
Edgewood Estates	1,194.00
Fuhr Enterprises	61.00
Gardenview Apartments	5,638.00
Glenbrook MHP	575.00
Gene Glick	2,980.00
John Hartman	829.00
I&M	7,498.43
Chris Jones	505.00
Kaufmann Property Management	2,044.74
Knotty Pine Motel	5,950.00
David Marvar	1,550.00
Meyer & Son Trailer Village	4,750.00
Sharon Nagley	1,050.00
NIPSCO	1,580.20
Northeastern REMC	465.31
Orchard Place Apts	7,384.38
Pleasant Village MHC	175.00

EMS FUND

To Whom Paid	Gross Amount
Personal Services:	
Chad Andorfer	2,290.50
Nathan Beeson	11,693.88
Rex Bowlin	9,437.73
Brateman's, Inc	109.98
Ryan Breeden	550.00
Ryan Breeden	3,514.50
Mark Hasdenschild II	4,018.38
Richard Hutson	110.00
Terry Masters	15,678.63
Bruce McBride	117.00
Mike Perry	4,683.75
Timothy Schnitz	4,592.50
Jacob Schroeder	1,501.50
Tim Schweitzer	3,272.50
Andrew Schick	550.00
Andrew Schick	3,658.39
Tower Bank	4,982.11
Total Personal Services	70,766.35
Supplies:	
A/M Mail Center #151	43.24
Batteries Plus	89.58
BP – Amoco Fuel	1,030.87
Brateman's, Inc	259.97
Life Star Rescue, Inc	460.55
Novak Supply Co., Inc	239.65
Office Depot	31.97
Verizon Wireless	164.25
Washington Township Vol Fire Dept	6,000.00
Welder Services, Inc	356.40
Total Supplies	8,736.88
Medical Supplies:	
Allied 100, LLC	55.41
Bound Tree Medical, LLC	2,436.45
Chomping Bale Co., Inc	79.95
Emergency Medical Products, Inc	339.59
Welder Services, Inc	431.70
Total Medical Supplies	3,396.50
Transfer of Funds	
Transfer to Levy Excess	1,958.00
Total Transfers	1,958.00
Total EMS Fund	84,867.73

FIRE FIGHTING FUND

To Whom Paid	Gross Amount
Personal Services:	
Chad Andorfer	270.00

FIRE FIGHTING FUND - Con't

To Whom Paid	Gross Amount
Aqua Blast	165.69
Aqua Systems	220.20
Barney's Auto Electric Service, Inc	463.46
Batteries Plus	243.71
BP – Amoco Fuel	4,593.80
Bruce McBride	453.78
C&C Distributors, Inc	323.62
Clarke Detroit Diesel-Allison	4,932.17
Craft Laboratories, Inc	146.90
D G Bojrab & Sons	1,812.53
Dimension Ford Lincoln Mercury	711.16
Emergency Radio Service	1,080.51
Fenner's Engine repair	155.70
Fire Apparatus & Supply Team	52.76
Geneva Parts Company	649.78
Global Emergency Products	51.69
Heuser Automotive	505.40
Jasper's Supply Co., Inc	54.00
Koorsen Fire & Security, Inc	175.68
Lowe's	822.85
McMahon Tire, Inc	1,829.18
Mil Supplies	12.00
Moore's Welding Service, Inc	337.50
Mutton Outdoor Power Equip	19.78
Novak Supply Co., Inc	2,991.83
Office Depot	941.10
Office Equipment Finance Services	812.48
Perry Corporation	213.34
Power Components Corp	271.26
Rex Bowlin	119.85
Steve Hosler	39.74
Steven E Jenkins Company, Inc	47.99
Task Force Tips, Inc	492.00
Terry Masters	97.00
Towers Fire Apparatus	2,211.85
Truck Maintenance, Inc	725.16
W W Grainger, Inc	10.59
White Swan Hardware	241.99
Total Supplies:	30,450.54
Other Services & Charges:	
ACS	625.00
A/M Mail Center #151	167.74
I&M	4,849.41
Aqua Systems	531.65

FIRE FIGHTING FUND - Con't

To Whom Paid	Gross Amount
Mini Warmer	172.0
National Fire Protection Assoc	150.0
NIPSCO	5,575.5
Pro Air Inc	550.0
Rich Sellers	64.5
Rob Tucker	86.0
Ryan Smith	172.0
Sunset Printing & Advertising Spec, Co	159.4
Tom Doyle	64.5
Tom Rotering	86.0
Underwriters Laboratories, Inc	3,630.0
Van Andel Propane	116.3
Verizon Wireless	363.3
Washington Township Vol Fire Dept	6,000.0
Total Other Services and Charges	53,227.9
Capital Outlays	
All-Weather Exteriors, Inc	3,917.4
Emergency Radio Service	4,113.0
MSI Supplies	462.5
Total Capital Outlays	8,492.9
Transfers/Transfer to Excess Levy	1,095.0
Total Transfers	1,095.0
Total Fire Fighting Fund	124,574.1

CUMULATIVE FIRE FUND

To Whom Paid	Gross Amount
Transfers:	
Transfer to Excess Levy Fund	976.0
Total Transfers	976.0
Total Cumulative Fire Fund	976.0

EMS EQUIPMENT FUND

To Whom Paid	Gross Amount
Capital outlays:	
Zoll Medical Corporation GPO	3,173.5
Total Capital Outlays	3,173.5
Transfers:	
Transfer to Excess Levy Fund	26.0
Total Transfers	26.0
Total EMS Equipment Fund	3,199.5

RECREATION FUND

To Whom Paid	Gross Amount
Other Services and Charges	
I&M	2,155.6

FORT WAYNE NEWSPAPERS

600 West Main Street - P.O. Box 100
Fort Wayne, IN 46801-0100
Agent: News Publishing Co. Journal-Gazette Co.

MAKE CHECKS PAYABLE TO:
Fort Wayne Newspapers, Inc.

LEGAL INVOICE

Account #	Statement Date
1065830	2/18/2010

Terms: Upon Receipt

City Utilities
1 E Main Street Room 280
Fort Wayne IN 46802

ORDER NO.	BALANCE
0000793547	$78.82

AMT DUE $78.82

AMOUNT PAID 78.82

CHECK NO.

Please Return Top Portion With Payment

PUBLICATION OF LEGAL NOTICES

DATE	ORDER NUMBER	DESCRIPTION	LINES 6 PT.	RATE	COST
:/5/10-2/12/10	0000793547	Journal Gazette USE ATTAINABILITY ANALYSIS	71	0.555	$39.41
:/5/10-2/12/10	0000793547	News-Sentinel USE ATTAINABILITY ANALYSIS	71	0.555	$39.41

57457405 5332

CUSTOMER ACCOUNT # 1065830

$78.82 TOTAL AMT DUE

City Utilities
2/12/2010

09080633

BILLING QUESTIONS OR TO PLACE A LEGAL AD, PLEASE CALL (260) 461-8246

LEGAL INVOICE

NOTICE OF PUBLIC MEETINGS REGARDING FORT WAYNE'S USE ATTAINABILITY ANALYSIS (UAA) FOR CSO-IMPACTED WATERS

NOTICE IS HEREBY GIVEN THAT FORT WAYNE CITY UTILITIES WILL CONDUCT PUBLIC MEETINGS ON WEDNESDAY, FEBRUARY 17, 2010, AT 1:00 P.M. (LOCAL TIME) AT THE INDIANA INSTITUTE OF TECHNOLOGY ANDORFER COMMONS, 1600 EAST WASHINGTON BOULEVARD, FORT WAYNE, INDIANA AND ON WEDNESDAY, FEBRUARY 17, 2010, AT 6:30 PM (LOCAL TIME) IN THE PRESENTATION ROOM AT WOODLAN JUNIOR/SENIOR HIGH SCHOOL 17215 WOODBURN ROAD, WOODBURN, INDIANA, CONCERNING FORT WAYNE'S PROPOSED SUBMITTAL OF A USE ATTAINABILITY ANALYSIS TO THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY TO SUPPORT THE PROPOSED REVISION OF USE DESIGNATION FOR THOSE WATERWAYS AFFECTED BY THE CITY'S CSO DISCHARGES TO A CSO WET WEATHER LIMITED USE DESIGNATION PURSUANT TO STATE AND FEDERAL LAW.

AN EXPLANATION OF THE UAA DOCUMENT WILL BE PROVIDED AND PUBLIC QUESTIONS OR COMMENT WILL BE ACCEPTED. COMMENTS MAY ALSO BE SUBMITTED BY MARCH 17, 2010 TO: FORT WAYNE CITY UTILITIES, ONE EAST MAIN STREET, ROOM 280, FORT WAYNE, INDIANA 46802 AND THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, C/O TODD TRINKLE, WET WEATHER SECTION, MC 65-42 IGCN 1255, 100 N. SENATE AVENUE, INDIANAPOLIS, IN 46204-2251.

THE DOCUMENT IS AVAILABLE FOR REVIEW IN THE OFFICE OF THE FORT WAYNE BOARD OF PUBLIC WORKS, FROM 8:30 A.M. UNTIL 4:45 P.M., MONDAY THROUGH FRIDAY AT ONE EAST MAIN STREET, ROOM 420, FORT WAYNE, INDIANA.

"REASONABLE ACCOMMODATION" FOR PERSONS WITH A KNOWN DISABLING CONDITION WILL BE CONSIDERED IN ACCORDANCE WITH STATE AND FEDERAL LAW. ANY PERSON NEEDING A "REASONABLE ACCOMMODATION" SHALL NOTIFY FORT WAYNE CITY UTILITIES AT (260) 427-1381, TTY (260) 427-1359, AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING.

KUMAR MENON DIRECTOR OF
FORT WAYNE CITY UTILITIES
2--5--12 793547.

Prescribed by State Board of Accounts

General Form No. 99P
(Rev. 2009A)

The News-Sentinel

Account # 1065830 - 793547
City Utilities

Allen County, Indiana

ATTACH COPY OF ADVERTISEMENT HERE

PUBLISHER'S CLAIM

LINE COUNT

Display Master (Must not exceed two actual lines, neither of which shall total more than four solid lines of the type in which the body of the advertisement is set) -- number of equivalent lines	
Head -- number of lines	
Body -- number of lines	
Tail -- number of lines	
Total number of lines in notice	71

COMPUTATION OF CHARGES

71 lines, 1 column(s) wide equals	
71 equivalent lines at $ 0.555 cents per line	$ 39.41
Additional charges for notices containing rule or tabular work (50 per cent of above amount)	-
Charge for extra proofs of publication ($1.00 for each proof in excess of two)	-
TOTAL AMOUNT OF CLAIM	$ 39.41

DATA FOR COMPUTING COST

Width of single column in picas . . . . 9.8 Size of type . . . . 7point.
Number of Insertions 2

Pursuant to the provisions and penalties of IC 5-11-10-1, I hereby certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid.

I also certify that the printed matter attached hereto is a true copy, of the same column width and type size, which was duly published in said paper 2 times.

The dates of publication being as follows:

2/5/2010 2/12/2010

Additionally, Newspaper has a Web site and this public notice was posted on the same day as it was published in The News-Sentinel.

T. Brown-Smith
Legal Clerk

Date: February 12, 2010

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Legal Clerk

Date: February 12, 2010

INVOICE

FROST Illustrated

Award Winning Weekly News Authority

3121 S. CALHOUN ST. • FORT WAYNE, IN 46807 • 219/745-0552

DATE 2/10/10

City of Fort Wayne
Utilities Administration
One Main Street, Room 280
Fort Wayne, IN 46802

DATE	CHARGES and CREDITS	
2/10/10	Legal Notice-Notice of Public Meeting	$ 145.13
	Total Amount Due	**$ 145.13**

Finance charge after 30 days: 1½% monthly, annual percentage rate, 18% per annum.

RECEIVED
FEB 1 0 2010
City Utilities
Administration

57457403 5332 [illegible] 5332

FROST ILLUSTRATED®

Fort Wayne's Leading Independent Weekly

3121 South Calhoun Street • Fort Wayne, Indiana 46807 • (260) 745-0552

PROOF OF PUBLICATION

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KUMAR MENON
DIRECTOR OF FORT WAYNE CITY UTILITIES

2/10/10

DIANA)
) SS:
ALLEN)

February 9, 2010

ired before the undersigned Edna Smith

n according to law, says that she is

anager of Frost Illustrated, a weekly

neral circulation, printed and published in

state, and that the notice herewith attached

n said paper for one (1) time.

Edna M. Smith Publisher

sworn to before me this 9th

uary, 2010.

W. Smith
Notary Public

My Commission Expires:

August 12, 2014

RECEIVED
FEB 18 2010
City Utilities
Administration

Proof of Publication

The Defiance Publishing Company L.L.C.
624 West Second Street
Defiance, Ohio 43512
Phone: (419) 784-5441
Fax: (419) 784-1492

I, Patti Hinojosa, being first duly sworn, depose and say that I am Advertising Clerk of THE CRESCENT-NEWS (FED. ID 34-1842326) a newspaper printed and published in the city of Defiance, and of general circulation in the County of Defiance, State of Ohio, and have personal knowledge of the facts herein stated and that the notice hereto annexed was published in said newspaper for 2 insertions on the same day of the week from and after the 5th day of February, 2010 and that the fees charged are legal.

Patti Hinojosa

Name of Account: City of Fort Wayne Utilities Administration
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No. of Lines: 45

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Sworn to and subscribed before this 12th day of February, 2010.

Linda J. Ricker
Notary Public
Commission Expires September 17, 2012

NOTARIAL SEAL
STATE OF OHIO

LINDA J. RICKER
Notary Public
In and for the State of Ohio
My Commission Expires
September 17, 2012

5 Legals

NOTICE OF PUBLIC MEETINGS
REGARDING FORT WAYNE'S USE ATTAINABILITY ANALYSIS
(UAA) FOR CSO-IMPACTED WATERS

NOTICE IS HEREBY GIVEN THAT FORT WAYNE CITY UTILITIES WILL CONDUCT PUBLIC MEETINGS ON WEDNESDAY, FEBRUARY 17, 2010, AT 1:00 P.M. (LOCAL TIME) AT THE INDIANA INSTITUTE OF TECHNOLOGY, ANDORFER COMMONS, 1600 EAST WASHINGTON BOULEVARD, FORT WAYNE, INDIANA, AND ON WEDNESDAY, FEBRUARY 17, 2010, AT 5:30 P.M. (LOCAL TIME) IN THE PRESENTATION ROOM AT WOODLAN JUNIOR/SENIOR HIGH SCHOOL, 17215 WOODBURN ROAD, WOODBURN, INDIANA, CONCERNING FORT WAYNE'S PROPOSED SUBMITTAL OF A USE ATTAINABILITY ANALYSIS TO THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY TO SUPPORT THE PROPOSED REVISION OF USE DESIGNATION FOR THOSE WATERWAYS AFFECTED BY THE CITY'S CSO DISCHARGES TO A CSO WET WEATHER LIMITED USE DESIGNATION PURSUANT TO STATE AND FEDERAL LAW.

AN EXPLANATION OF THE UAA DOCUMENT WILL BE PROVIDED AND PUBLIC QUESTIONS OR COMMENTS WILL BE ACCEPTED. COMMENTS MAY ALSO BE SUBMITTED BY MARCH 17, 2010 TO: FORT WAYNE CITY UTILITIES, ONE EAST MAIN STREET, ROOM 280, FORT WAYNE, INDIANA 46802; AND THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, C/O: TODD TRINKLE, WET WEATHER SECTION, MC 65-42 IGCN 1255, 100 N. SENATE AVENUE, INDIANAPOLIS, IN 46204-2251.

THE DOCUMENT IS AVAILABLE FOR REVIEW IN THE OFFICE OF THE FORT WAYNE BOARD OF PUBLIC WORKS, FROM 8:30 A.M. UNTIL 4:45 P.M., MONDAY THROUGH FRIDAY, AT ONE EAST MAIN STREET, ROOM 420, FORT WAYNE, INDIANA.

"REASONABLE ACCOMMODATION" FOR PERSONS WITH A KNOWN DISABLING CONDITION WILL BE CONSIDERED IN ACCORDANCE WITH STATE AND FEDERAL LAW. ANY PERSON NEEDING A "REASONABLE ACCOMMODATION" SHALL NOTIFY FORT WAYNE CITY UTILITIES AT (260) 427-1381, TTY (260) 427-1359, AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING.

KUMAR MENON
DIRECTOR OF FORT WAYNE CITY UTILITIES

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Meetings to talk sewer overflow

City will explain Use Attainability Analysis.

From staff reports

The city of Fort Wayne will hold two public meetings as part of its process to be in compliance with regulations regarding combined sewer overflows.

The city must submit a Use Attainability Analysis to the Environmental Protection Agency and Indiana Department of Environmental Management.

The city will explain the analysis at these meetings:

◈ 1 p.m. Wednesday in Room 205 in Andorfer Commons, Indiana Tech, 1600 E. Washington Blvd. Enter from the parking lot on the north side of the building.

◈ 6:30 p.m. Wednesday in the presentation room at Woodlan Junior-Senior High School, 17215 Woodburn Road. Enter through Door 6.

Written comments may be submitted by March 17 to:

◈ Fort Wayne City Utilities, Room 280, 1 E. Main St., Fort Wayne, IN 46802

◈ Indiana Department of Environmental Management, C/O Todd Trinkle, Wet Weather Section, MC 65-42 IGCN 1255, 100 N. Senate Ave., Indianapolis, IN 46204-2251.

Fort Wayne has many old sewer lines that carry both sewage and rainwater. During heavy downpours, excess sewago and water will go into the rivers.

The analysis is available for review 8:30 a.m.-4:45 p.m. Monday-Friday at the Fort Wayne Board of Public Works, Room 420, 1 E. Main St.

Briefs

Man's body found

A man's body was found outside in the 1300 block of East State Boulevard early Sunday morning, and the incident is under investigation by the Fort Wayne Police Department.

Allen County Deputy Coroner Becky Stuttle said today that the body is that of a white male in his late 20s to early 30s. No foul play is suspected. A

moro, including meals, drinks and tickets to events. The current threshold is $100.

The Senate bill has similar provisions, and legislative leaders say they're confident that any differences in the bills can be worked out.

New street signs in Bloomington

BLOOMINGTON — A new breed of street signs could make Bloomin

SACS

Continued from Page 1A

that we raised for hearing, and she ordered remedies for those, including the use of outside individuals to come in and show the district how to do what the law requires them to do," Carol Laughlin said.

The hearing officer said the school failed to evaluate Matt in a timely manner, that staff did not know when to properly refer him for an evaluation, and that the staff's "inaccurate beliefs and lack of awareness" delayed Matt access to the "emotionally distressed" program by at least a month, among other violations, according to documentation provided by the family.

"Taken together, the delays in evaluating the student, failure to respond to the mother's request to look at areas in addition (to the 'emotionally distressed' program) and the lack of critical information in a functional behavioral assessment effectively denied the student a free appropriate public education," the hearing officer said in her report.

The report did support the school in some areas, such as properly updating the parents on Matt's progress.

In June, even before due process began, the Laughlins enrolled Matt in Stone Mountain School, a residential program in North Carolina, because they did not feel his needs were being met at Summit. In the residential program, Matt is able to work at his own pace and one-on-one with an instructor, which was not happening on a regular basis at Summit.

While Carol Laughlin says Matt has improved immensely in the residential pro-

gram, stude stopp neede "Wi ately behav proper ior-im school' sonabl the str ate pu hearin So n Carc will st progra semest ficer s conduc for its partme Laughl lated th treatm the due "We the hea cated u

IRAN

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producing weapons of mass destruction.

The Revolutionary Guard has long been a pillar of Iran's regime as a force separate from the ordinary armed forces. The Guard now has a hand in every critical area, including missile development, oil resources, dam building, road construction, telecommunications and nuclear technology.

It also has absorbed the paramilitary Basij as a full-fledged part of its command structure — giving the militia greater funding and a stronger presence in Iran's internal politics.

Asked if the U.S. is planning a military attack on

Iran, Cl U.S. is f ternatio tions "th ly aimed controll ary Gua is in eff governm said.

The C tion is tr sage to messag open to that we while ye program threaten even bey

Later civilian preoccup

COUNTY

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can get the right project," said Brown, who acknowledged that the county, over time, would pay a premium of roughly 8 percent to get its hands on the $38 million. "That (expense) would have to be offset by economic growth," he added.

leaseback idea currently "makes no sense for the county at any level."

Cash-strapped private companies often sign such deals, she said, to raise money while gaining tax advantages. But the county pays no taxes and doesn't need the money, she said, with a surplus of about $8 million in its general fund and another $18 million in

Col

INDIANA TECH

Welcomes

City of Fort Wayne Public Meeting

Rm 205

(upstairs)

Tech Treasures Gift Shop and **Recreation Center** located in ***Lower Level.***

Hours: 10:00am -1:00pm

Cinema Center @IndianaTech located in Magee O'Connor Theater on ***Main Level***

Restrooms on each level left of elevator and **vending machines** on *Lower Level.*

For additional assistance please visit Student Life, Room 146 on *Main Level.*

Public Meeting on Fort Wayne Use Attainability Analysis
Indiana Tech 1:00 PM February 17, 2010

Name	Address	Representing	Phone and/or e-mail
TINA WOLFF	418 DEEP WOOD COVE FTW, IN 46845	SELF	260-338-0403 TGWOLFF@VERIZON.NET
DICK BEAM	1345 W. SHERWOOD TERR.	SOUTHWOOD PARK BOARD	456-5471 DICKEBEAM@MSN.COM
KELLY BAJIC	2021 LAWNDALE DR FT WAYNE, IN 46805	SELF	260-471-2696
Wendy Reust	6704 Spiren Ft. Wayne, IN 46814	SELF	260-676-2205
Frank Suarez	335 W Wayne Ft Wayne 46802	City of Ft. Wayne	
Matthew Wirtz	One Main St, Rm 450 Ft Wayne IN 46802	City of FW	427-2690
DAN WIRE	3002 NORTHSIDE DR	Self - UNA	483-0205
Todd Trinkle	100 N. Senate Ave. MC65-42 Indianapolis, IN 46204	IDEM	ttrinkle@idem.in.gov 317-234-1003
GARY CHAPPLE	1 E MAIN ST FORT WAYNE, IN 46802	FW-AC DEPT OF HEALTH	260-449-7695 gary.chapple@co.allen.in.us
BRANDI WALLACE		City of Fort Wayne	260-427-5582

Public Meeting on Fort Wayne Use Attainability Analysis
Woodlan Jr/Sr High School 6:30 PM February 17, 2010

Name	Address	Representing	Phone and/or e-mail
Nancy Carper	900 Rosamond Av.	Me	260 740-7467 work 260-749-2777
Mark Heber	7511 Wahana Drive		(260) 747-2699
STEVE MILLER	4814 N. WEBSTER RD. N.H		260-493-0957
Todd Trinkle	100 N. Senate Ave. MC 65-42 Indianapolis, IN 46204	IDEM	ttrinkle@idem.in.gov 317-234-1003
PAT CALLAHAN	12320 BUFFLEHEAD RUN		260-627-8049 pwcallahan@aquaamer.com
JUSTIN BRUGGER		CITY OF FW	427-117
Andi Adams	1809 N State Line Rd	me	632-5053
DENNY MIESLE	Woodburn, IN 46797 19223 WOODBURN RD WOODBURN 46797	SELF	632-5653
BRANDI WALLACE		CITY OF FW	427-5582

COPY for City Utilities.

1123 Ludwig Park Drive
Fort Wayne, IN 46825
February 19, 2010

Indiana Department of Environmental Management
C/O Todd Trinkle, Wet Weather Section
MC 65-42 IGCN 1255
100 North Senate Avenue
Indianapolis, IN 46204-2251

Dear Sir:

This letter supports the requested revision to the full body contact recreation use designation submitted as a Use Attainability Analysis (St. Marys River, St. Joseph River, and Maumee River) by City Utilities of the City of Fort Wayne.

I became involved with City Utilities (CU) in 2003 because of neighborhood flooding problems, which were solved years ago. I continued to interact with them and am a volunteer member of their Stormwater and Sewer Advisory Group (SAG) because of CU's integrity and genuine responses to citizen inputs. The City of Fort Wayne in general is by far the most responsive out of eleven places I've lived nationwide.

I boat infrequently for the time being because of family, volunteer, and financial demands, but own two square-backed rowing canoes with small outboard motors and trailers, plus a toy (9.5') kayak. In the past five years, about three-quarters of our time spent around water has been along the rivers in the area affected by this Use Attainability Analysis, and most of the other quarter just upstream (0.25-2.5 miles) on the St. Joseph River. My wife and I expect to boat much more in a few years, mostly in these same river segments because of their proximity to home and lack of fees or other expense. Therefore, we have a lot of self-interest in the projected usability of these waters.

I am a former PhD (Plant Pathology) field research scientist for Bayer. I quit my profession after our three middle school children nearly set the house on fire twice in 1996, in order to be home with them and free up my wife in her profession (industrial safety and environmental health). My Fort Wayne volunteer activities include SAG, Co-Chair of the Mayor's Northwest Area Partnership (an association of homeowner associations), and the 2010 Solid Waste Contract Committee in Public Works. A notable former volunteer commitment was the Curdes Avenue Task Force (report available by Googling), which was a citizen-involvement test case regarding how to deal with five adjoining combined sewer subsheds in preparation for the Consent Decree. I also attended, as an observer, almost every meeting of the Clean Rivers Task Force, which was charged with exploring all options by which to fund the Consent Decree (and significant associated ongoing projects).

I personally believe that the requested revision would have virtually no impact on recreational use of the rivers. The magnitude of the rain events probably associated with this requested revision would raise the river levels and speeds beyond the point where submerged shoreline obstacles (such as trees) make overall use of the rivers less attractive and unlikely. These obstacles and a number of bridges would also make boating significantly hazardous.

The Use Attainability Analysis is correct that the cost of a more stringent Long Term Control Plan would be a severe economic hardship to a City trying to reverse the classic economic decay being experienced for decades here in the Midwest. I would go further and believe that further controls would be economically inadvisable because individuals in impoverished areas (since the 1970's) tend to strip and punish their environments just in order to survive for the moment. No amount of policing can keep up with citizens acting *en masse*. To use an admittedly extreme but real scenario witnessed elsewhere at various times over decades, I have seen rivers and floodways become direct toilets when significant numbers of homeless lived along waterways because of fish and trash availability, plus strength in numbers. Pollution not withstanding, crime (or lack of money for adequate policing) was a major reason that communities turned their backs on waterways during my younger years.

As someone who moved here from elsewhere, I also perceive a local culture and government that is putting resources into removing, replacing, and upgrading its buildings and other infrastructure. A greater burden for increased sewage control would certainly restrain these other private and public activities. I say this especially because most of the sewer overflows under the requested revision would occur from formidable rain events. The size of the extra pipes and storage, never mind the excess treatment capacity, strikes me as mind-boggling not just in scope but also in impact on the economic environment of Fort Wayne.

I perceive the current recreational uses, frequencies, and weather conditions reported in the Use Attainability Analysis to be realistic. Uses are increasing, but depend upon river conditions that should be covered by improvements mandated in the existing Long Term Control Plan.

I personally suspect that a sufficient amount of fecal waste must be coming from natural sources, on and upriver from the Analysis areas, to limit recreational use after significant storms regardless of sewer overflows. We stay off the St. Joseph, even upriver of Fort Wayne, after significant rains. This is substantiated in part by local IPFW research, which particularly implicated geese, although I question focusing on any one species of wildlife. Either way, the high water conditions which apply to the requested revision would typically involve extensive flushing of watershed and floodway habitats.

Thank you for your time and consideration.

This is a Copy for

Sincerely,

Rod Vargo

Rodney H. Vargo, PhD
(260) 416-0986
rodvargo@comcast.net

Copy sent to:
Fort Wayne City Utilities
One East Main Street, Room 280
Fort Wayne, Indiana 46802

APPENDIX N-2: Public Participation Meetings April 15, 2019

City of Fort Wayne LTCP Update & Use Attainability Analysis

CITY UTILITIES
WATER THAT WORKS

April 15, 2019

cityoffortwayne.org/utilities

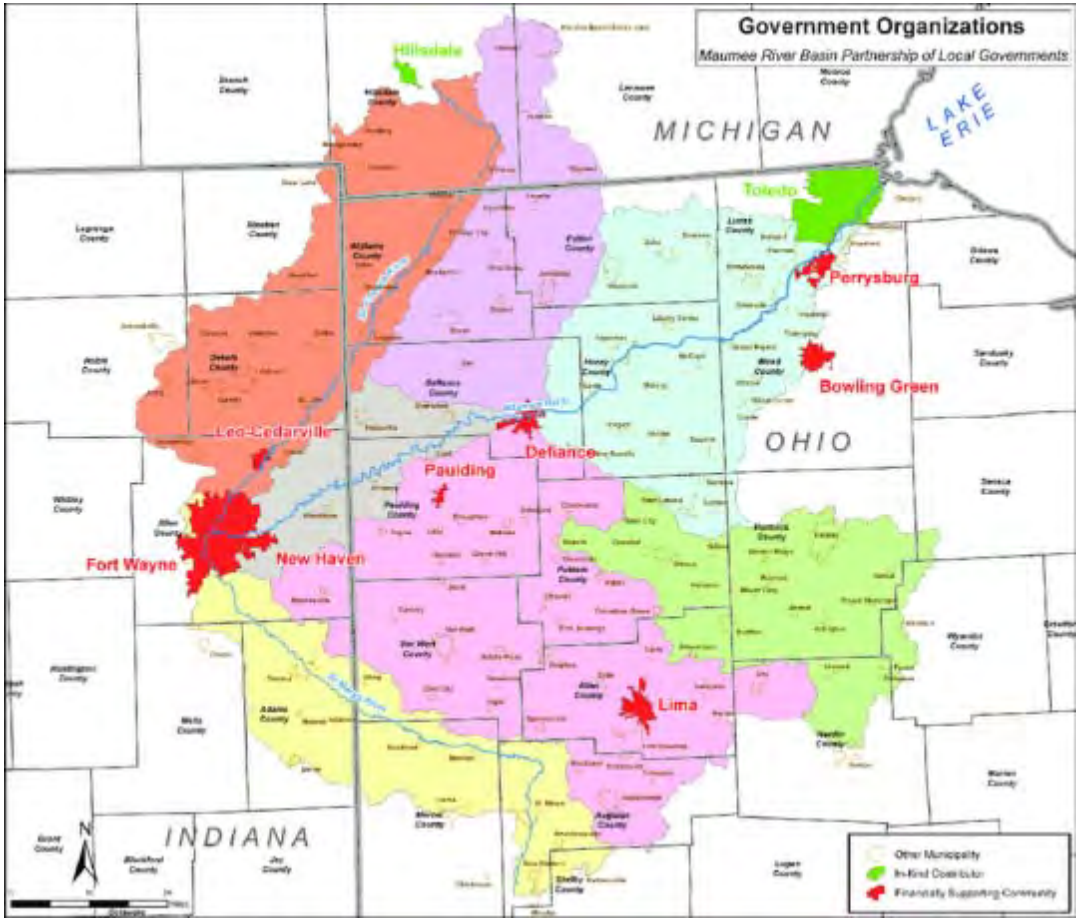
Presentation Outline

CITY UTILITIES
WATER THAT WORKS

- LTCP Update
- Benefits of LTCP
- Use Change in Water Quality Standards
- Use Attainability Analysis factors
- Next Steps

The Big Picture

CITY UTILITIES
WATER THAT WORKS



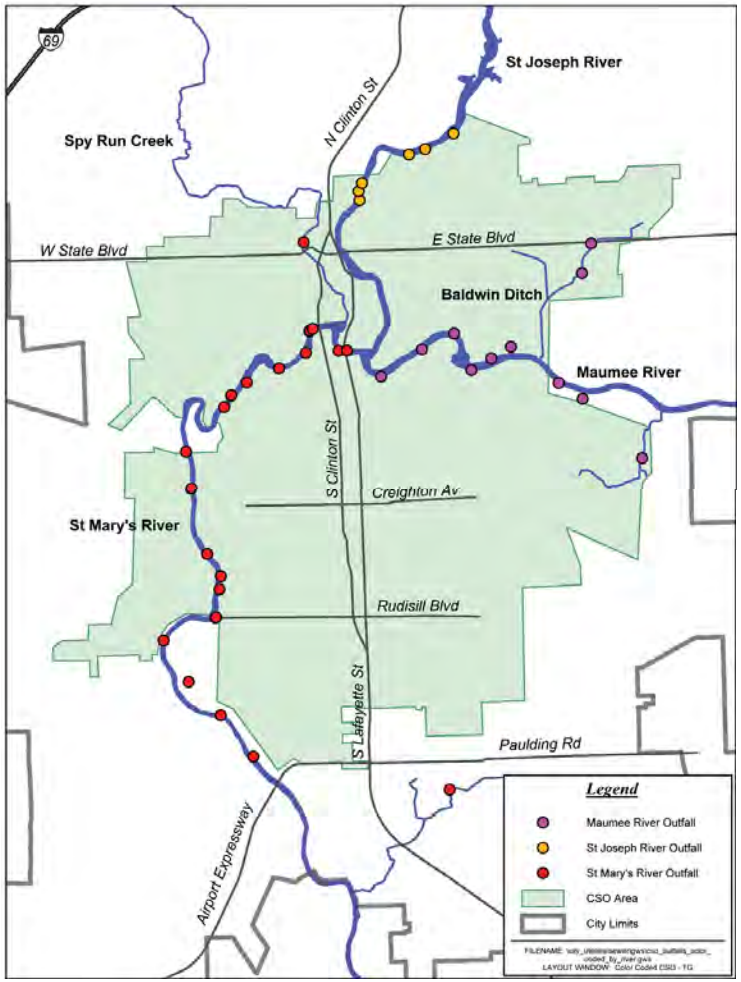
Impact of Land Use Activities in the Maumee River Watershed on Harmful Algal Blooms in Lake Erie - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/Map-of-Maumee-River-Watershed-The-Maumee-River-watershed-which-contributes-most-of-the_fig2_317969632 [accessed 27 Sep, 2018]

cityoffortwayne.org/utilities

Where Sewers Overflow

CITY UTILITIES
WATER THAT WORKS

- Maumee
- St. Joseph
- St. Marys
- Spy Run Creek
- Baldwin Ditch
- Other tributaries



cityoffortwayne.org/utilities

Original LTCP

CITY UTILITIES
WATER THAT WORKS

Program Element	Cost (millions)
Combined Sewer Capacity (partial sewer separation)	$68.3
Parallel Interceptor Sewers	$72.4
Satellite storage/treatment	$34.8
Combined sewer overflow pond storage improvements	$53.9
Treatment plant improvements	$10
Total Cost	**$239.4**

(All cost estimates based on 2005 dollar value)

cityoffortwayne.org/utilities

Updated LTCP

CITY UTILITIES
WATER THAT WORKS

Program Element	Cost (millions)
Combined Sewer Capacity (partial sewer separation)	$33.8
3RPORT & Foster Park Relief Sewer	$230.0
Remote CSO Relief Sewers, Storage Facilities & Floatables	$24.7
Wet Weather storage pond improvements	$34.0
Treatment plant improvements	$17.4
Total Cost	**$339.9**

(All cost estimates based on 2005 dollar value)

cityoffortwayne.org/utilities

Updated LTCP with Tunnel Solution

CITY UTILITIES
WATER THAT WORKS

Capital Program	2008 Estimates	Current Estimates
LTCP	$239.4 million	$339.9 million
Wastewater Improvements CIP	$454.6 million	$326.6 million
Total 18 year CIP	$694 million	$666.5 million

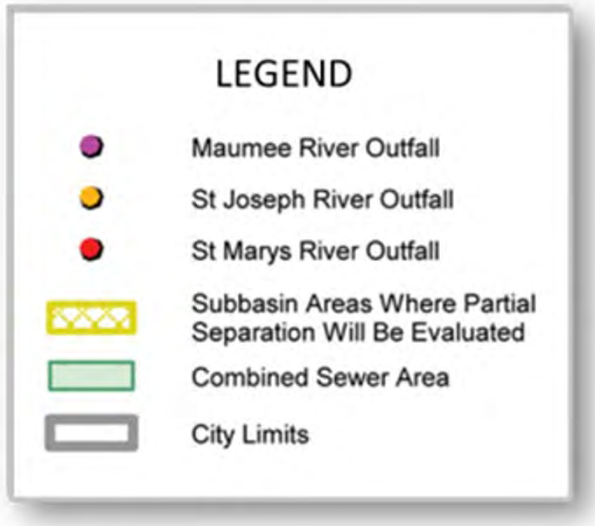
(All cost estimates based on 2005 dollar value)

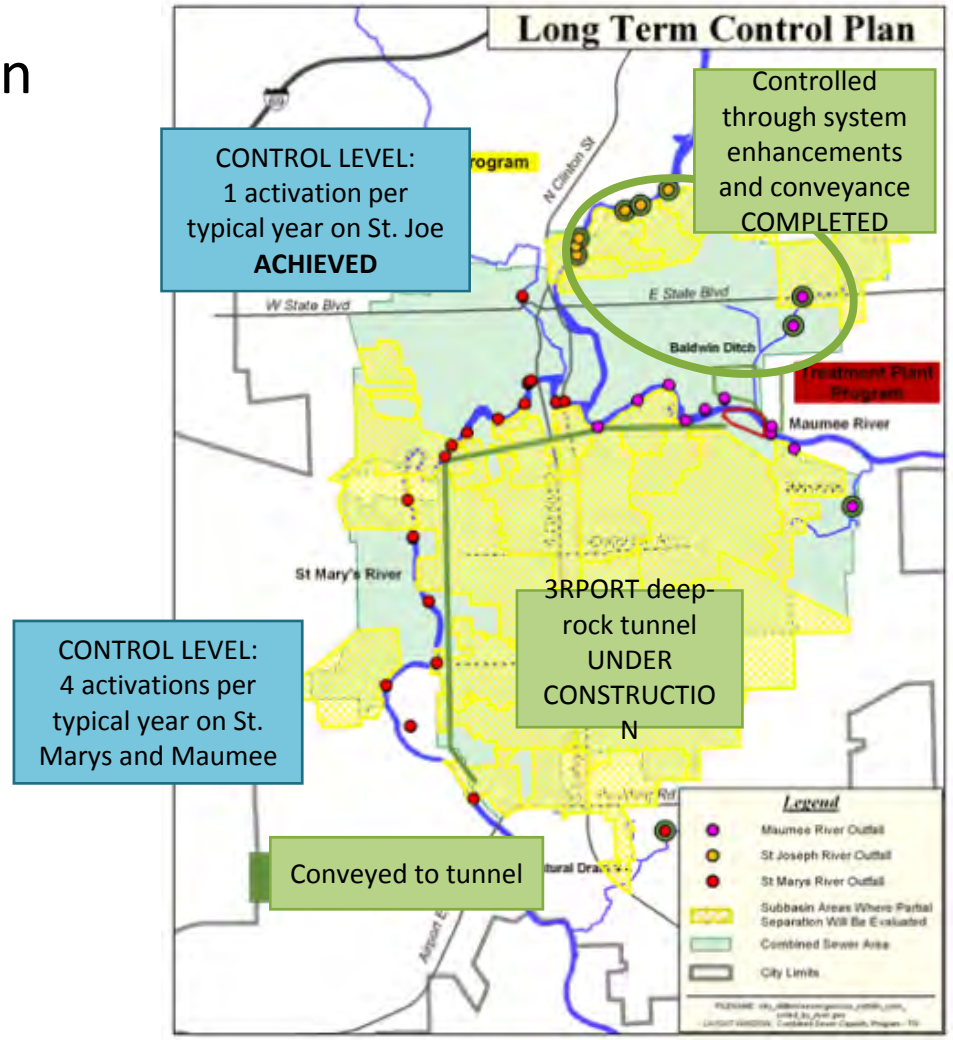
cityoffortwayne.org/utilities

Current LTCP Status

CITY UTILITIES
WATER THAT WORKS

1. Reduce Through Separation
2. Collect More
3. Treat More



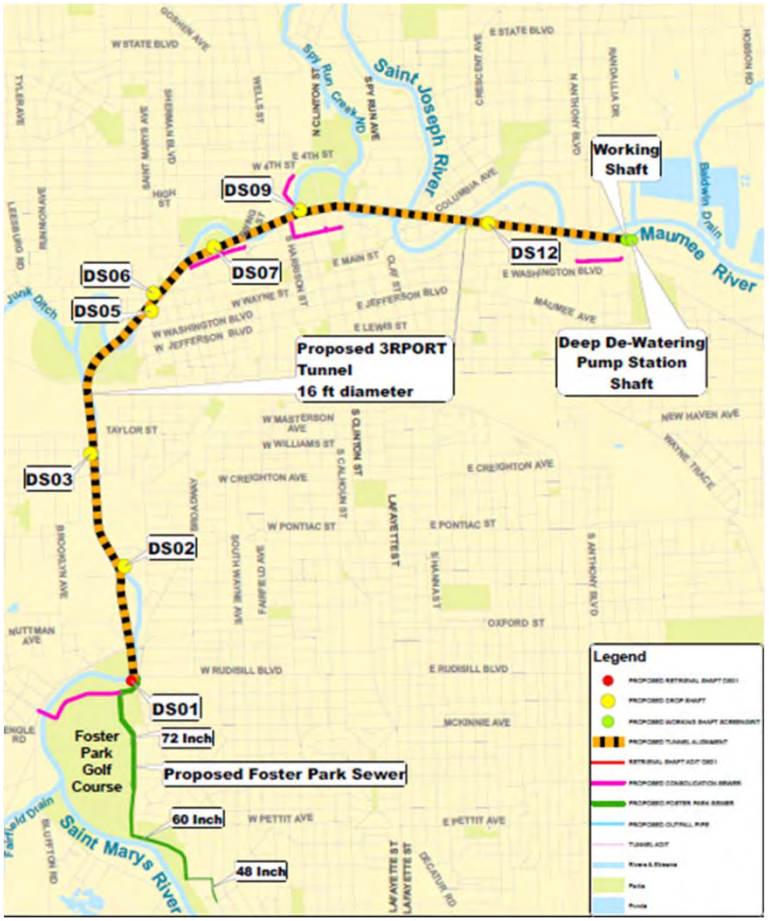


3RPORT Program Update

CITY UTILITIES
WATER THAT WORKS

Tunnel Works Program

- Scheduled completion: 2023
- Three Rivers Protection and Overflow Reduction Tunnel (3RPORT)
  - Deep-rock tunnel
  - Drop shafts & adits
- Deep dewatering pump station
- Near surface infrastructure
  - Consolidation sewers



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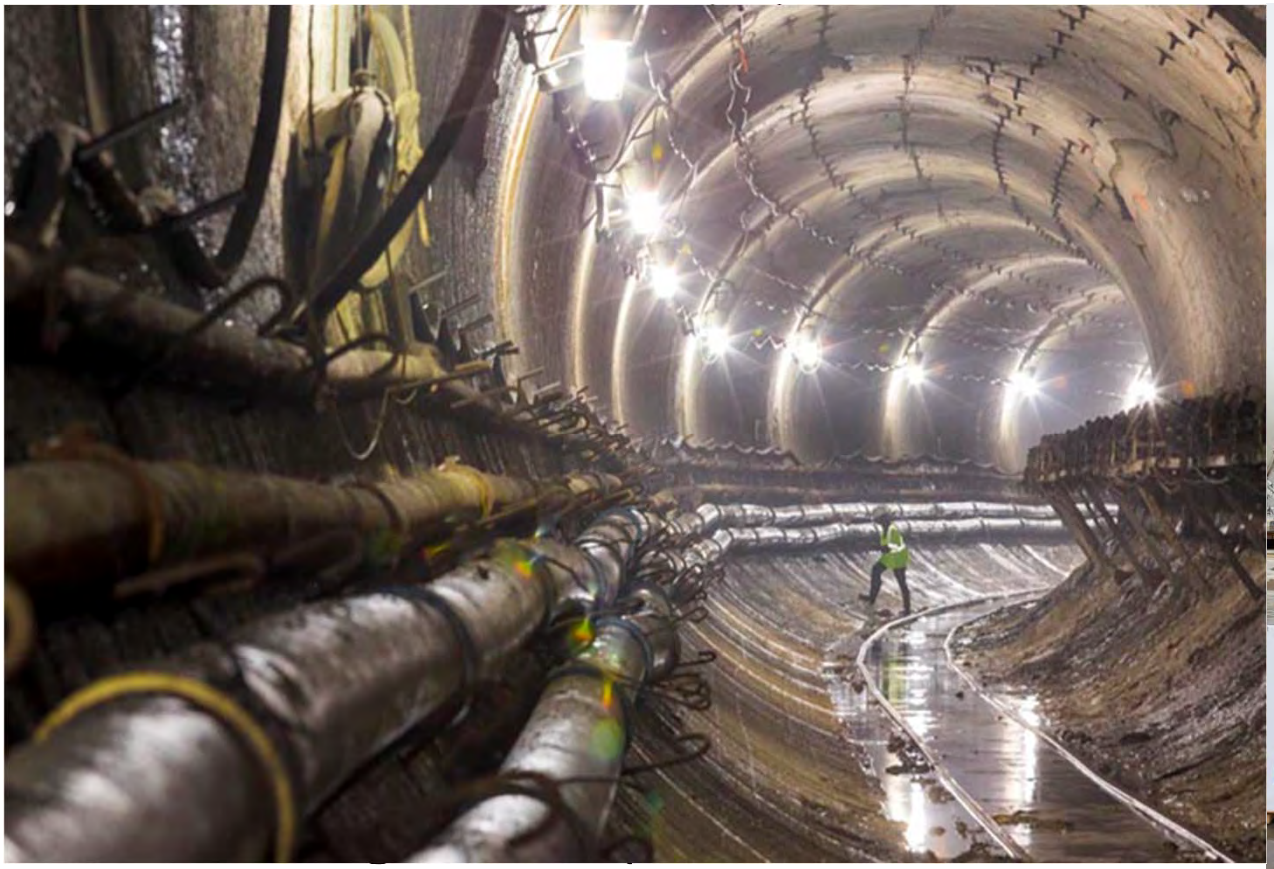
Tunnel Works

CITY UTILITIES
WATER THAT WORKS



Citizens Energy Deep Rock Connector Tunnel – Indianapolis
Courtesy of AECOM

cityoffortwayne.org/utilities

Benefits of City's Plan

CITY UTILITIES
WATER THAT WORKS

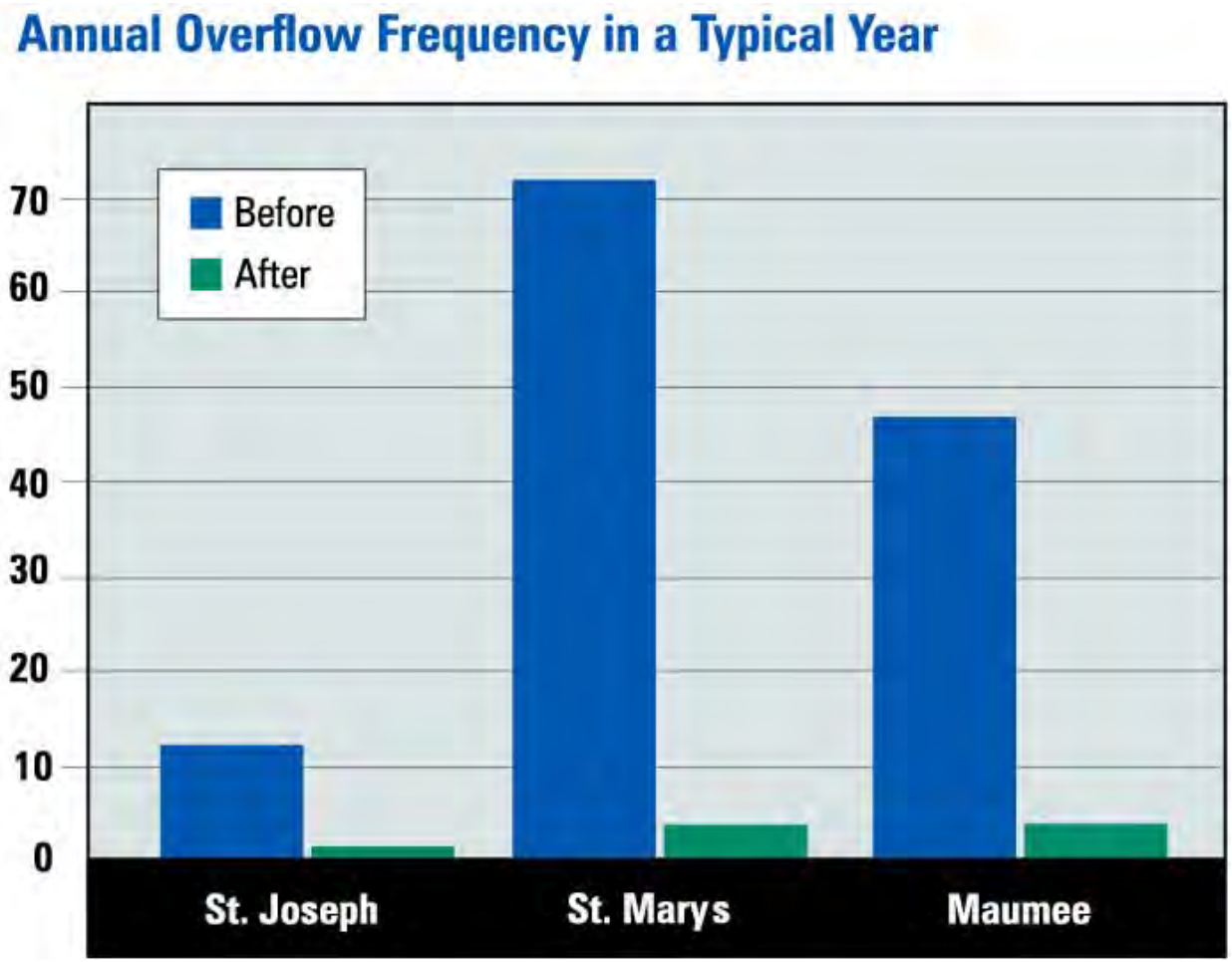
- Reduced odors, untreated sewage and trash in our rivers and streams
- Reduces annual sewer overflow volume by 91 percent
- Reduces overflow frequency from 71 times in a typical year to:
  - 1 storm per year causing overflows to St. Joseph River*
  - 4 storms per year causing overflows to St. Mary's and Maumee rivers*
- Reduced bacteria loading to our waterways

*Predictions based on a year with average rainfall

cityoffortwayne.org/utilities

Benefits: Reduced Overflow Frequency

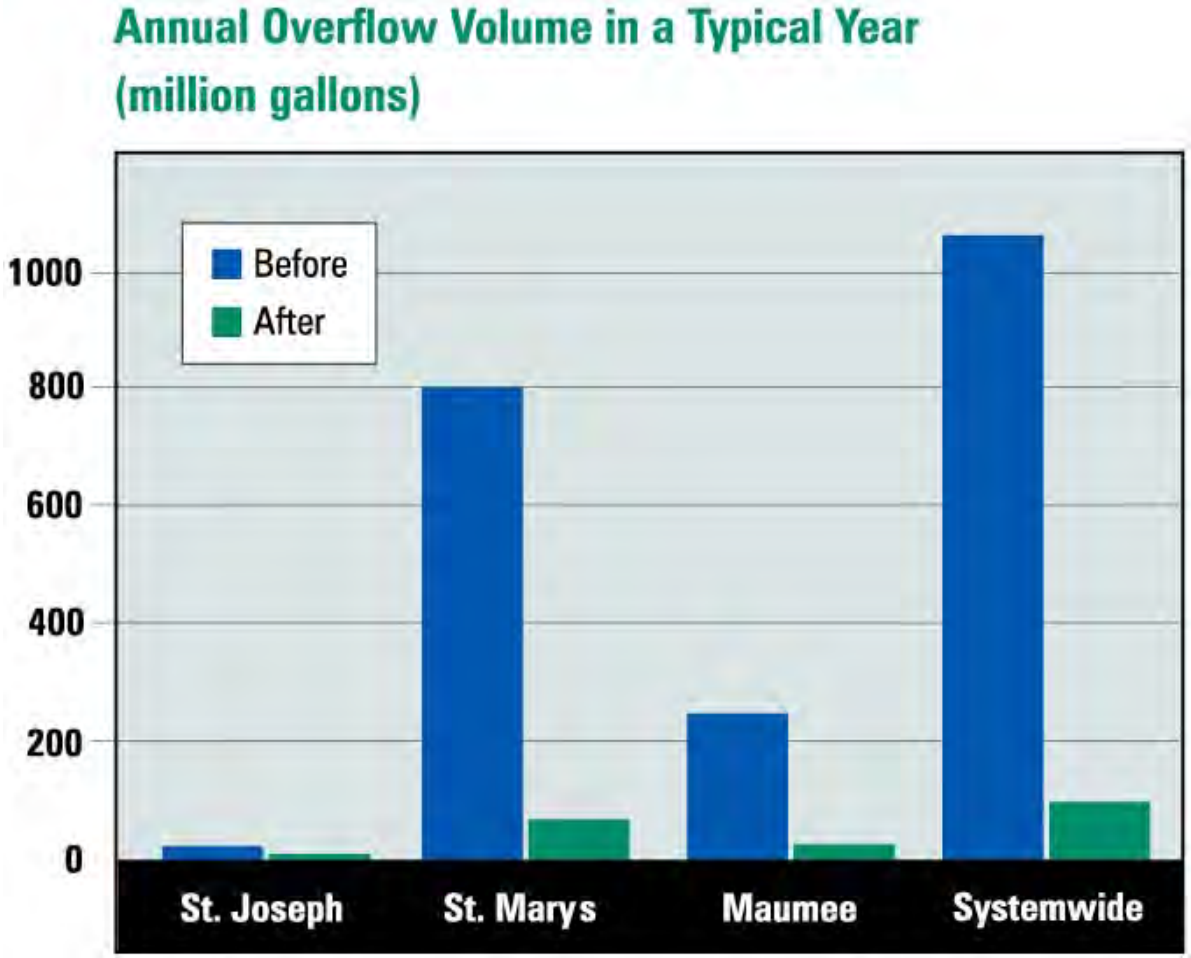
CITY UTILITIES
WATER THAT WORKS



cityoffortwayne.org/utilities

Benefits: Reduced Overflow Volume

CITY UTILITIES
WATER THAT WORKS



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Use Designation

CITY UTILITIES
WATER THAT WORKS

- All surface waters within Indiana's Great Lakes drainage basin are designated for full-body contact recreation (swimmable) by state water quality rules. 327 IAC 2-1.5-5(a)(1)
- This recreational use designation applies to the St. Joseph, St. Marys and Maumee Rivers (and tributaries)
- Recreation Season includes April – Oct.

Why is it necessary to change the designated use?

CITY UTILITIES
WATER THAT WORKS

- Even after implementation of the City's costly LTCP, a small number of overflows will still occur during the largest storms of a typical year.
- High bacterial pollution levels from these infrequent storms will make the rivers unsuitable for swimming and other full body recreational contact at those times (although rivers are already unsuitable for swimming due to nonpoint sources of bacteria).
- State water quality rules allow no exceptions to compliance with bacterial criteria required for the current recreational use designation.

CITY UTILITIES
WATER THAT WORKS

- 100% compliance with the water quality criteria for recreation would require additional CSO controls to capture overflows from the largest storms, which is not affordable.
- Recreation on area rivers during storm events occurs rarely, if at all.
- A revised use designation is needed that recognizes that recreation should not occur during times area rivers are impacted by overflows from the infrequent storms beyond the reach of the LTCP's control measures.
- Current (swimmable) recreational use designation would apply except when LTCP's CSO controls cannot capture overflows from larger storms.

Federal and State Law for Use Designation Changes

CITY UTILITIES
WATER THAT WORKS

- The U.S. EPA adopted rules many years ago to govern the establishment and revision of water quality standards, including use designations, for the nation's waters. 40 CFR Part 131, Subpart B.
- In 2005, the Indiana legislature created a CSO wet weather limited use designation for waters affected by CSOs where a community has agreed to implement an approved LTCP that reduces but cannot totally eliminate discharges from combined sewer systems due to affordability or other constraints.

UAA – a Prerequisite to Change in Use Designation

CITY UTILITIES
WATER THAT WORKS

- Under the relevant federal and state law, a use designation, such as the current recreational use for waters impacted by the City's CSOs, cannot be changed without conducting a Use Attainability Analysis (UAA) to assess the feasibility of achieving the designated use.

What is a UAA

CITY UTILITIES
WATER THAT WORKS

- A UAA is defined under federal law as a “structured, scientific assessment of the factors affecting the attainment of the use, which may include physical, chemical, biological, and economic factors as described in 40 CFR 131.10(g)”.
- Six factors may be considered when conducting a UAA.

Basis of Fort Wayne UAA

CITY UTILITIES
WATER THAT WORKS

- Fort Wayne's draft UAA update is based upon three factors:
- Naturally occurring pollutant concentrations prevent attainment of the designated use;
- Human-caused sources of pollution that cannot be remedied prevent designated use attainment;
- **substantial and widespread economic and social impacts** would be caused by a requirement to implement controls beyond those contained in the City's LTCP as approved by IDEM and U.S. EPA.

Sources of Water Quality Impairment

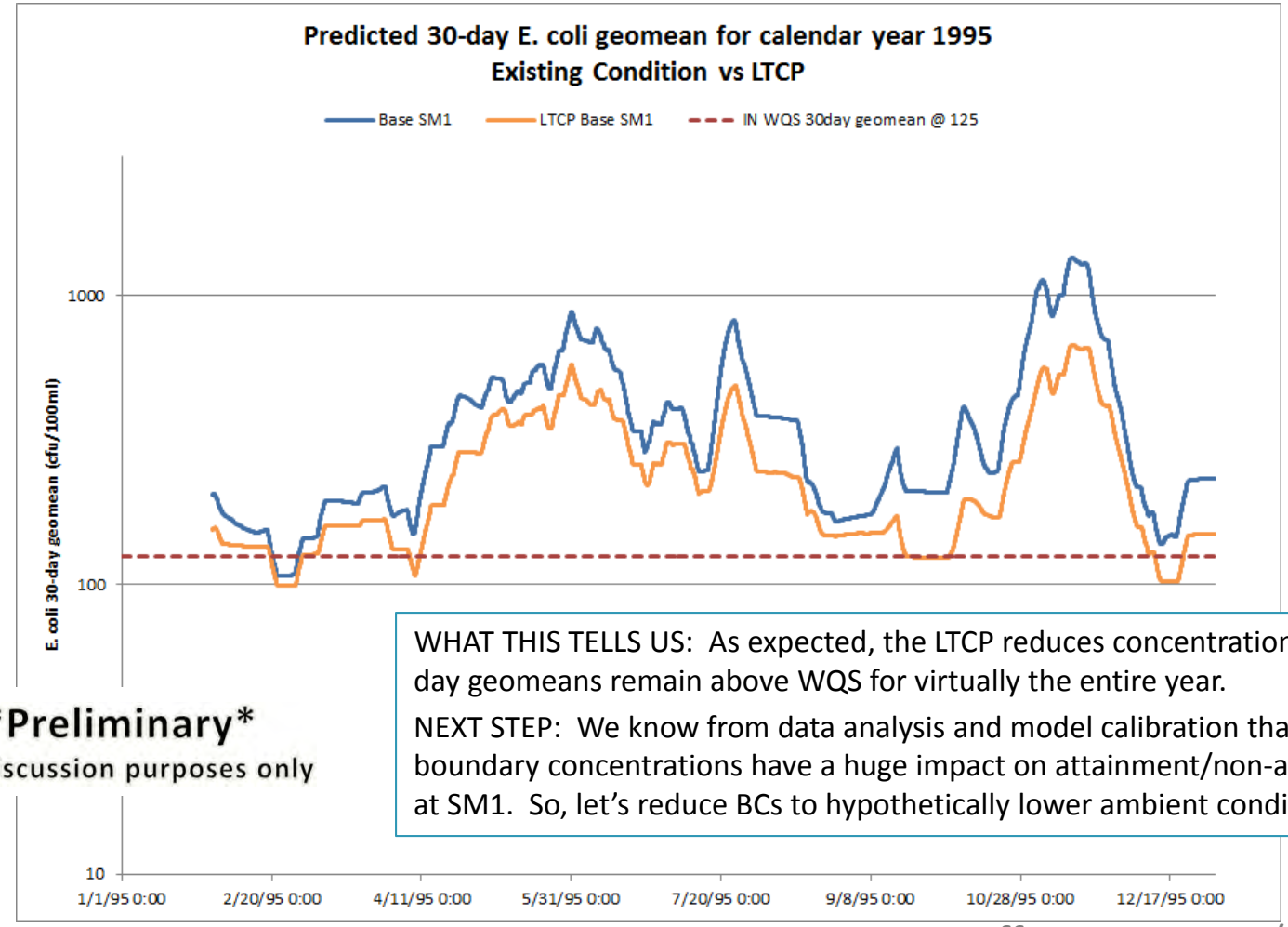
CITY UTILITIES
WATER THAT WORKS

Not all from CSO's

cityoffortwayne.org/utilities

Will bacteria WQS be met after LTCP implementation?

CITY UTILITIES
WATER THAT WORKS



Preliminary
For discussion purposes only

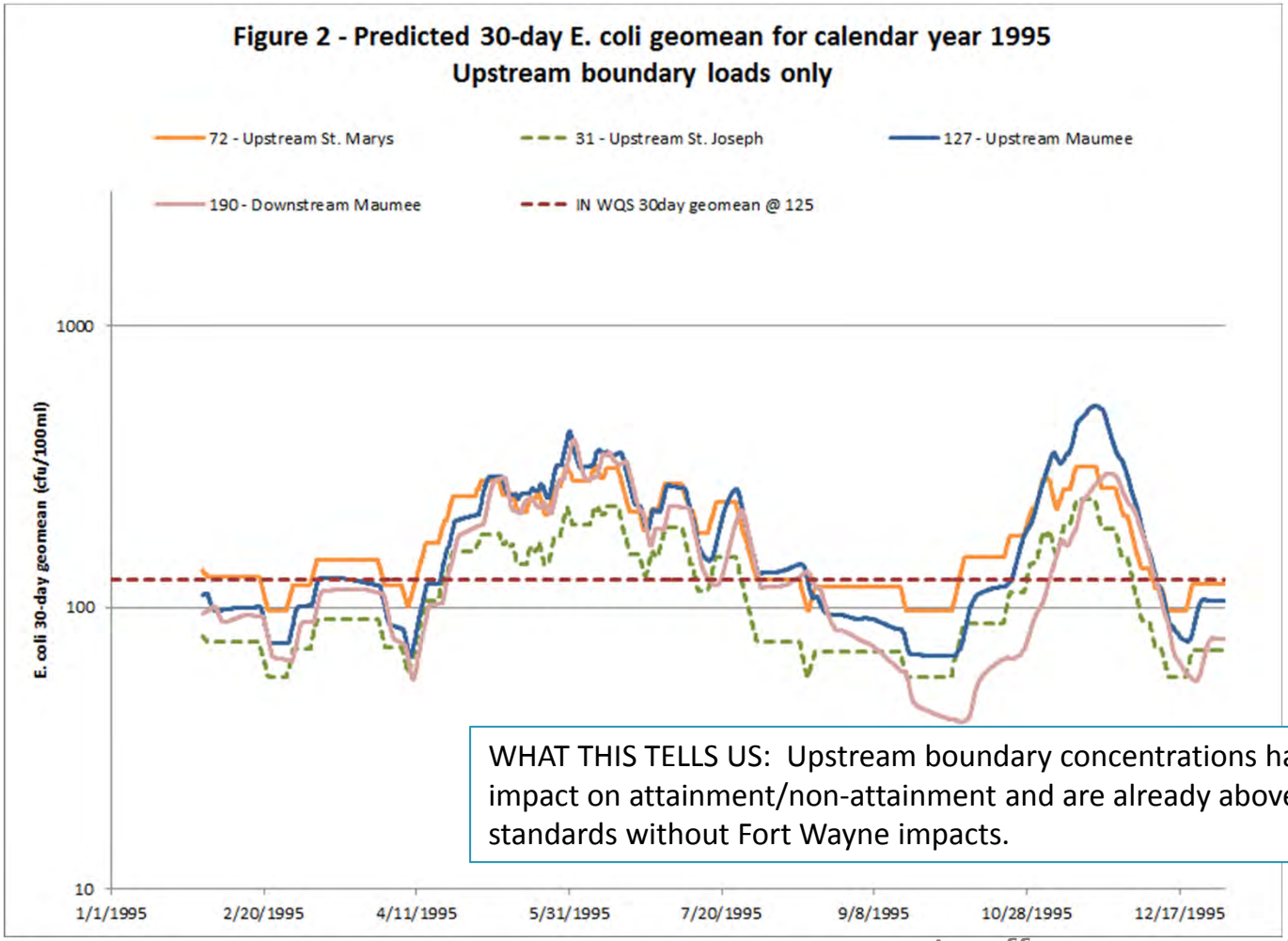
WHAT THIS TELLS US: As expected, the LTCP reduces concentrations - but, 30-day geomeans remain above WQS for virtually the entire year.

NEXT STEP: We know from data analysis and model calibration that upstream boundary concentrations have a huge impact on attainment/non-attainment at SM1. So, let's reduce BCs to hypothetically lower ambient conditions.

cityoffortwayne.org/utilities

What about sources beyond City control, from upstream watersheds?

CITY UTILITIES
WATER THAT WORKS

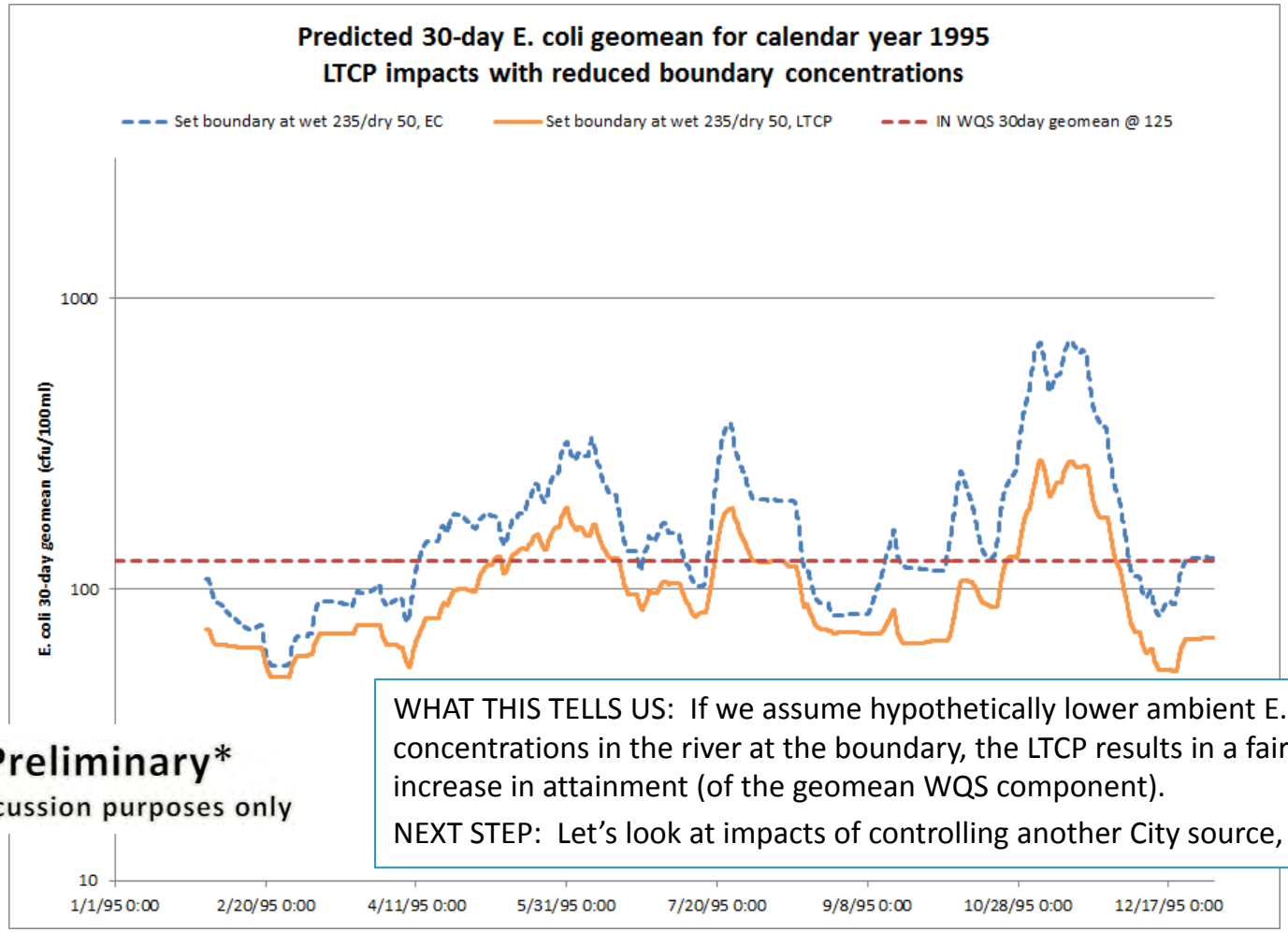


WHAT THIS TELLS US: Upstream boundary concentrations have a huge impact on attainment/non-attainment and are already above E.coli standards without Fort Wayne impacts.

cityoffortwayne.org/utilities

What about sources beyond City control, from upstream watersheds?

CITY UTILITIES
WATER THAT WORKS



Preliminary
For discussion purposes only

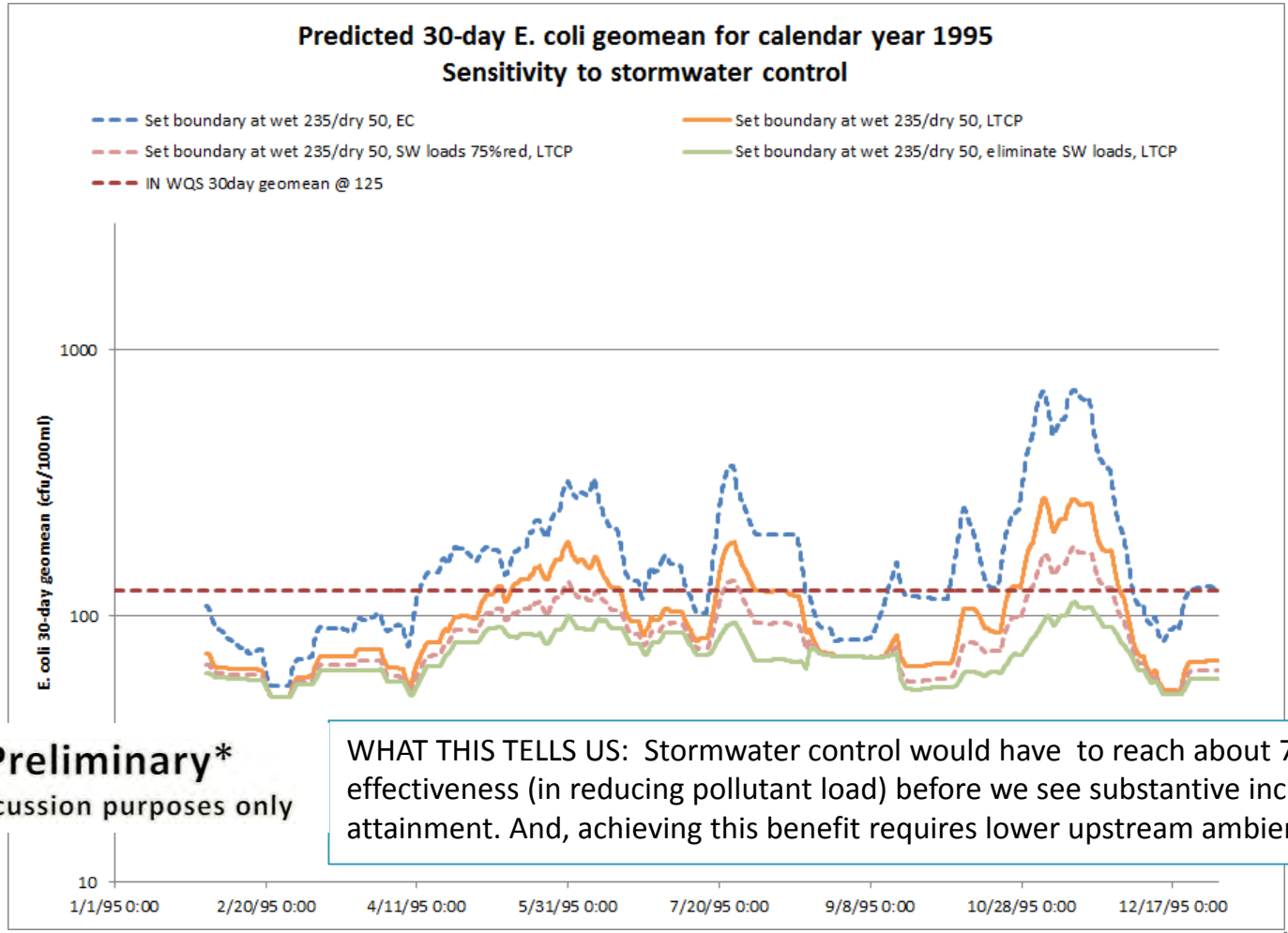
WHAT THIS TELLS US: If we assume hypothetically lower ambient E. coli concentrations in the river at the boundary, the LTCP results in a fairly dramatic increase in attainment (of the geomean WQS component).

NEXT STEP: Let's look at impacts of controlling another City source, stormwater.

cityoffortwayne.org/utilities

When and where should we invest in controlling other City sources, like stormwater?

CITY UTILITIES
WATER THAT WORKS



Preliminary

For discussion purposes only

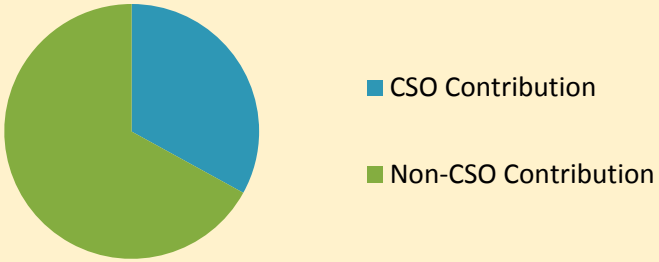
WHAT THIS TELLS US: Stormwater control would have to reach about 75% effectiveness (in reducing pollutant load) before we see substantive increases in time of attainment. And, achieving this benefit requires lower upstream ambient conditions.

cityoffortwayne.org/utilities

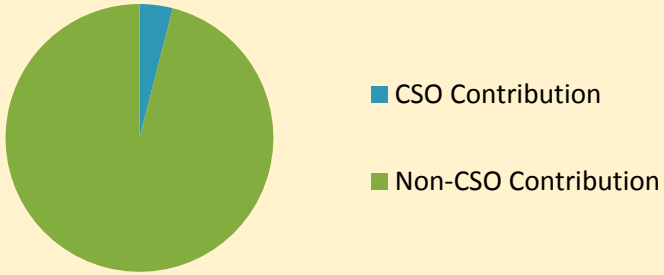
What these scenarios tell us

CITY UTILITIES
WATER THAT WORKS

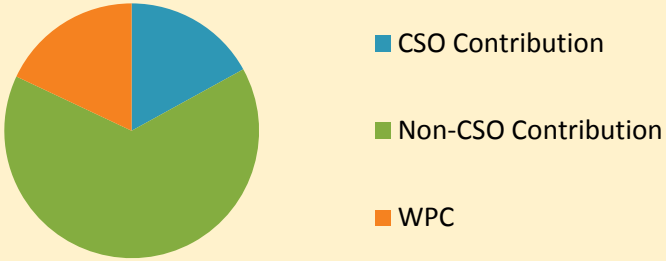
St. Mary's River Pollutants CSO VS. Non CSO Sources



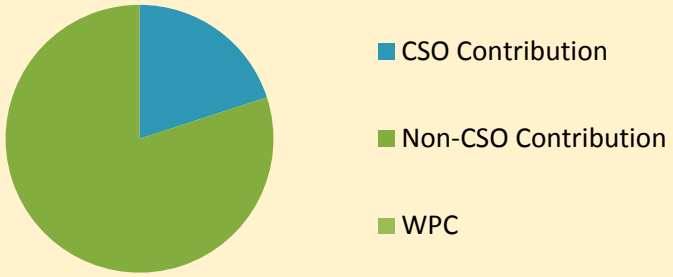
St. Joseph River Pollutants CSO VS. Non-CSO Sources



Maumee River Pollutants (Non-Bacterial) CSO VS. Non-CSO Sources



Maumee River Pollutants (Bacterial) CSO VS. Non-CSO Sources



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Substantial and Widespread Social and Economic Impacts

CITY UTILITIES
WATER THAT WORKS

- Complete Control of CSOs would still not meet Water Quality Criteria for *E. Coli* in affected rivers due to other, non-point sources.
- Fort Wayne's approved LTCP provides the best environmental benefit for the dollar. It will eliminate most overflows and capture some stormwater that otherwise would have gone to the river.
- Complete Control of CSOs would increase capital costs for the LTCP by more than 100% and would be unaffordable for the City and its rate payers under applicable state and federal criteria.

Substantial and Widespread Social and Economic Impacts - Original

CITY UTILITIES
WATER THAT WORKS

UAA Table 4.3-1

Capital Costs for CSO Control Measures for Complete Capture and Control of CSOs

Program Element	Cost (millions)
Combined Sewer Capacity (partial sewer separation)	$ 102.7
Interceptor sewers	213.1
Satellite storage/treatment	30.3
Combined sewer overflow pond storage improvements	170.5
Treatment plant improvements	75.8
Total Cost	**$592.4***

(All cost estimates based on 2005 dollar value and Typical Year Conditions)

*Total Complete Capture costs are in process of being updated. Projected to be higher that original estimate of $592.4M, based on increased costs of LTCP.

Current Status for Change in Use Designation

CITY UTILITIES
WATER THAT WORKS

- Approved LTCP (December 2007)
- UAA approved by IDEM (2010)
- Update/Refresh of UAA information (2019)
- Request IDEM to move forward with UAA process and submitting UAA to EPA for EPA approval

Next Steps

CITY UTILITIES
WATER THAT WORKS

- Indiana Water Pollution Control Board to conduct rulemaking to revise use designation for CSO-impacted waterways to apply the CSO wet weather limited use designation during those infrequent periods of CSO discharge.
- Approval by US EPA of UAA and Indiana rule to revise use designation to CSO wet weather limited use during periods of CSO discharge

CITY UTILITIES
WATER THAT WORKS

Questions?

cityoffortwayne.org/utilities

Fort Wayne City Utilities
Long-Term Control Plan Use Attainability Analysis Update
Citizens Square, 200 E. Berry St., Fort Wayne, Indiana 46802
April 15, 2019 – 5:30 p.m.

Name	Organization	Email	Phone
Doug Fasick	St. Joseph River Watershed		494-8936
Kristen Buell	Upper Maumee Watershed Partnership		316-6769
Anne Marie Strachula	Tri State Watershed Alliance		317-919-8292
Michael Gierscher	St. Joe. River Watershed	Gierscher@yahoo.com	579-3037
Kate Sanders	Indiana State Dept of Ag	kasanders1@isda.in.gov	(260)417-1313

APPENDIX O: IDEM Letter Approving 2010 UAA

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

August 30, 2010

The Honorable Thomas C. Henry, Mayor
City of Fort Wayne
One Main Street
Fort Wayne, Indiana 46802-1804

Dear Mayor Henry:

Re: Use Attainability Analysis
City of Fort Wayne
NPDES Permit IN0032191
Allen County

The Indiana Department of Environmental Management (IDEM), Office of Water Quality (OWQ) has conducted a review of the City of Fort Wayne's (City) Use Attainability Analysis (UAA) for the current full body contact recreational designation use for the following CSO-impacted waters:

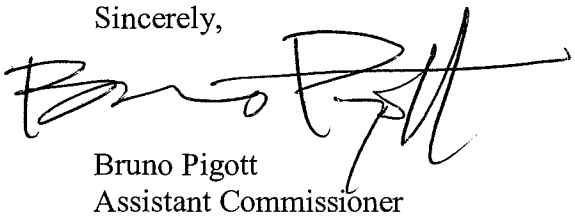
- St. Mary's River, from its junction with Natural Drain #4 near Tillman Road, to the confluence with St. Joseph River;
- Natural Drain #4; from CSO Outfall 054 near the intersection of Hollis Lane and Mercer Avenue, to its junction with the St. Mary's River;
- Spy Run Creek, from CSO Outfall 036, located north of W. State Street along Eastbrook/Westbrook Drive, to its junction with the St. Mary's River south of 4th Street;
- St. Joseph River, from CSO Outfall 052, located immediately south of Coliseum Blvd., near N. Anthony Blvd., to the confluence with St. Mary's River;
- Maumee River, from its origin at the confluence of the St. Mary's and St. Joseph Rivers in the City of Fort Wayne to the boundary between states of Indiana and Ohio;
- Baldwin Ditch, from CSO Outfalls 061 and 062 near the intersection of E. State Street and Barnhart Avenue, to its junction with the Maumee River near CSO Ponds 1 and 2; and
- Harvester Drain, from CSO Outfall 064 to its junction with the Maumee River.

Consistent with the Clean Water Act and Federal regulations at 40 CFR 131.10, States may remove designated uses applied to surface waters under their jurisdiction where it is shown that the designated use is not an existing use and that the designated use is not attainable. Based on the information contained in the City's UAA, IDEM finds that Fort Wayne has provided sufficient information to propose changing the designated recreational use for the above mentioned waters from "full body contact" to the "Combined Sewer Overflow (CSO) Wet Weather Limited Use" subcategory of Indiana's recreational use designation as provided in IC 13-18-3-2.5 during storm events that exceed the level of control in the City's approved Long Term Control Plan (LTCP).

IDEM will draft a proposed rule that changes the recreation uses to the CSO Wet Weather Limited Use subcategory for the abovementioned streams. The UAA prepared by the City will serve as the technical justification for the proposed rule revisions. This proposed rule will be posted to the Indiana Register for at least a 30-day review and comment period. Following the public comment period, the Indiana Water Pollution Control Board (WPCB) will hold a public hearing on the rulemaking. After the public hearing, if no comments are received that would lead the WPCB to modify or reject the proposed rule, the WPCB will vote on adopting the proposed rule. If adopted, the rule will first be submitted to the Office of the Attorney General for review, then to the Governor, and lastly, filed with the Publisher. The rule will be effective 30-days after filing with the Publisher. IDEM will submit the rule to EPA as a new or revised water quality standard for review and approval under section 303(c) of the Clean Water Act (CWA). The rule will not become effective for CWA purposes until it is approved by EPA.

Please contact Todd Trinkle at (317) 234-1003 or at ttrinkle@idem.in.gov, if you have questions regarding this letter.

Sincerely,



Bruno Pigott
Assistant Commissioner
Office of Water Quality

cc: Dave Pfeifer, USEPA Region 5
Holly Wirick, USEPA Region 5
Brandi Wallace, City of Fort Wayne
Larry Kane, Bingham McHale LLP

APPENDIX P: St. Joseph River Milestone Report (2017)

City of Fort Wayne

St. Joseph River Milestone Report

Consent Decree Case # 2:07 cv 00445

8/9/2017

1. Introduction

The City of Fort Wayne has been actively implementing an approved Combined Sewer Overflow (CSO) Long-Term Control Plan (LTCP) since 2007. The requirements of the LTCP are outlined in the City's federal Consent Decree (CD), and include a detailed Post-Construction Monitoring Program (PCMP, Appendix 4 of the CD). Under the PCMP, the City is scheduled to submit a series of Milestone Reports, each one coinciding with monitoring and analysis of completed CSO controls in a river watershed. The timing and purpose of the Milestones is as follows, from the PCMP:

"A milestone report will be prepared for each of the three river watersheds, when all the CSO controls in a particular river watershed are operational. The reports will provide documentation of facility performance relative to the Performance Criteria in Table 4.2.4.1, along with a presentation of observed water quality trends."

The first river watershed to achieve full operation (AFO) of all CSO controls was the St. Joseph River watershed, with AFO reached on September 1, 2015. The Performance Criteria for the St. Joseph River CSOs, per Table 4.2.4.1 of the CD, is to achieve 1 overflow event in a "typical year." Once AFO was reached, the City completed a 1-year monitoring period in the St. Joseph watershed, followed by a 1-year analysis period, per the requirements of the PCMP. The results of that monitoring and analysis process are the basis for this Milestone Report, and confirm that the operational St. Joseph River CSO controls are complying with the performance criteria required by the CD.

2. Milestone Report Development Process and Report Outline

As required by the formal assessment protocol outlined in the CD, the Milestone Report development process is as follows:

- Collect 12 months of CSO activation and rainfall data following Achievement of Full Operation of all CSO controls in the river watershed.
- Analyze the 12 months of CSO activation data and compare to historical trends.
- Use the 12 months of CSO activation data to implement the Model-Based Approach to Assessing Compliance (CD Appendix 4, Section 4.6.4.1) and summarize results.
- Comment on compliance, or non-compliance, as demonstrated by the Model-Based Approach.
- Analyze in-stream bacteria data collected under the PCMP water quality sampling program and summarize long-term trends.

Each of these steps was completed for the St. Joseph River watershed. Further details on the approach under each step, along with results and discussion, are presented in the individual Milestone Report sections as outlined in Table 1.

Table 1
St. Joseph River Watershed Milestone Report Outline

Topic[(1)]	Milestone Report Section
Description of river and CSO controls being implemented	Section 3
CSO monitoring and rainfall monitoring results	Section 4
River water quality sampling results	Section 5
Evaluation of the effectiveness of CSO Control Measures, including results of analyses performed to assess whether the implemented controls are complying with the Performance Criteria in Table 4.2.4.1	Section 6
A discussion of any significant variances from the Performance Criteria, including impacting factors and associated water quality impacts (if observed)	Not applicable – Performance Criteria met
Re-evaluation and proposed corrective action (if necessary)	Not applicable – Performance Criteria met
Status of upcoming CSO Control Measures in other watersheds (reporting on status of construction schedules, etc.)	Section 7

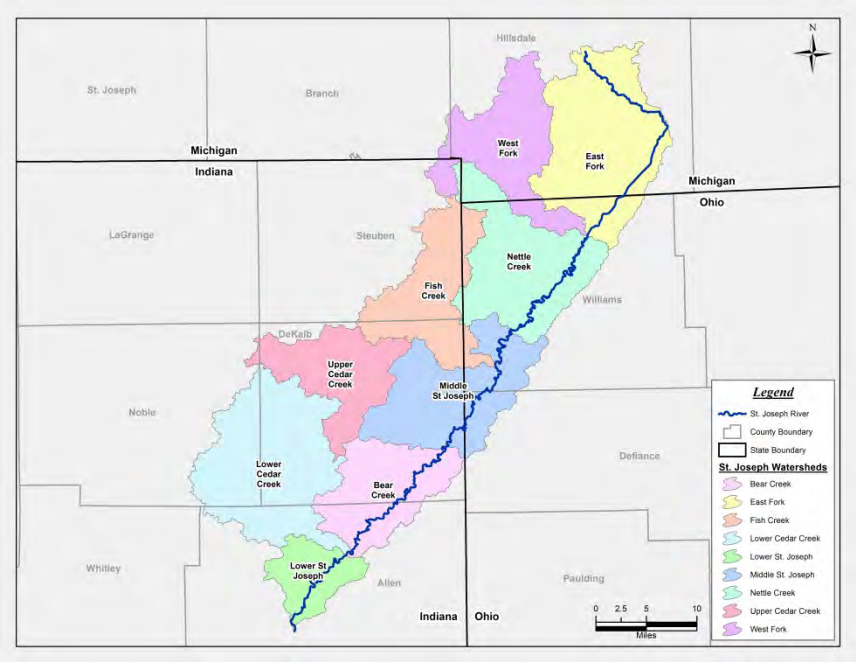
(1) The topics in Table 1 represent the full set of information expected in a Milestone Report, as presented in CD Appendix 4, Section 4.6.6.1.

3. Description of River and CSO Controls Being Implemented

The St. Joseph River watershed, shown in Figure 1, drains approximately 700,000 acres in Michigan, Ohio and Indiana. Flowing through primarily rural agricultural areas in northeast Indiana, the river enters metropolitan Fort Wayne approximately 9 miles upstream of its confluence with the St. Marys River. The St. Joseph and St. Marys Rivers converge in the City's downtown area to form the Maumee River, which flows northeast as a major tributary to Lake Erie.

The interaction between metropolitan Fort Wayne and the St. Joseph River tributary areas is limited primarily to the "Lower St. Joseph" subwatershed, at the far lower end of the river as shown in Figure 1. This is illustrated further in Figure 2, which shows a detailed view of the Lower St. Joseph subwatershed only, along with the extent of the City's interceptor system.

Figure 1
Overall St. Joseph River Watershed



Source: http://www.sjrwi.org/content/watershed-information-maps

Figure 2
Lower St. Joseph Subwatershed and Overlap with Metropolitan Fort Wayne

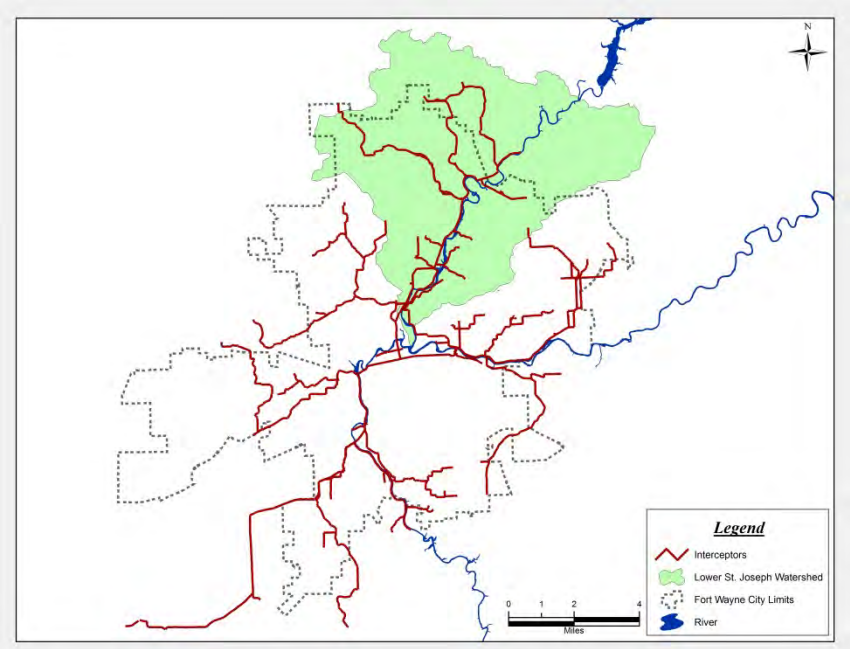
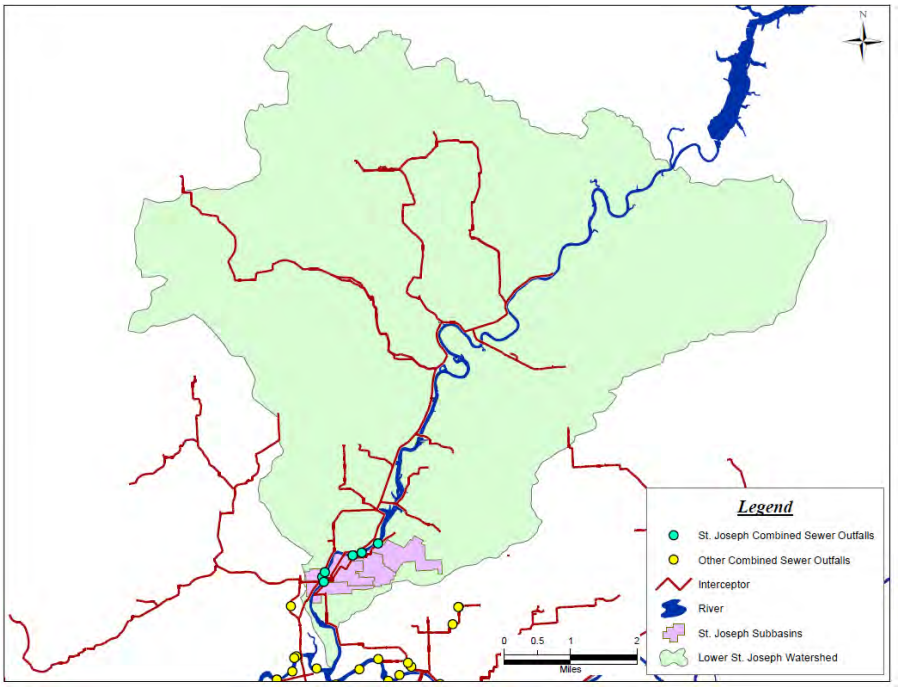


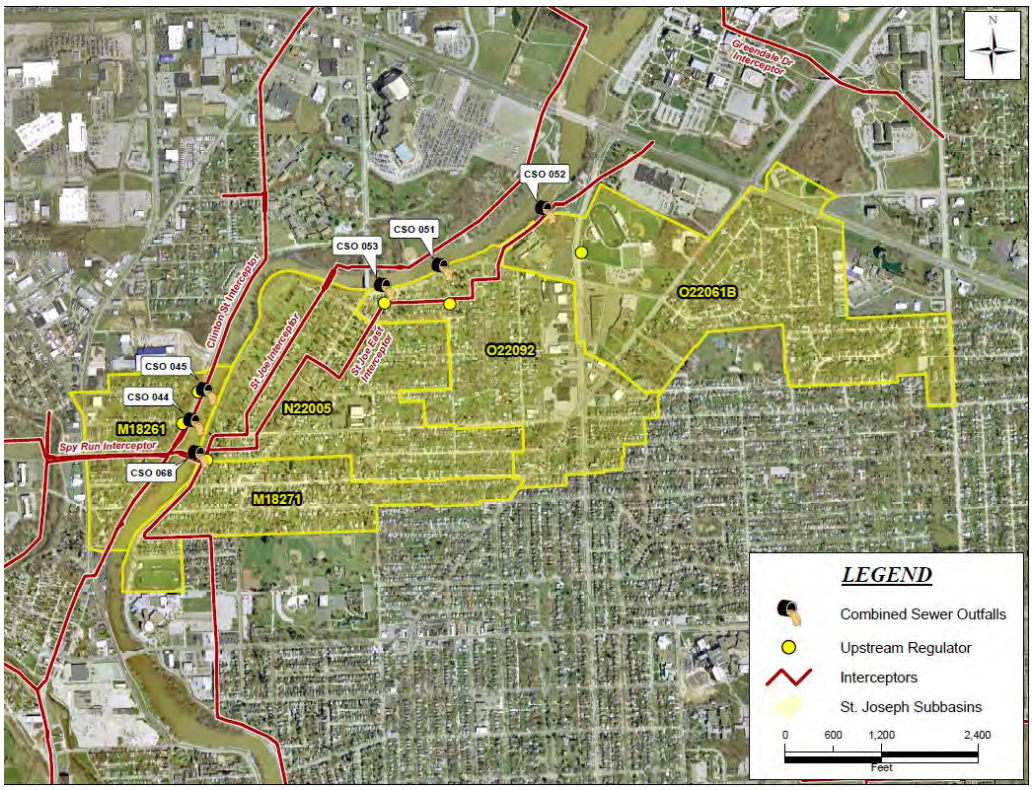
Figure 3 shows the location of the St. Joseph River CSOs and tributary subbasins within the lower St. Joseph River subwatershed. As can be seen, a) the St. Joseph CSO subbasins are a very small part of the smallest subwatershed in the overall St. Joseph River tributary area, and b) the St. Joseph CSOs discharge to the St. Joseph at the far downstream end of the river. This means that well over 690,000 acres of tributary area have introduced loads to the river before the St. Joseph CSOs add their minimal contribution.

Figure 3
Lower St. Joseph Subwatershed With St. Joseph CSOs and Tributary Subbasins



There are six CSOs on the St. Joseph River, as shown in more detail in Figure 4. Four of these overflows, CSOs 51, 52, 53, and 68, are on the east side of the river – these CSOs serve the area typically referred to as the "St. Joe Subbasins." The remaining two overflows, CSOs 44 and 45, are small discharges that result from rather minor subbasins on the west side of the river. The compliance requirement for all six CSOs per Table 4.2.4.1 (CD Appendix 3) is to have untreated overflows limited to once per year during a typical year.

Figure 4
Detailed View of St. Joseph CSOs



The first control measure required by the LTCP for the St. Joseph River CSOs was identification and implementation of cost-effective partial separation for the St. Joe Subbasins under the Combined Sewer System Capacity Improvement Program, prior to finalization of full CSO controls. The partial separation work was completed on schedule by 2010. Following this work, and with the support of refined collection system modeling tools developed since completion of the original LTCP, the City developed a revised and improved solution for the St. Joseph River CSOs. This improved solution was presented to the U.S. EPA and the IDEM (the "regulatory agencies") in May 2013 (see previously submitted "Submittal in Support of Request for Approval of Revision of Certain Control Measures Specified by Approved Long-Term Control Plan," dated May 15, 2013), and approved as a CD revision in January, 26, 2015 (see CSOCM 7&8 Approved Consent Decree Modifications in Attachment 1).

The improved solution for control of the St. Joseph River CSOs is made up of the following components:

- The St. Joe Control Structure, to increase the effective hydraulic capacity of the St. Joseph Interceptor during wet weather conditions by allowing flows from this interceptor to be conveyed directly to the Wet Weather Pump Station at times when the Water Pollution Control Plant is at full capacity, thus lowering the hydraulic grade line at the downstream end of the St. Joseph Interceptor; and
- The St. Joe Relief Sewer, to capture additional wet-weather flows prior to discharge from the eastern St. Joseph River CSOs and convey these flows to the St. Joseph Interceptor, thus taking

advantage of the increased effective hydraulic capacity in the St. Joseph Interceptor provided by the St. Joe Control Structure.
- Miscellaneous local improvements for the western St. Joseph CSOs to achieve required control levels.

In summary, these constructed components replaced the plan for satellite treatment and storage facilities (as proposed in the original LTCP) with a regional solution to control of the St. Joseph River CSOs through increased capture and conveyance of wet weather flows that otherwise would have been discharged at multiple CSOs for regional storage at the CSO Ponds.

4. CSO Monitoring and Rainfall Monitoring

The City has been collecting system-wide CSO outfall flow data since 2004, with 33 of 41 CSO locations (including the St. Joseph CSOs) monitored with continuous depth/velocity meters. In addition, the City has maintained a network of 10 rain gauges to measure rainfall across the service area since 1983. These monitoring programs provide a strong dataset for understanding baseline conditions, with 13 years of combined CSO and rainfall data on record.

As explained in the PCMP, these in-place programs provided an ideal platform to collect the requisite 12 months of rainfall and activation data following AFO for the St. Joseph CSOs. This 12-month post-construction monitoring period began on September 1, 2015, and was completed on September 1, 2016. A key purpose for this data was to support the model-based compliance assessment approach (see Section 6 below), but it can also be used for an informative comparative data analysis of pre- and post-construction behavior. With this analysis, however, it is important to emphasize that a single 12-month post-construction dataset presents only limited insight into long-term performance of CSO controls.

The flow monitoring data and rainfall data were analyzed for calendar years 2010 – 2014 (inclusive) to represent pre-construction conditions; calendar year 2015 was eliminated from consideration given that construction of controls was underway. Relevant metrics from these five pre-construction 12-month periods were then compared to the same metrics for the 12-month post-construction monitoring period. The results of the comparison are shown in Table 2, included at the end of this document.

Several pertinent observations from this comparison are as follows:

- The annual rainfall in the pre-construction years ranges from a low of 33.1 inches to a high of 49.6 inches, compared to the typical year average of 35.4 inches. This wide range illustrates the fact that in any given real calendar year, in-place CSO controls may experience rainfall that is dramatically different from a “typical” year, resulting in greater (or fewer) activations than a target “typical” year compliance level.
- The distribution of 6-hour duration events shown in the third column provides a summary of the actual number of events experienced as compared to a statistical return period expectation, and provides another indication of whether a given year was “wet” or “dry” relative to the long-term average. For example, in 2011, there were 18 real events with a 6-hour duration that equaled

or exceeded the depth associated with a statistically-based 1-month return period – this is an indication that 2011 was a wetter-than-typical year relative to this type of event.

- In terms of CSO metrics, the post-construction monitoring data shows a dramatic decrease in activations and volumes across all St. Joseph CSOs, with 0 monitored activations in the 12-month period at all but one location (CSO 052). While this data comparison is not the mechanism specified by the Consent Decree to assess compliance with Performance Criteria, it does provide an initial suggestion of the success of the LTCP solution in the St. Joseph River Watershed.
- Although 2 true wet-weather activations were detected at CSO 052 over the 12-month post-construction monitoring period, this monitoring period is only a single real year and does not constitute a "typical" year. While the monitored total rainfall for this 12-month period (34.55 inches) was slightly less than the typical year average (35.4 inches), the number of 6-hour duration events was higher, indicating a higher-than-typical proportion of larger events with the potential to trigger CSO activations. As shown in Section 6, below, the model-based compliance determination method specified by the Consent Decree shows the St. Joseph River CSOs to be in compliance with the Performance Criteria.

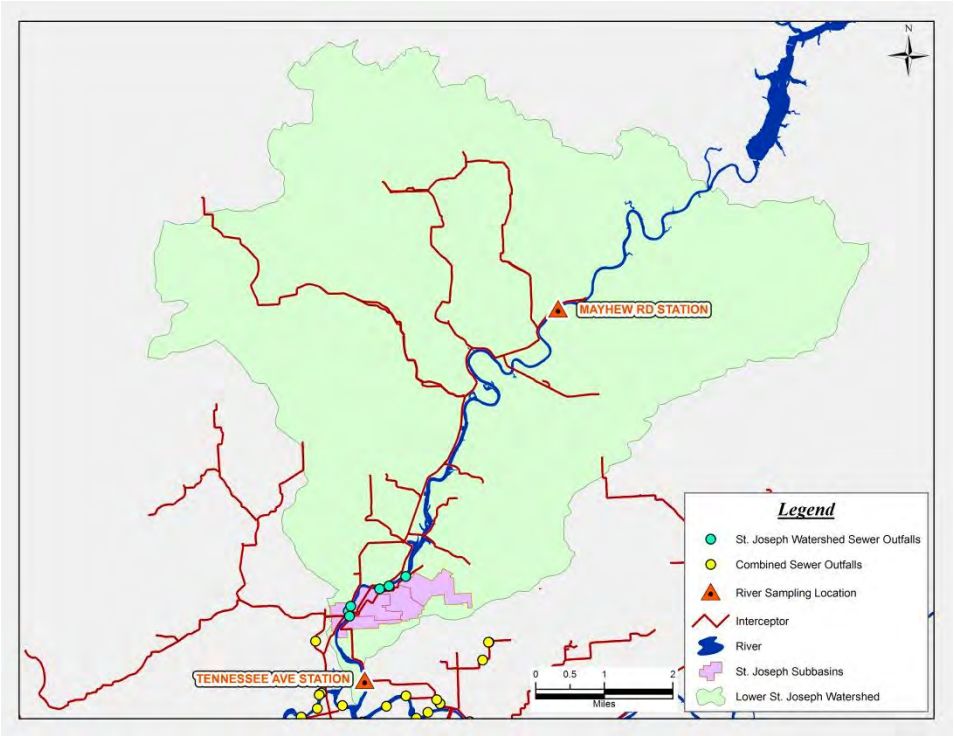
5. River Water Quality Sampling Results

During the LTCP system characterization effort (Chapter 2 of LTCP) and through subsequent discussions with U.S. EPA and IDEM, the City identified *E. coli* bacteria as the parameter of concern in local waterbodies. The City utilized water quality sampling data collected from 2001 – 2016 in order to analyze trends in both dry-weather and wet-weather E. coli levels during pre- and post-construction periods.

In U.S. EPA's December 2001 Report to Congress: Implementation and Enforcement of the Combined Sewer Overflow Control Policy, the agency noted that "In practice, it is often difficult, and in some instances impossible, to link environmental conditions or results to a single source of pollution, such as CSOs. In most instances, water quality is impacted by multiple sources, and trends over time reflect the change in loadings on a watershed scale from a variety of environmental programs." As explained further below, the noted watershed-scale impacts on E. coli levels is clearly a factor in the St. Joseph River, with the St. Joseph CSOs having a minor effect with or without control.

The City utilized data from its cooperative river water quality sampling program with IDEM, which has been ongoing since 2001, to perform the water quality analysis for this Milestone Report. Under this program, the City collects water quality samples at six locations, including two locations on the St. Joseph River. The two locations on the St. Joseph River are shown in Figure 5; one is located at Mayhew Road, which is effectively an upstream boundary for impacts from City sources, and the other is located at Tennessee Avenue, just downstream of the St. Joseph CSO outfalls. Samples are collected once per month on a year-round basis in support of the IDEM program; the City increases the frequency to weekly sampling during the period April 1 to October 31

Figure 5
Location of Water Quality Sampling Locations on St. Joseph River

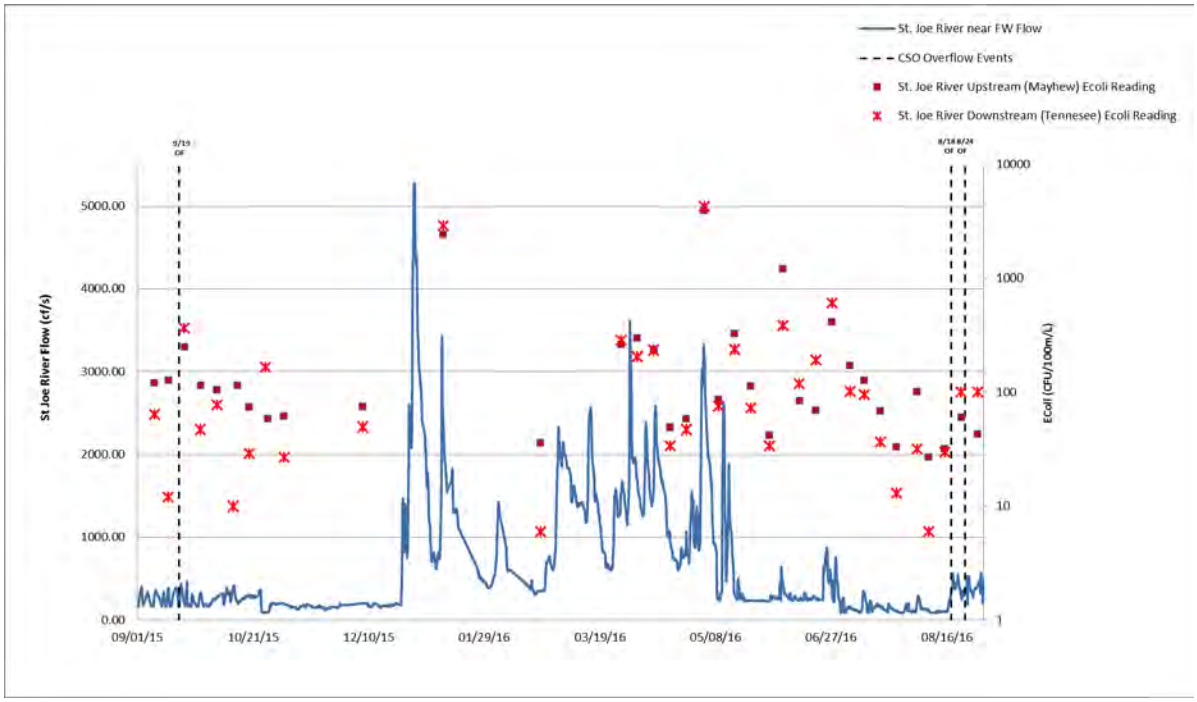


Data from the City's sampling program was used in two ways to examine E. coli levels in the St. Joseph River, each described below.

E. coli trends during the 12-month post-construction monitoring period: Figure 6 displays the E. coli sampling results from the St. Joseph River over the 12-month post-construction monitoring period from both the upstream (Mayhew) and downstream (Tennessee) sites, along with river flow (from USGS Gauge #04180500 at Mayhew Rd. Bridge) and the timing of monitored CSO 052 overflow events. Several conclusions can be drawn from this figure:

- E. coli levels are often higher at the upstream City boundary than at the location downstream of St. Joseph River CSO outfalls. Specifically for this 12-month period, out of 34 comparisons based on real sampling data, the upstream site had higher E. coli levels on 22 occasions.
- Second, the highest E. coli readings at the downstream site do not correlate to CSO activations. E. coli levels at the downstream Tennessee site were consistently less than 1000 cfu/100ml after each of the monitored CSO 052 activations (and as low as 100 cfu/100ml after two of the activations), compared to levels well over 1000 cfu/100ml at other times of the year. No activation occurred at any St. Joseph River CSO other than CSO 052.

Figure 6
E. coli Sampling Results During the 12-Month PCMP Monitoring Period



Note: The CSO overflow event on 09/19/15 is being shown for completeness, but as explained in Section 4 this overflow was due to a temporary blockage and so is not a wet-weather activation. The temporary blockage was removed immediately.

Informal assessment of E. coli water quality standards (WQS) attainment 2001 – 2016: The weekly E. coli sampling results from April to October of each year provide an informal mechanism to assess whether current E. coli WQS would have been attained over the historical sampling period. With weekly sampling, the City collects at least 4, and sometimes 5, samples every calendar month. Grouping the samples by calendar month, and treating each calendar month as a 30-day period, provides 100 "sample sets" from each sampling location that can be used to assess compliance with Indiana's E. coli WQS. The assessment is considered "informal" because it is not a strict application of the Indiana E. coli WQS, as many of the monthly sample sets include 4, rather than the minimum of 5, E. coli samples. However, it is still a valuable indicator of potential attainment based on an impressively long-term dataset.

Each monthly E. coli sample set was analyzed to determine the geometric mean and 90th percentile value, the two metrics used in the Indiana WQS. For the 90th percentile value, a simple linear interpolation method was used to estimate the value that represents the 90th percentile of the statistical distribution represented by the dataset.

Attachment 2 includes yearly plots of all the results, comparing geomeans and 90th percentile values at the upstream and downstream sites. The results of this analysis are consistent with the

conclusions drawn above from the individual E. coli sample values obtained during the 12-month post-construction monitoring period. From visual review, the results for any given year show that the downstream site (downstream of the St. Joseph CSOs) often has lower E. coli measures than the upstream site. Summarizing across all years, of the 100 available sample sets from 2001-2016, 71 (or 71%) showed non-attainment for E. coli at the upstream site (before City sources enter the river), and 76 (or 76%) showed non-attainment at the downstream site. The 90th percentile value controlled the non-attainment count, but the sample sets were often in violation of the geomean criterion as well.

In conclusion, both the individual E. coli samples from the 12-month post-construction monitoring and an analysis of monthly sample results for the 2001 – 2016 period reveal similar trends. The St. Joseph River is commonly in non-attainment of E. coli WQS upstream of the City boundary, before CSOs or other City sources contribute bacteria loads to the river. Further, there is no apparent trend suggesting that E. coli levels in the river downstream of the St. Joseph CSO discharges are consistently any higher than upstream of the CSO discharges, even before CSO controls were implemented (i.e. in the period from 2001 – 2014). These observations are consistent with the approved PCMP, which stated that it was unlikely that CSO controls alone will result in attainment of Indiana's *E. coli* standards for primary contact recreation due to numerous *E. coli* sources in the environment.

6. Evaluation of the Effectiveness of CSO Control Measures

Section 4.6.4.1 of CD Appendix 4 provides a detailed workplan for the Model-Based Approach to Assessing Compliance, which represents the required methodology for evaluating the effectiveness of CSO control measures. This workplan is summarized below, with the full text of Section 4.6.4.1 included in Attachment 3 for reference.

- Collect CSO outfall data for 12-months following AFO and QA/QC the data.
- Compare the CSO outfall data to a 12-month model simulation.
- "Model re-calibration will not be needed if the model achieves at least the same degree of calibration as was achieved for pre-CSO Long-Term Control conditions during the LTCP development process, and there is a high degree of agreement between the model output and CSO monitoring data for activation frequency."
- If necessary, re-calibrate the model with two or more appropriate events.
- Verify the re-calibration with a final 12-month simulation.
- Apply the final model for the 5-year (1998-2002) typical year period.
- Assess compliance with the performance criteria as 24 or fewer simulated CSO events on the Maumee and St. Mary's Rivers, and 6 or fewer simulated CSO events on the St. Joe River, over the simulated 5-year typical period.
- The overflow frequency performance criterion is based upon a "typical year," calculated using the 5-year continuous simulation of the collection system model, as described above. If the modeled average annual overflow frequency is less than or equal to 1.2 for the St. Joseph River and 4.8 for the Maumee and St. Mary's Rivers, the system is deemed to be in compliance with the performance criteria of 1 and 4 overflow events per year.

The City began the compliance assessment process by completing the model calibration check, using the 12 months of post-construction monitoring data collected after AFO of the St. Joseph River CSOs. A full description of the model calibration check is included as a Technical Memorandum in Attachment 4. The conclusion from the model calibration check was that the collection system model achieves at least the same degree of calibration for AFO conditions as was achieved for pre-CSO Long-Term Control conditions during the LTCP development process, and there is a high degree of agreement between the model output and CSO monitoring data for activation frequency. Therefore, the model was confirmed as an appropriate calibrated tool to perform the 5-year typical period simulation.

Following confirmation of the model calibration, the 5-year typical period simulation was performed for the 1998-2002 period, and activation counts at the St. Joseph CSOs were tabulated from the results. The predicted activation counts are shown in Table 4.6.2.1 (the approved summary format from CD Appendix 4), included at the end of this document. The results shown in the table confirm that the St. Joseph CSOs meet the required Performance Criteria in Table 4.2.4.1 and so are in compliance with the requirements of the CD.

7. Status of Upcoming CSO Control Measures in Other Watersheds

This section provides an overview of upcoming CSO Control Measures in other watersheds, reporting on status of construction schedules, etc. Please note that regular updates of this information are provided every six months in Appendix 1 of the City's Consent Decree Status Reports.

CSO Control Measure 6 – Combined Sewer System Capacity Improvement Programs (CSSCIP) – Basins Tributary to 3RPORT (formerly Parallel Interceptor), all river watersheds: This Control Measure identifies and implements cost-effective sewer separation in combined sewer subbasins in order to reduce the amount of wet-weather flow reaching regulator structures. Much of the work under this control measure has been completed, but remaining work is ongoing for the following CSO outfalls:

- CSO Outfalls 027 & 033 – final design is underway.
- CSO Outfall 48 – construction has been initiated.

CSO Control Measure 9 – Conveyance and/or Storage (formerly Satellite Disinfection, approved as a CD revision on November 2, 2016, see CSOCM 9 approval letter in Attachment 1), Maumee River Watershed and St. Marys River Watershed: Under this Control Measure, flows from CSO 061 and 062 up to the required control level will be conveyed to the Wet-Weather Ponds for storage, and a satellite storage facility will be constructed as necessary to achieve the required control level at CSO 054. The status of these improvements is as follows:

- CSO Outfalls 061 and 062 – final design has been completed, and bids received.
- CSO Outfall 054 – Advanced facilities planning is underway to optimize the final control technology, accounting for flow reduction at CSO 054 resulting from implementation of the CSSCIP under CSO Control Measure 4.

CSO Control Measure 10 – Morton Street/O10101 Reroute, Maumee River Watershed: Under existing conditions, CSO 048 is a pumped discharge to the Maumee River. Under CSO Control Measure 10, this pumped discharge up to the required control level will be rerouted to storage at the Wet-Weather Ponds. The design for these required improvements is currently ongoing.

CSO Control Measures 11 & 12 – Wayne Street and St. Marys Parallel Interceptors, Maumee River and St. Marys River Watersheds: As the agencies are aware, the City has submitted a request to modify these Control Measures to provide improved CSO control. The improved solution is made up or the 3RPORT Tunnel and Foster Park Relief Sewer. The status of the 3RPORT Tunnel and Foster Park Relief Sewer is as follows:

- The City's public outreach program for the 3RPORT is ongoing, to provide information to and solicit input from ratepayers.
- Final design of the Tunnel and Drop Shafts Package has been completed, and bids received.
- Final design of the Consolidation Sewers Package is ongoing.
- Final design of the Deep Dewatering Pump Station Package is ongoing.
- Construction of solution components east of the Water Pollution Control Plant (surface sewers and regulator modification) is ongoing.
- Final design of the Foster Park Relief Sewer is ongoing.

CSO Control Measure 13 – Late Floatables Control, all river watersheds: Under this Control Measure, overflow-specific controls are implemented at CSOs where solids and floatables controls are not being addressed as part of a broader Control Measure. Current projects under this Control Measure are addressing CSO Outfall 060 (construction ongoing) and CSO Outfalls 061 & 062 (final design completed, bids received).

CSO Control Measure 14 – Satellite Storage, Maumee River Watershed: Under this Control Measure, satellite storage is proposed for CSO 064. Advanced facilities planning is underway to optimize the final control technology, accounting for flow reduction at CSO 064 resulting from implementation of the CSSCIP under CSO Control Measure 4.

Table 2
Summary of Rainfall and Flow Monitoring Data Analysis

Year	Total Rainfall Depth (in)	Distribution of 6-Hour Duration Events				Monitored CSO Metrics											
						CSO 44		CSO 045		CSO 051		CSO 052		CSO 053		CSO 068	
		1-Month	3-month	6-month	1-Year	Activations	OF Volume (MG)	Activations	OF Volume (MG)	Activations	OF Volume (MG)	Activations	OF Volume (MG)	Activations	OF Volume (MG)	Activations	OF Volume (MG)
2010	33.1	13	7	1	0	5[1]	0.146	6	0.162	24	3.778	28	4.754	12	1.677	8	0.575
2011	49.59	18	5	2	2	5	0.063	4	0.09	18	0.95	35	12.05	6	0.62	19	3.12
2012	28.58	10	4	1	0	0	0	0	0	7	0.078	19	2.546	2	0.019	4	0.071
2013	42.21	15	8	2	1	9	0.431	1	0.056	23[1]	1.282	41	16.121	10	2.108	10	1.887
2014	42.81	13	7	5	4	6	0.039	1	0.028	23	0.991	48	20.218	9	0.45	11	0.503
2015	CONSTRUCTION PERIOD																
Sep 1, 2015 - Sep 1, 2016 (PCMP Monitoring Period)	34.55	13	4	3	2	0	0	0	0	0	0	3 recorded, 2 true[2]	0.100	0	0	0	0
Expected Return Period Depth (in)		0.63	1.04	1.36	1.64												
Ideal Number of Events in 1-Year Period		12	4	2	1												

Notes:
(1) These activation counts have been corrected since submittal of DMRs, based on additional data review.
(2) One recorded activation at CSO 052 (on September 19, 2015) was due to a blockage in the regulator and not due to excess wet-weather flows. This blockage was immediately cleared.

Table 4.6.2.1
Post-Construction Monitoring for CSO Control Measures by River Watershed

Watershed	CSO Control Measure		CSOs Controlled (By Overflow Permit ID)	Monitoring Data		Typical Year Performance		Overflow Frequency Performance Criteria Achieved (Yes/No)[1]	Comments
				CSO Volume (MG)	Overflow Frequency By Watershed	CSO Volume (MG)	Overflow Frequency By Watershed		
St. Joseph River	7, 8[2]	Conveyance and Regional Storage	51, 52, 53, 68	0.1	2	0.02	0.6	**Yes**	2 activations in the 12-month PCMP monitoring period can be explained by a higher-than-typical proportion of larger events - see Section 4 for additional details.
		Miscellaneous Improvements	44, 45						

Notes:
(1) Typical Year Performance Criteria of 1 overflow event (for the St. Joseph River) is based on average annual statistics over a representative five-year period (with 1.2 overflow events per year allowed based on raw model results). The methodology used for assessing compliance with this criterion is presented in Section 6.
(2) Original CSO Control Measures 7 and 8 were replaced with an improved solution as part of the approved CD revision dated abc, 20xx. Please see Section 3 for details.

ATTACHMENT 1

CD Revisions for CSOCM 7 and 8:
Agreed Consent Decree Modifications dated January 26, 2015

CD Revisions for CSOCM9
Approval Letter dated November 2, 2016

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF INDIANA
FORT WAYNE DIVISION

UNITED STATES OF AMERICA and THE STATE OF INDIANA, Plaintiffs, v. THE CITY OF FORT WAYNE, INDIANA, Defendant.	Civil Action No. 2:07-cv-00445-PPS-APR

AGREED CONSENT DECREE MODIFICATION

WHEREAS:

A. On April 1, 2008, the United States District Court for the Northern District of Indiana approved and entered a Consent Decree between the United States and State of Indiana (collectively "Plaintiffs") and the City of Fort Wayne, Indiana ("Fort Wayne" or "Defendant") in a case captioned *United States, et al. v. City of Fort Wayne,* Civil Action No. 2:07-cv-00445-PPS-APR (Doc. No. 4).

B. The objective of the Consent Decree is for Defendant to achieve and maintain full compliance with the Clean Water Act, applicable state law, and Fort Wayne's Current National Pollution Discharge Elimination System Permit issued pursuant to the Clean Water Act for Defendant's Wastewater Treatment Plant and Sewer System.

C. Paragraphs 14 and 16 of the Consent Decree require the Defendant to construct the Combined Sewer Overflow Control Measures set forth in Appendix 3 to the Consent Decree in accordance with the descriptions, Design Criteria, and schedule set forth in Appendix 3, and to achieve the specified Performance Criteria in accordance with the schedule set forth in Appendix 3.

D. In the course of implementing the Consent Decree, Fort Wayne has determined that certain of the Combined Sewer Overflow ("CSO") Control Measures (requiring satellite storage and disinfection) that it had previously selected and agreed to are not ideal, and that better solutions exist for the affected CSOs. Fort Wayne has proposed, and the U.S. Environmental Protection Agency ("EPA") and the Indian Department of Environmental Management ("IDEM") have agreed to, an alternative approach for CSO Control Measures 7 and 8, and Fort Wayne is developing a proposed alternative approach for Control Measure 9 for consideration and, if appropriate, approval by, EPA and IDEM.

E. Paragraph 81 of the Consent Decree provides that any modification of the Consent Decree, including any attached appendices, may be made only by the written approval of all Parties. Where a modification also constitutes a "material change" to the Consent Decree, it shall be effective only upon approval by the Court. At least some of the modifications that the Parties propose herein constitute "material changes" and require judicial approval.

Changes to Appendices 3 and 4 concerning CSO Control Measures 7 and 8

F. EPA and IDEM have agreed to Defendant's proposal to combine and modify CSO Control Measures 7 and 8. Instead of using remote storage and disinfection to control the overflow from CSO Outfalls 45, 51, 52, 53 and 68, covered by Control Measures 7 and 8, as originally specified by Consent Decree Appendix 3, Fort Wayne shall expand the St. Joseph

Interceptor to accommodate the flow from Outfalls 45, 51, 52, 53 and 68. This "St. Joseph Interceptor" Control Measure is designated as Control Measure 7 in the Revised Appendix 3 (which is attached in redlined format as Attachment 1). CSO Control Measure 8 has been eliminated.

G. This modification extends one interim deadline applicable to Outfall 52 (which had been in the prior Control Measure 8) by one year, from December 2014 to December 2015, but the completion schedule for all of the CSO Control Measures for the St. Joseph River CSO Outfalls (45, 51, 52, 53 and 68) will be considerably accelerated with the revised approach (Revised Control Measure 7 in Revised Appendix 3, Attachment 1 hereto). The deadline for completion will move up from December 2019 to December 2015.

H. The proposed modification to these Control Measures is required and expected to achieve the Performance Criteria originally specified in Appendix 3 for the St. Joseph Combined Sewer Overflows (CSOs) (one overflow per typical year) and is expected to provide water quality benefits that meet or exceed those that would be obtained by the measures that were originally required for these CSOs. Revised CSO Control Measure 7 also costs less.

I. A modification is also proposed for Paragraph 4.6.2 in Appendix 4 to the Consent Decree (attached in redlined form here to as Attachment 2) to reflect the earlier deadline by which the St. Joseph River Interceptor Control Measure will achieve final operation (by December 2015, instead of December 2019).

Changes to Appendices 3 and 4 and Consent Decree Section XXI.G/Paragraph 103 Concerning CSO Control Measure 9

J. The Parties also take this opportunity to build some flexibility into the Consent Decree for Control Measure 9, to allow Fort Wayne to propose for EPA and IDEM approval

a Control Measure other than those that are currently specified in Appendix 3. As entered by the Court, Appendix 3, footnote 8, provides:

> The preferred CSO Control Measure for these CSOs is Satellite Disinfection based on the technology screening and selection process conducted by the City. The City will proceed as described in Section 4.6 of Appendix 4 to conduct a Satellite Disinfection Pilot Study if it ultimately elects to construct one or more Satellite Disinfection facilities. Alternatively, the City may elect to construct Satellite Storage facilities that will achieve the same Level of Control. The City will construct Satellite Storage facilities in lieu of Satellite Disinfection facilities if it comes to acquire, by January 1, 2010, the wastewater collection and treatment systems currently owned or operated by Utility Center, Inc. (a/k/a AquaSource or Aqua Indiana, Inc.) and connected to the Main Aboite and Midwest wastewater treatment facilities (for which the State has issued NPDES Permit Nos. IN0035378 and IN0042391).

K. EPA and IDEM have been in discussions with Fort Wayne concerning CSO Control Measure 9, and EPA and IDEM agree that satellite disinfection may not be the optimal remedy for the outfalls on the St. Marys and Maumee Rivers that are to be addressed by this Control Measure. The City may develop an alternative solution for these outfalls and has indicated that it may wish to propose a relief sewer approach (not dissimilar from the improved solution now set forth in proposed CSO Control Measure 7). However, the City's plans for a possible improved solution for CSO Control Measure 9 are not as developed as those for CSO Control Measures 7 and 8. Rather than specifying an alternative approach now, the Parties propose to allow the City the flexibility to propose its solution subject to EPA and IDEM approval, when it has been sufficiently developed. Any such proposed Alternative Control Measure must meet the Level of Control/Performance Criteria and Critical Milestones previously agreed to for Control Measure 9 (but see Paragraph P, below) and as currently set forth in proposed Revised Appendix 3 (Attachment 1 hereto). If the City fails to propose, or EPA does not approve, an Alternative Control Measure, the City remains obligated to

construct the Satellite Disinfection system that was originally required by the Consent Decree and that remains the specified CSO Control Measure for these CSOs in Revised Appendix 3 (Attachment 1).

L. Finally, footnote 8 of Appendix 3, as set forth above, specifies that the City may elect to construct Satellite Storage facilities in lieu of the Satellite Disinfection facilities, and that it would in fact construct them ("The City will construct . . . .") if the City acquired certain necessary property and facilities by January 1, 2010. EPA and IDEM do not currently believe that Satellite Storage is in fact an optimal approach for the St. Marys and Maumee Rivers CSOs, and, in any event, despite its efforts, the City was unable to timely acquire the necessary property and facilities. Thus, this aspect of the footnote is now moot.

M. Accordingly, the Parties propose to revise footnote 8 of Appendix 3 as follows (and as shown in Revised Appendix 3, Attachment 1 hereto):

> The preferred CSO Control Measure for these CSOs is Satellite Disinfection based on the technology screening and selection process conducted by the City. The City will proceed as described in Section 4.6 of Appendix 4 to conduct a Satellite Disinfection Pilot Study if it ultimately elects to construct one or more Satellite Disinfection facilities. ~~Alternatively, the City may elect to construct Satellite Storage facilities that will achieve the same Level of Control. The City will construct Satellite Storage facilities in lieu of Satellite Disinfection facilities if it comes to acquire, by January 1, 2010, the wastewater collection and treatment systems currently owned or operated by Utility Center, Inc. (a/k/a AquaSource or Aqua Indiana, Inc.) and connected to the Main Aboite and Midwest wastewater treatment facilities (for which the State has issued NPDES Permit Nos. IN0035378 and IN0042391).~~ Alternatively, the City may pursue construction of an Alternative Control Measure, including one or more satellite storage or other facilities, in lieu of satellite disinfection facilities as the CSO Control Measure for Outfalls 54, 61 and/or 62. Any such proposed Alternative Control Measure must meet the Level of Control/Performance Criteria and Critical Milestones previously agreed to for Control Measure 9 and as currently set forth in this Revised Appendix 3. If Fort Wayne pursues the selection of other facilities in lieu of satellite disinfection it shall submit an Alternative Control Measure Proposal by December 15, 2016 for approval under Paragraph 103 of the Consent Decree. The Proposal shall include a full discussion of the justification for the selection.

N. The Parties also propose minor revisions to the Consent Decree to bring the Alternative Control Measure Proposal within the ambit of the existing EPA/IDEM approval process set forth in Section XXI.G (Paragraphs 103-109, pp. 47-49) the Decree (Doc. 4, pp. 50-52). Specifically, the Parties propose that the Paragraph heading for Section XXI.G and Paragraph 103 be revised as follows:

> G. EPA and IDEM Approval of Submissions Pursuant to Sections XXI.A-F and Appendix 3, note 8
>
> 103. For all plans, reports, and other documents that Fort Wayne is required to submit to EPA and IDEM for approval in accordance with Sections XXI.A-F and Appendix 3, note 8, EPA and IDEM shall, in writing: (i) approve the submission . . . .

O. The Parties also agree to modify Paragraph 4.6.3.4.2 of Appendix 4, the Post Construction Monitoring Plan, to acknowledge that satellite disinfection at Outfalls 54, 61 and 62 may not occur, because Fort Wayne, as discussed above, may propose a Control Measure other than satellite disinfection. *See* Attachment 2, hereto.

Change to Appendix 3 to Correct Typographical Error Concerning Performance Criteria for CSO Control Measure 9

P. The Parties also take this opportunity to correct a longstanding typographical error in Appendix 3 concerning the Performance Criteria for CSO Control Measure 9, which addresses the Maumee River Outfalls (CSOs 54, 61 and 62). As correctly stated in footnote 7 of Appendix 3, "CSO Control Measure [9] will be designed to achieve Performance Criteria of 4 CSO events for the St. Marys and Maumee Rivers . . . in a 'typical year.'" This was also discussed in the United States' Motion to Enter Consent Decree and Memorandum in Support, which stated that CSO Control Measure 9 "is expected to reduce the number of CSOs from

roughly 60 per year currently to four per typical year on the Maumee [River] . . . ." Doc. 3, p. 8. However, the Performance Criteria for Control Measure 9 set forth in the text box of Appendix 3 mistakenly calls for Outfalls 54, 61 and 62 to be controlled to one overflow in a typical year. Therefore, the Parties have agreed that the Performance Criteria in the text box for Control Measure 9 should be corrected from one overflow event per typical year to four overflow events per typical year, as correctly set forth in footnote 7 and as previously explained to the Court. This correction is shown in the Revised Appendix 3 (Attachment 1).

. . . . . .

The Parties hereto agree, and the Court by entering this Agreed Consent Decree Modification finds, that entry of this Modification is fair, reasonable, and in the public interest;

NOW, THEREFORE, upon consent of the Parties hereto, before the taking of testimony, and without any adjudication of issues of fact or law, it is hereby ORDERED, ADJUDGED AND DECREED as follows:

1. The Consent Decree shall remain in full force and effect in accordance with its terms, except as follows:

a. The attached Revised Appendix 3 (Attachment 1) shall be substituted for the Appendix 3 currently filed with the Decree.

b. The attached Revised Appendix 4 (Attachment 2) shall be substituted for the Appendix 4 currently filed with the Decree.

c. Section XXI.G (Paragraphs 103-109, pp. 47-49) the Consent Decree (Doc. 4, pp. 50-52) shall be revised as follows:

G. <u>EPA and IDEM Approval of Submissions Pursuant to Sections XXI.A-F and Appendix 3, note 8</u>

> 103. For all plans, reports, and other documents that Fort Wayne is required to submit to EPA and IDEM for approval in accordance with Sections XXI.A-F and Appendix 3, note 8, EPA and IDEM shall, in writing: (i) approve the submission . . . .
>
> .

2. This Agreement may be executed in counterparts.

3. This Agreed Consent Decree Modification shall be lodged with the Court for a period of not less than 30 days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding this First Amendment to the Consent Decree disclose facts or considerations indicating that the Amendment is inappropriate, improper, or inadequate. Defendant hereby agrees not to withdraw from, oppose entry of, or to challenge any provision of this Consent Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Consent Decree.

This First Amendment to the Consent Decree is entered and approved this 26th day of Jan., 2015.

s/Philip P. Simon
PHILIP P. SIMON
Chief Judge

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

NOV 0 2 2016

REPLY TO THE ATTENTION OF:
WC-15J

BY ELECTRONIC MAIL AND BY CERTIFIED MAIL RETURN RECEIPT REQUESTED 7014 2870 0001 9580 7887

Mr. Matthew Wirtz
Deputy Director, Engineering
Citizens Square
200 E. Berry St.
Fort Wayne, Indiana 46802

Subject: Approval of Alternative to Combined Sewer Overflow Control Measure (CSOCM) #9, for Combined Sewer Overflows (CSOs) #54, #61 and #62
Pursuant to Consent Decree #2:07cv00445-PPS-APR as Modified

Dear Mr. Wirtz:

The U.S. Environmental Protection Agency and Indiana Department of Environmental Management (IDEM) have received and reviewed the City of Fort Wayne's (City's) September 15, 2015 request for the approval of alternative control measures to satellite disinfection for CSOs #54, #61, and #62.

For CSO #54, the proposed alternative consists of the construction of a proposed .20 million gallon storage basin in lieu of satellite disinfection. For CSOs #61 and #62, the proposed alternative consists of the construction of a 54 inch diameter relief sewer from the CSOs to convey those flows to the wastewater wet weather excess flow ponds for full treatment in lieu of satellite disinfection.

EPA and IDEM reviewed the City's request and subsequent technical engineering submittals pursuant to Paragraph M, Page 5 of the Third Consent Decree Modification in *United States of America and State of Indiana v. The City of Fort Wayne, Indiana* (#2:07cv00445-PPS-APR).

Pursuant to Paragraph 103 of the Consent Decree, EPA in consultation with IDEM, approves the City's alternative Control Measure #9 (CM#9) for CSOs #54, #61 and #62 as meeting the obligations set forth in the aforementioned paragraph.

The Design Criteria for Control Measure #9 is:

- For CSO #54, "To construct a .20 million gallon storage basin."
- For CSOs #61 and #62, "To construct a 54 inch diameter relief sewer for conveyance from these CSOs to the wet weather excess flow ponds."

The Performance Criteria for Control Measure #9 remains the same.

The Critical Milestones, are that the City must meet the following dates:

- For CSO 54: Operation - December 31, 2020
- For CSO # 61 and # 62: Operation - December 31, 2018

The City must complete construction and have operational Control Measure #9 consistent with the above Design Criteria, the Performance Criteria as previously agreed and in accordance with the approved Long Term Control Plan and terms of the Consent Decree.

If you have any questions or concerns regarding this letter, contact John "Jack" J. Bajor, Jr., of my staff at 312-353-4633 or via email at bajor.john@epa.gov.

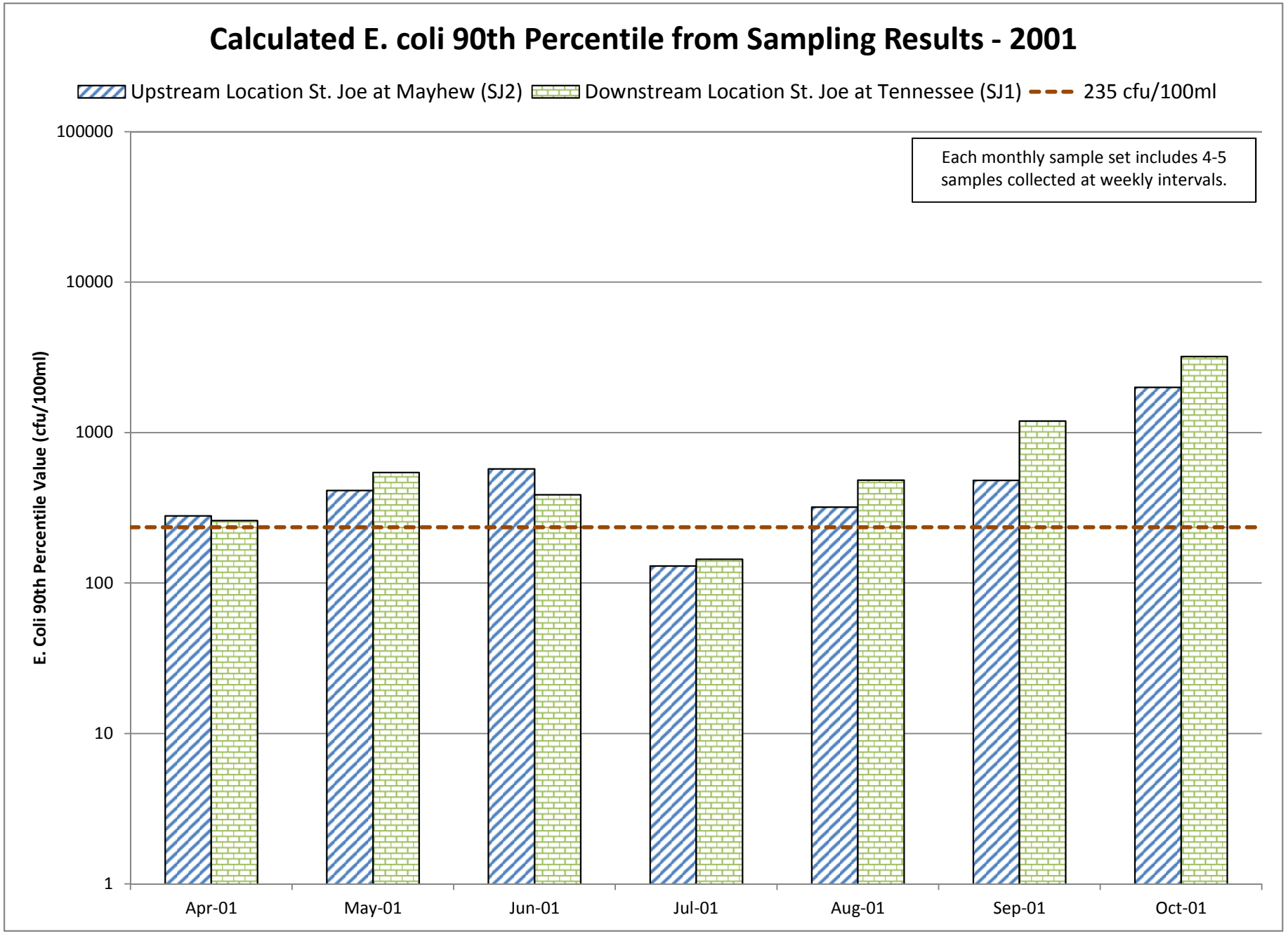
Sincerely,

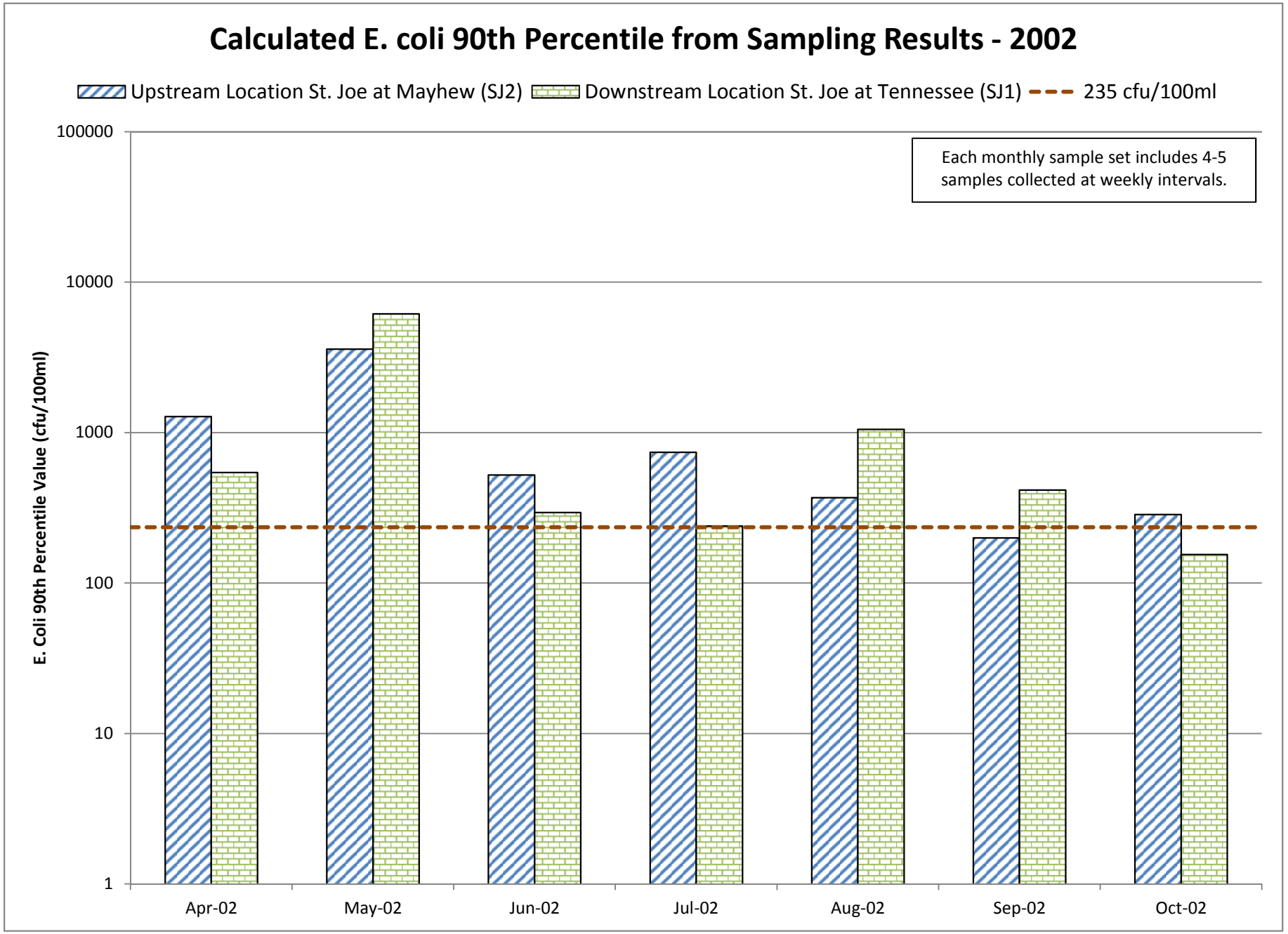
Christopher Korleski
Director, Water Division

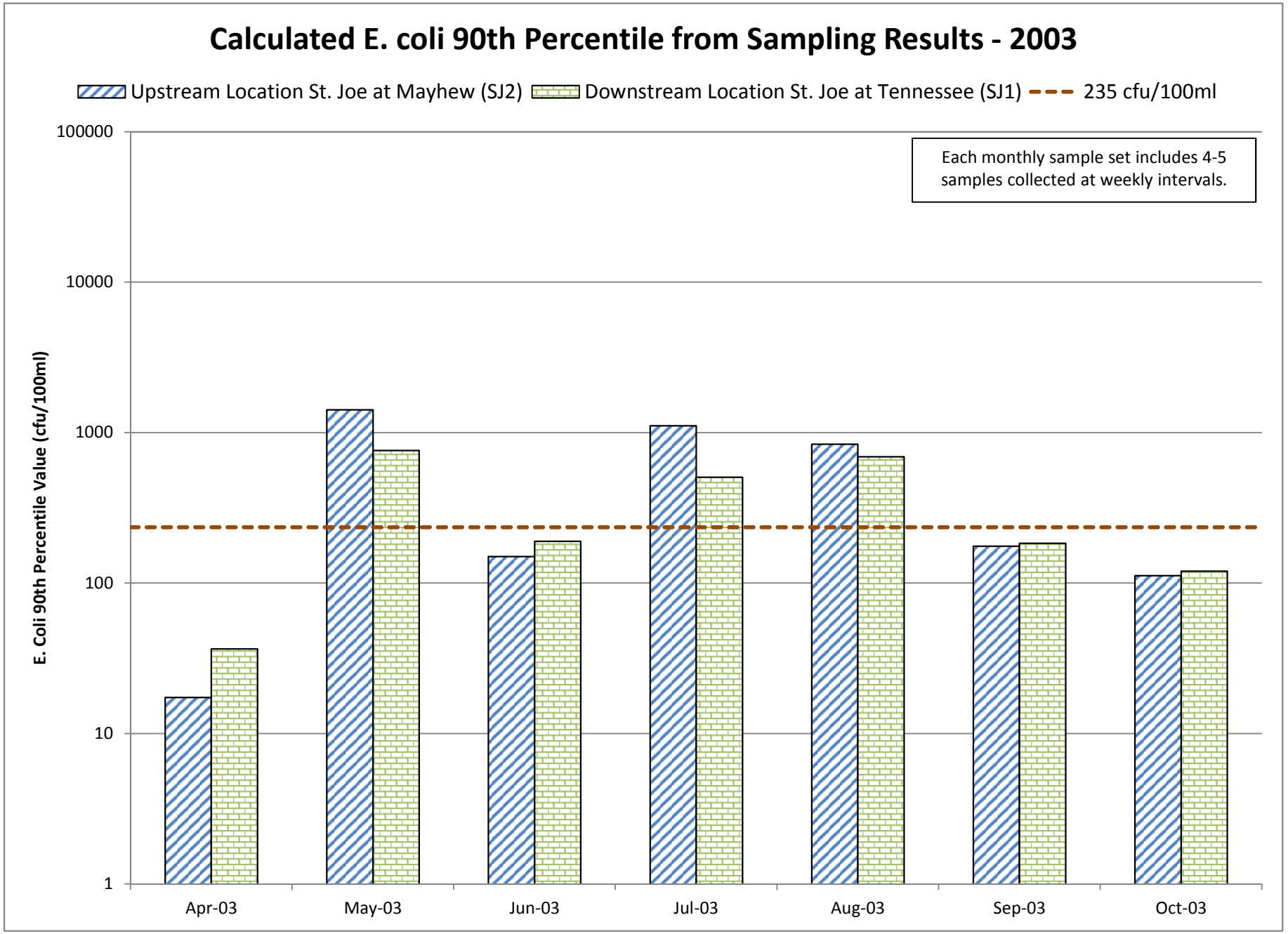
cc: Beth Admire, IDEM (via email)
Lynn Riddle, IDEM (via email)
Leslie Allen, DOJ (via email)
Mark Pollins, OECA (via email)

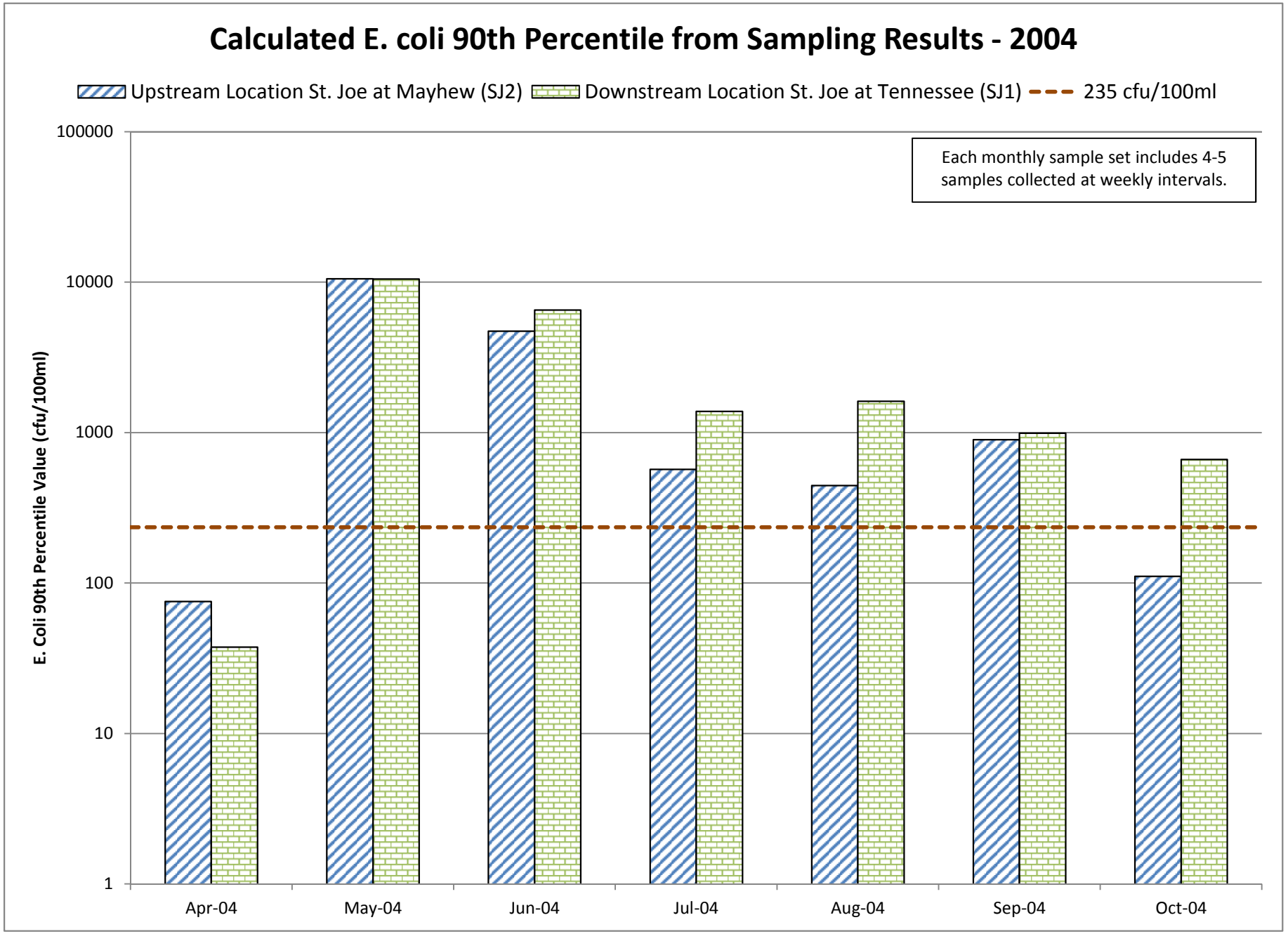
ATTACHMENT 2

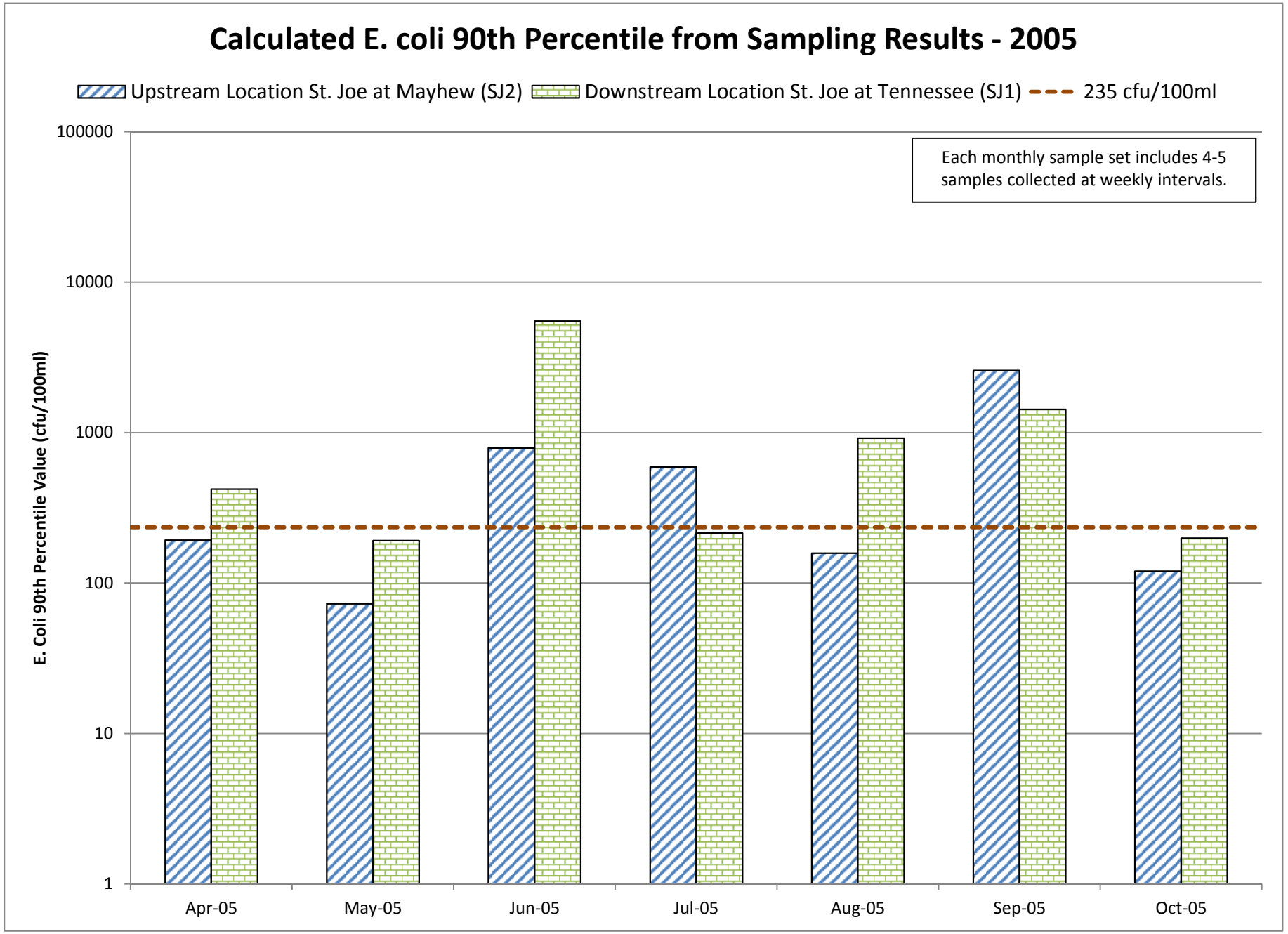
30-day Period E.coli Geomeans and 90th Percentile Values
Based on 2001-2016 Historical Sampling Data

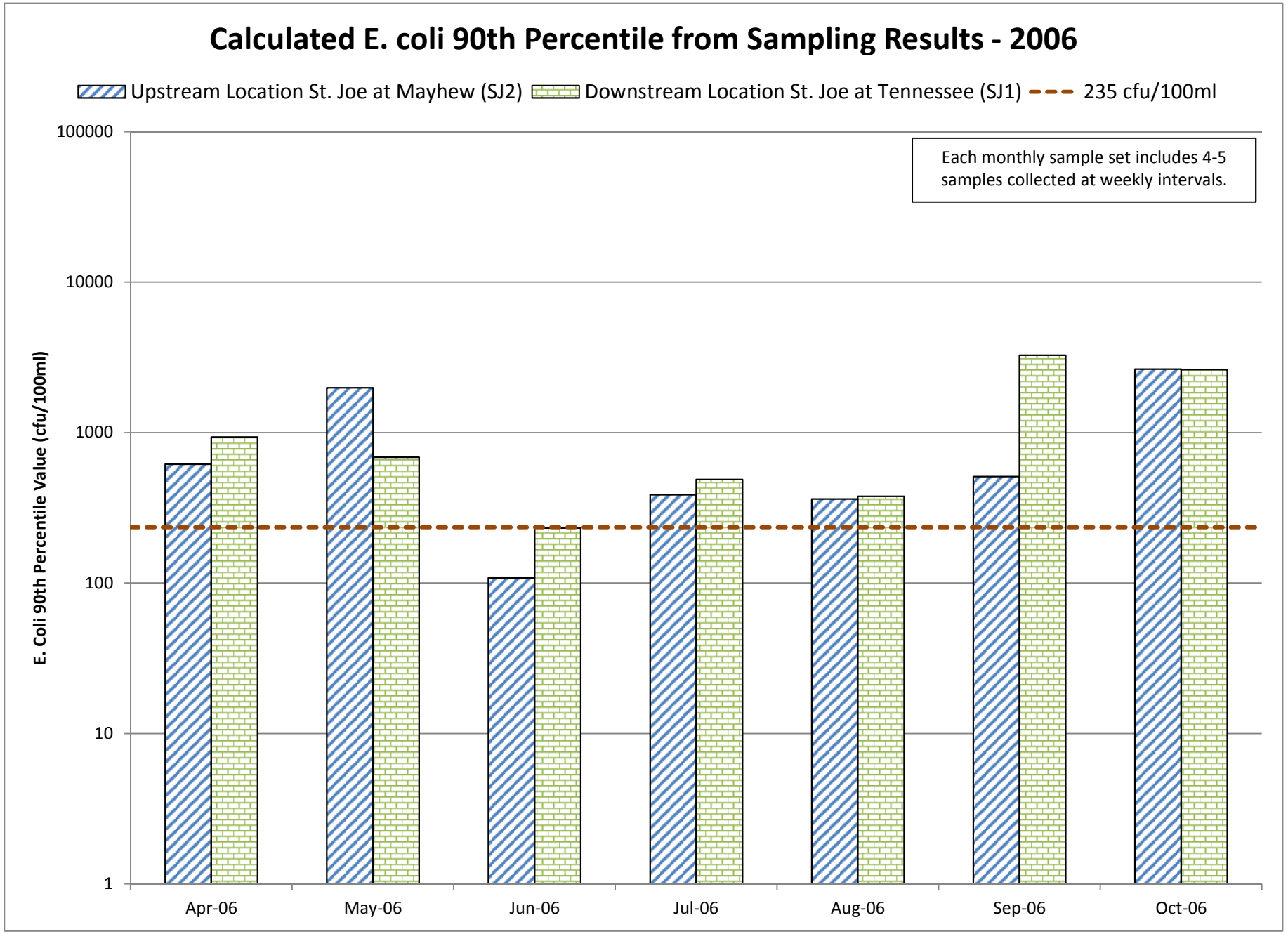

Calculated E. coli 90th Percentile from Sampling Results - 2001
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01


Calculated E. coli 90th Percentile from Sampling Results - 2002
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02


Calculated E. coli 90th Percentile from Sampling Results - 2003
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03
Oct-03


Calculated E. coli 90th Percentile from Sampling Results - 2004
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04


Calculated E. coli 90th Percentile from Sampling Results - 2005
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Oct-05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Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
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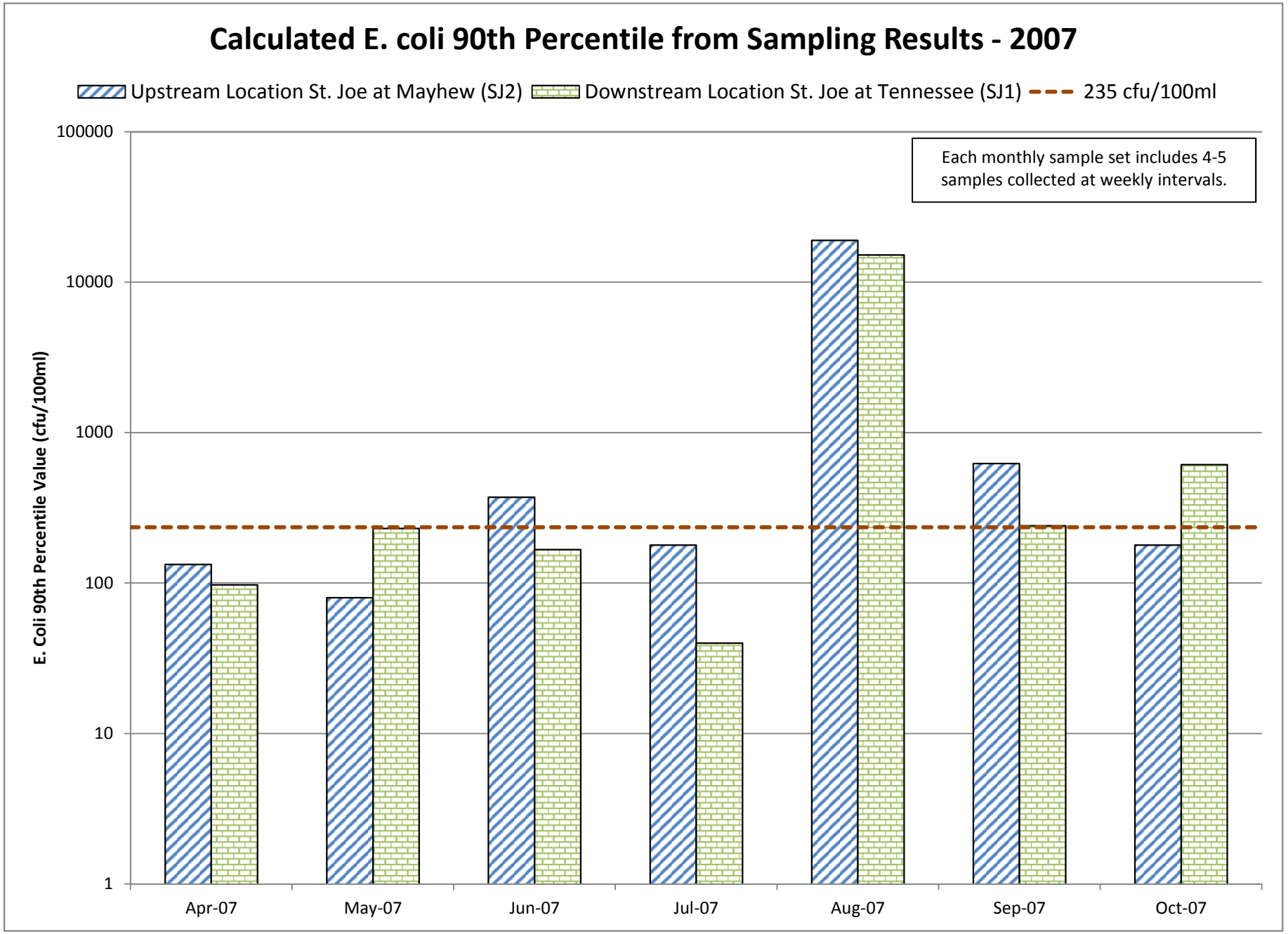
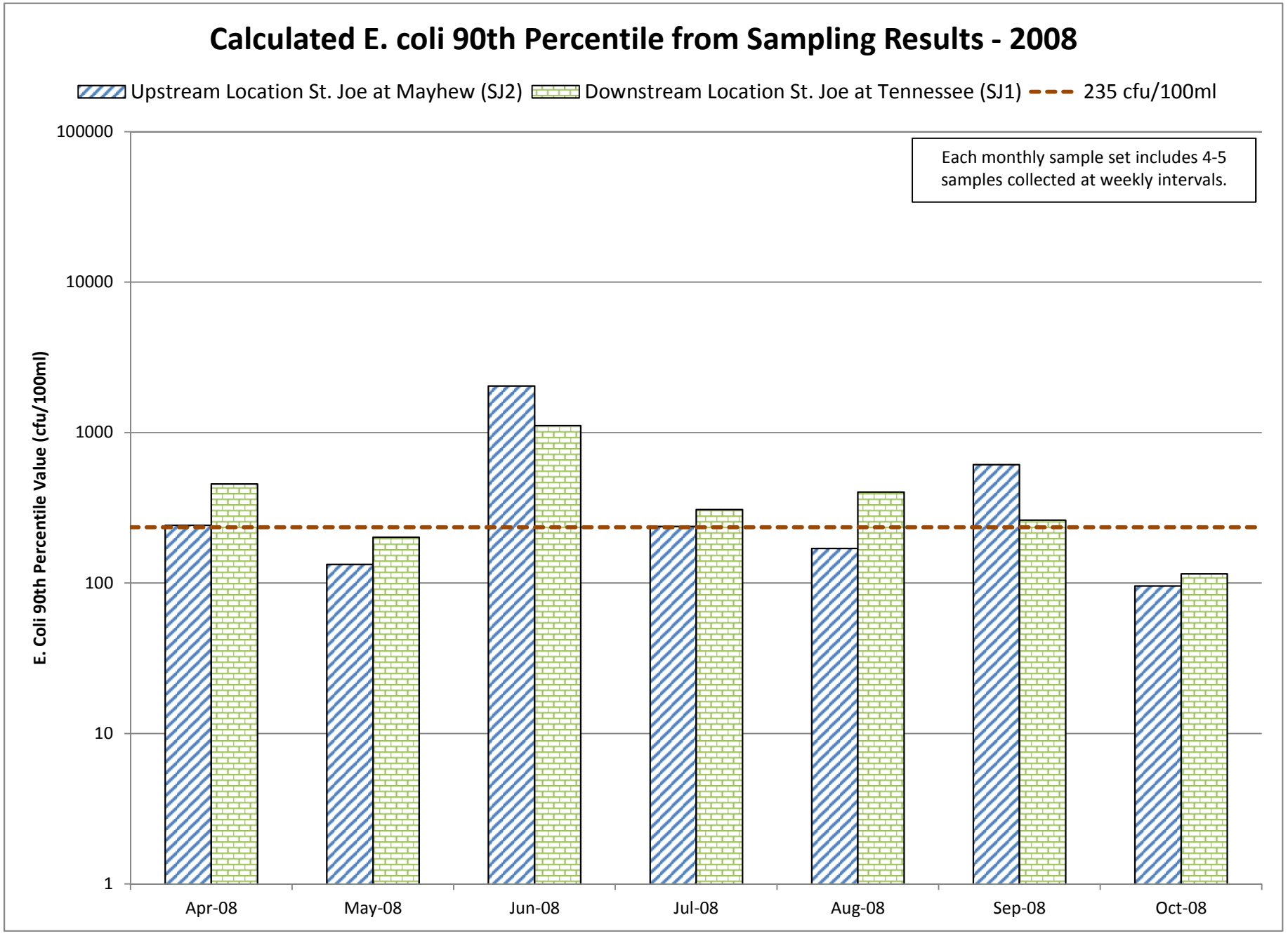
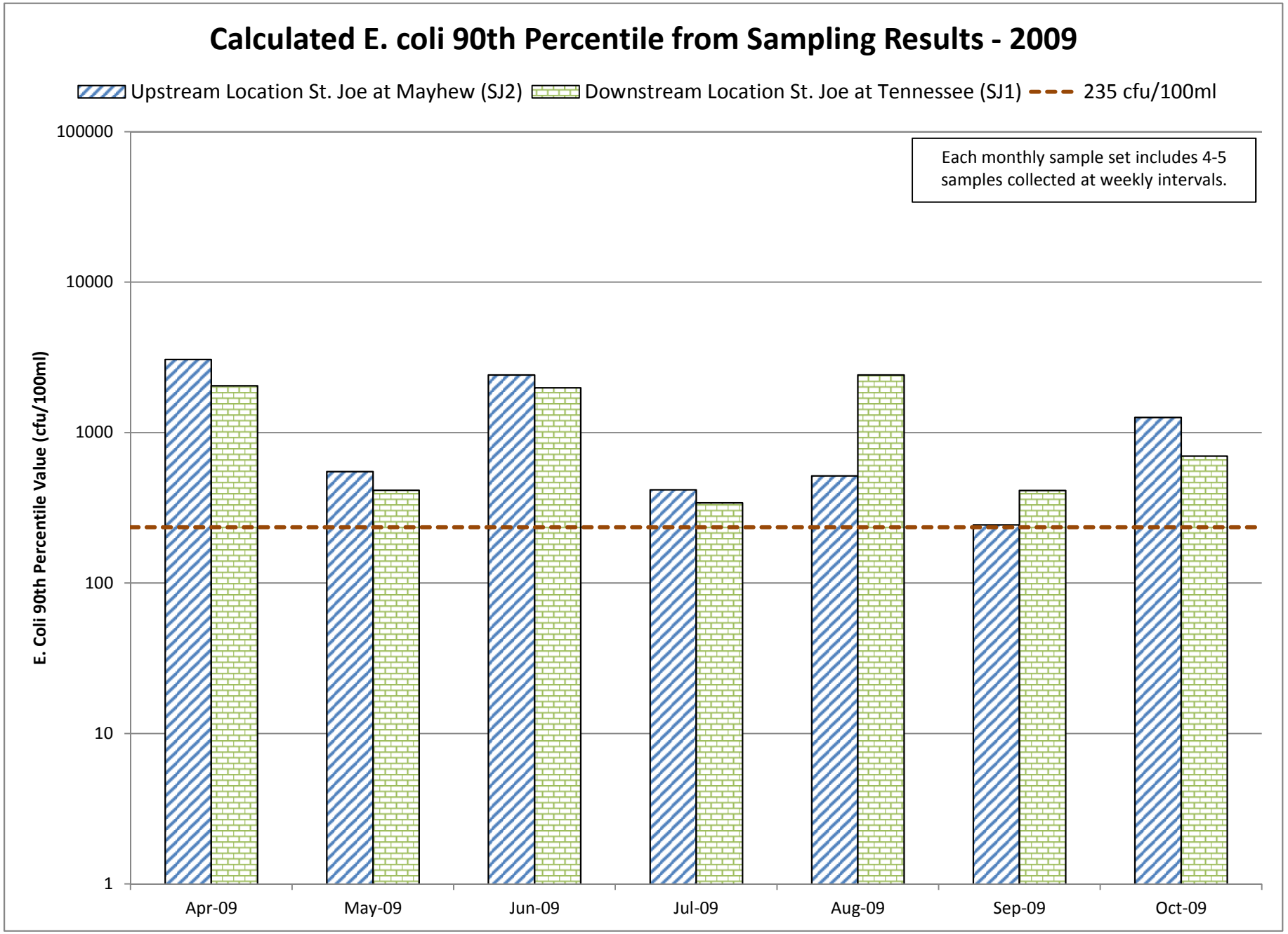
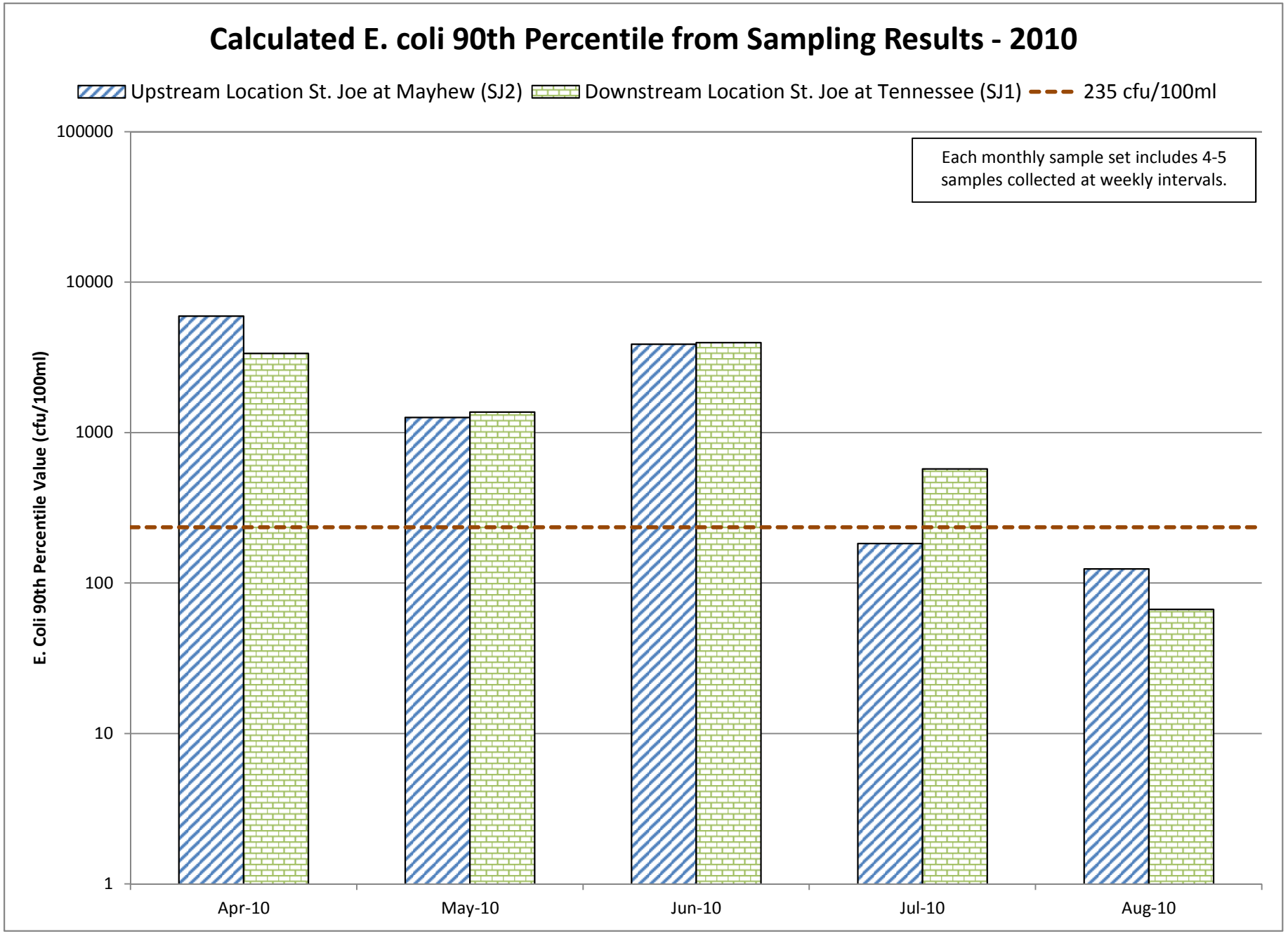
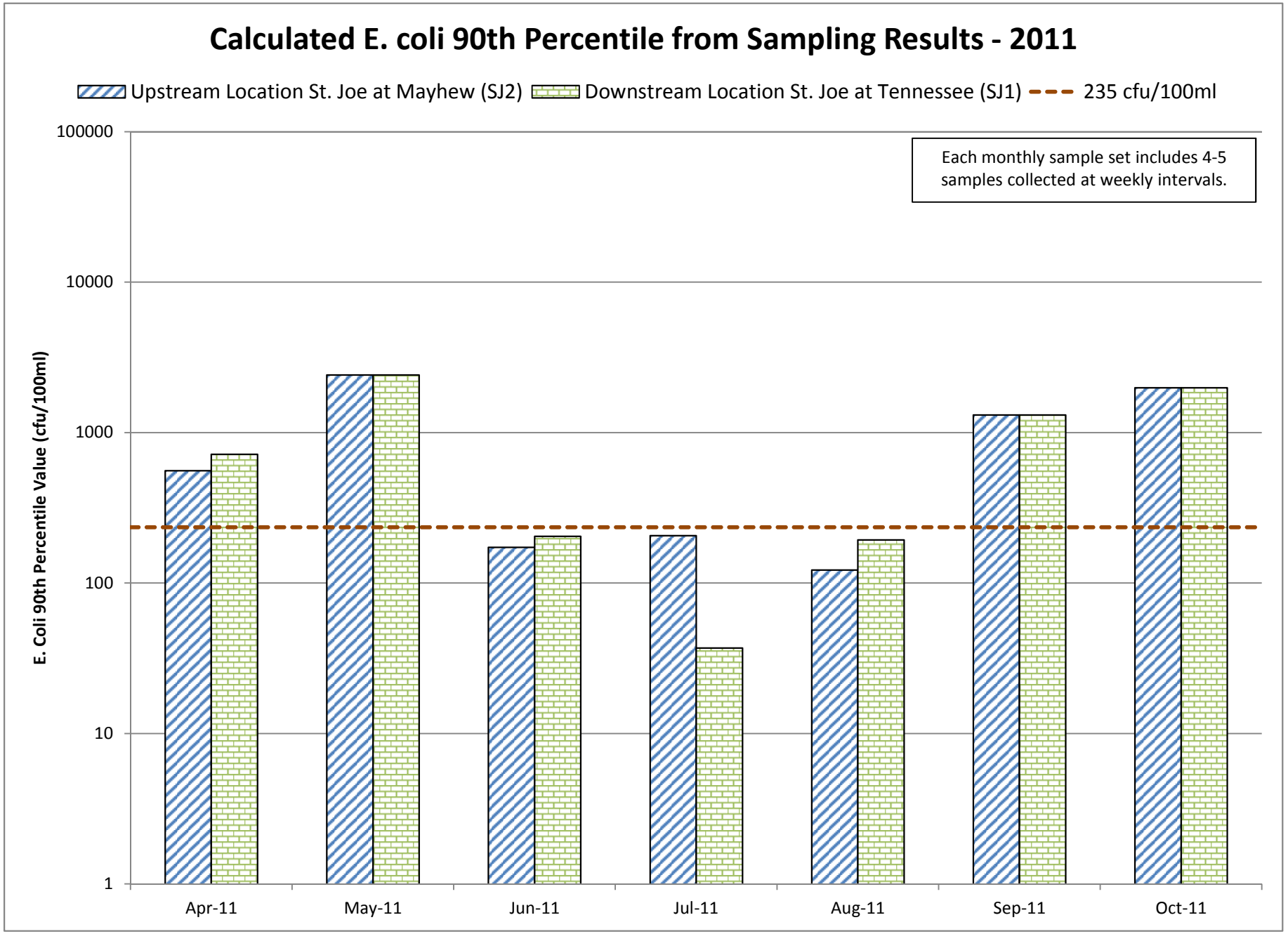
10000
1000
100
10
1
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06

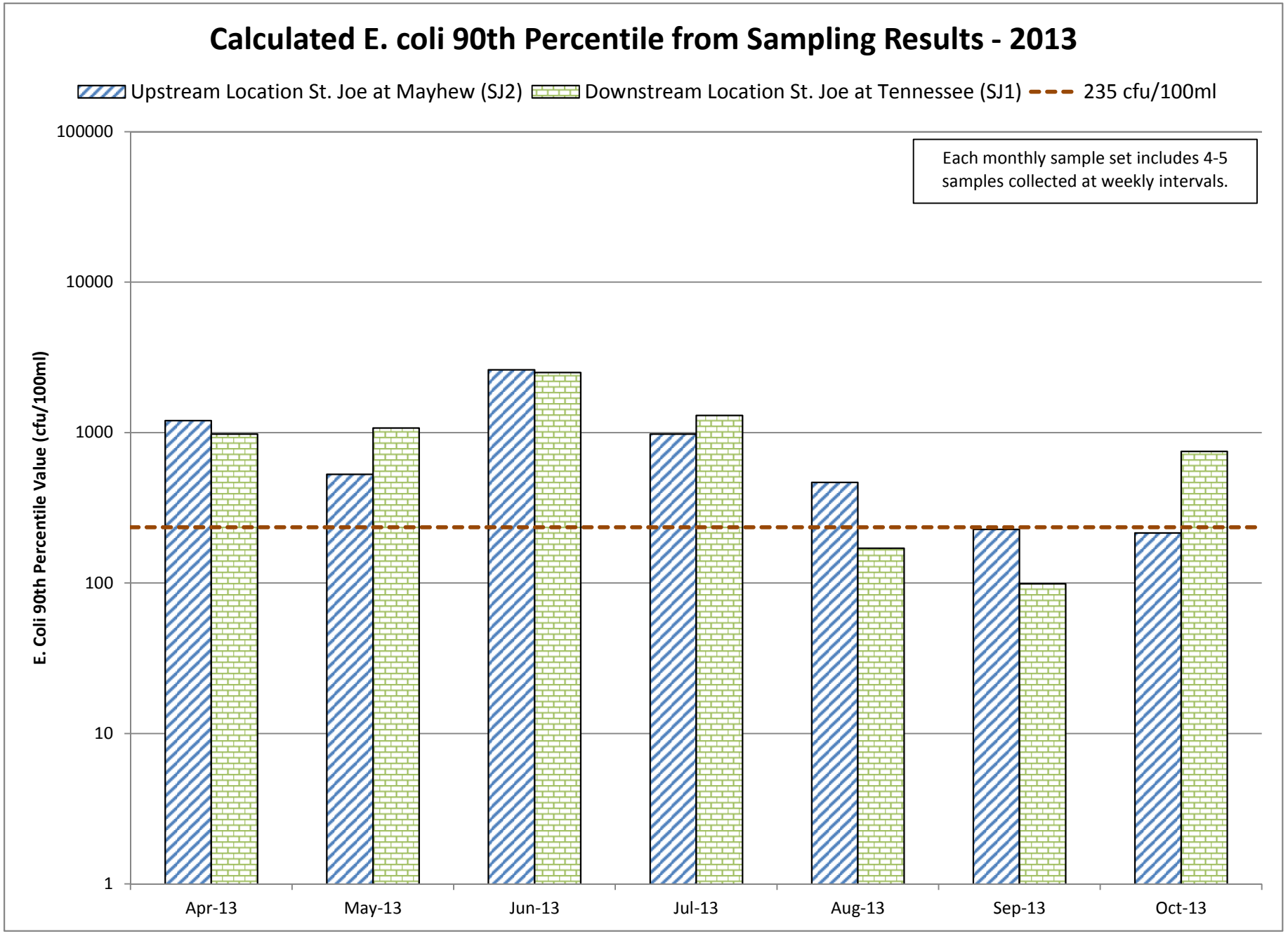

Calculated E. coli 90th Percentile from Sampling Results - 2007
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-07
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07

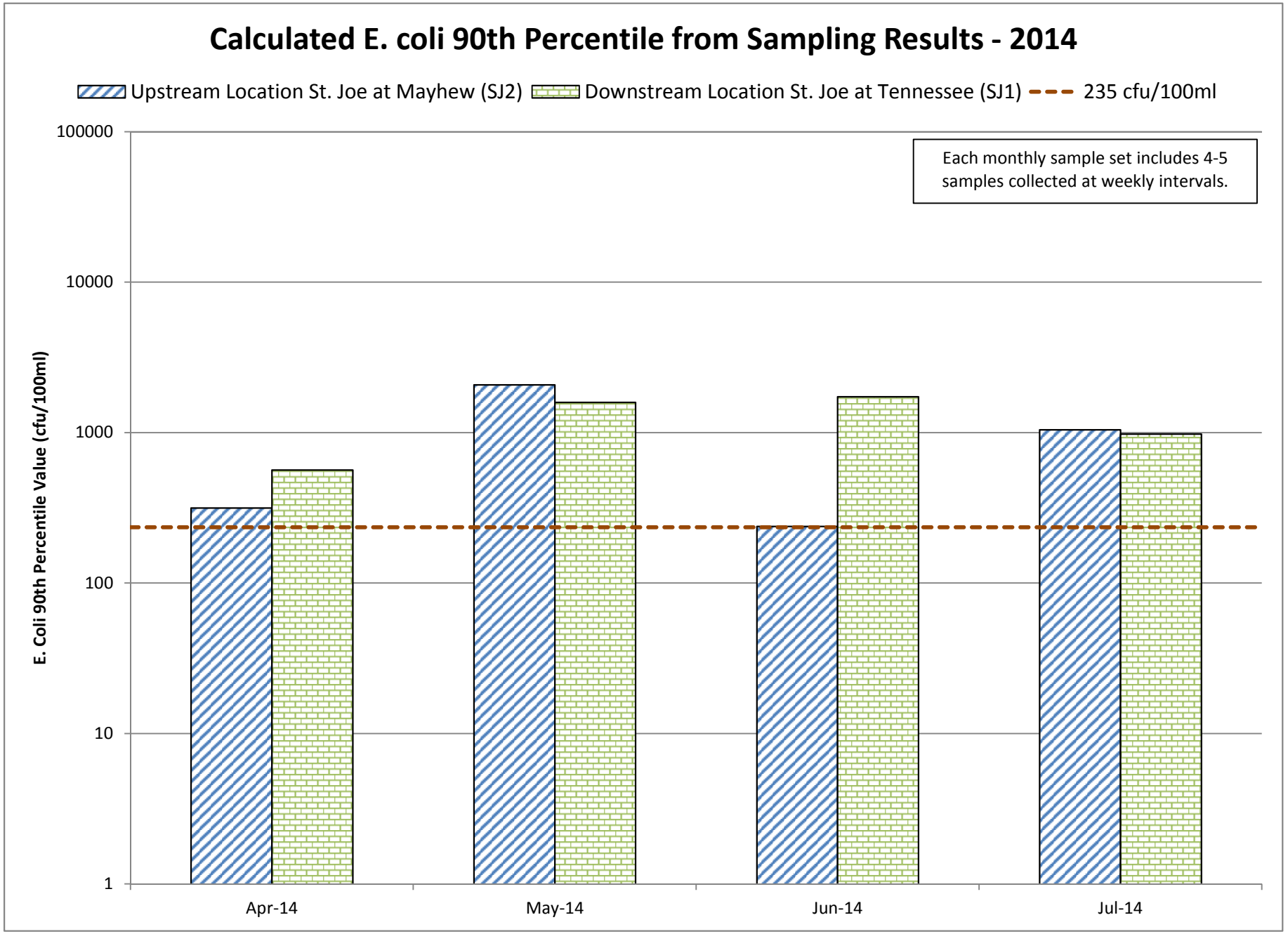

Calculated E. coli 90th Percentile from Sampling Results - 2008
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-08
May-08
Jun-08
Jul-08
Aug-08
Sep-08
Oct-08

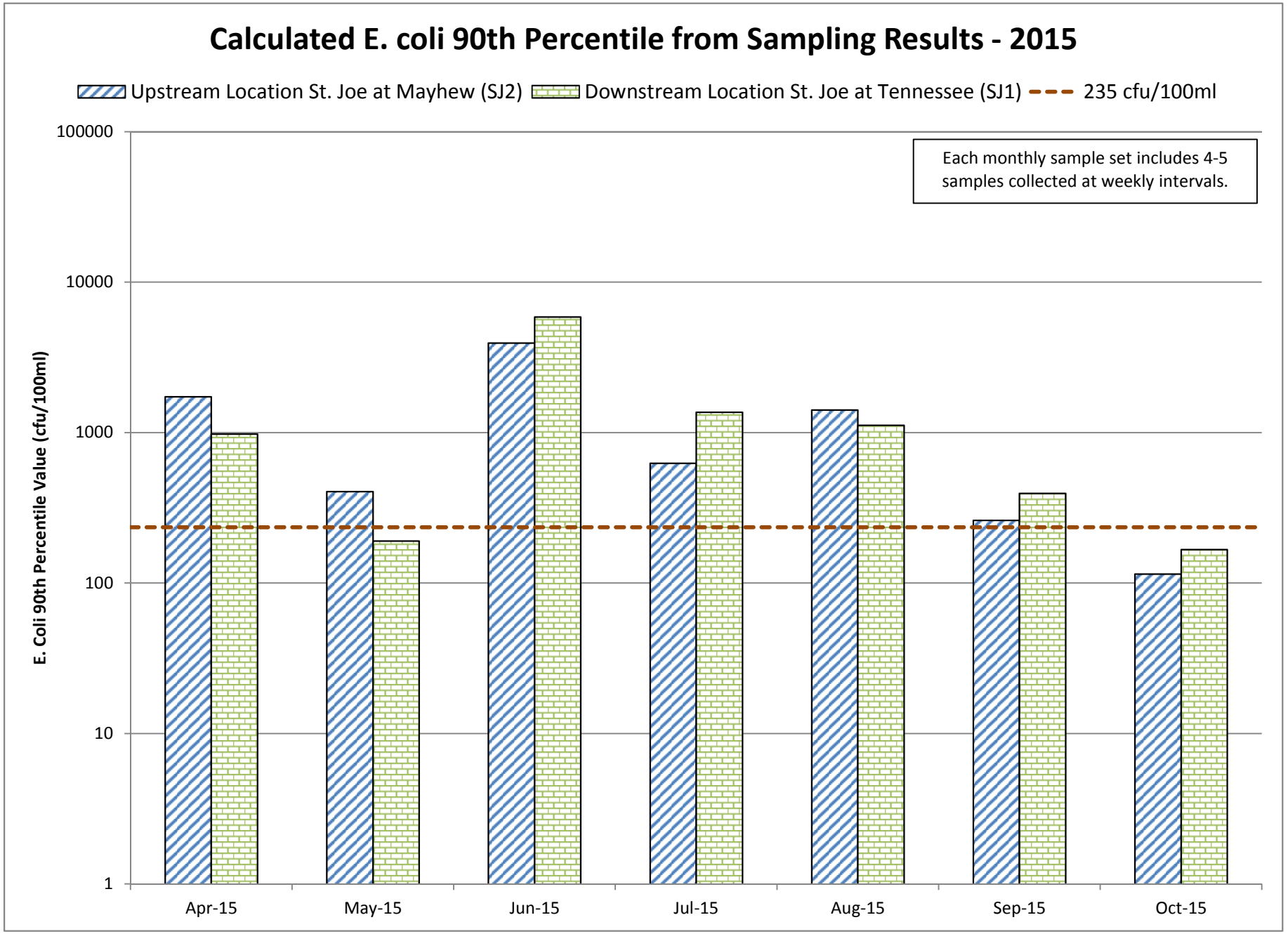

Calculated E. coli 90th Percentile from Sampling Results - 2009
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-09
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09

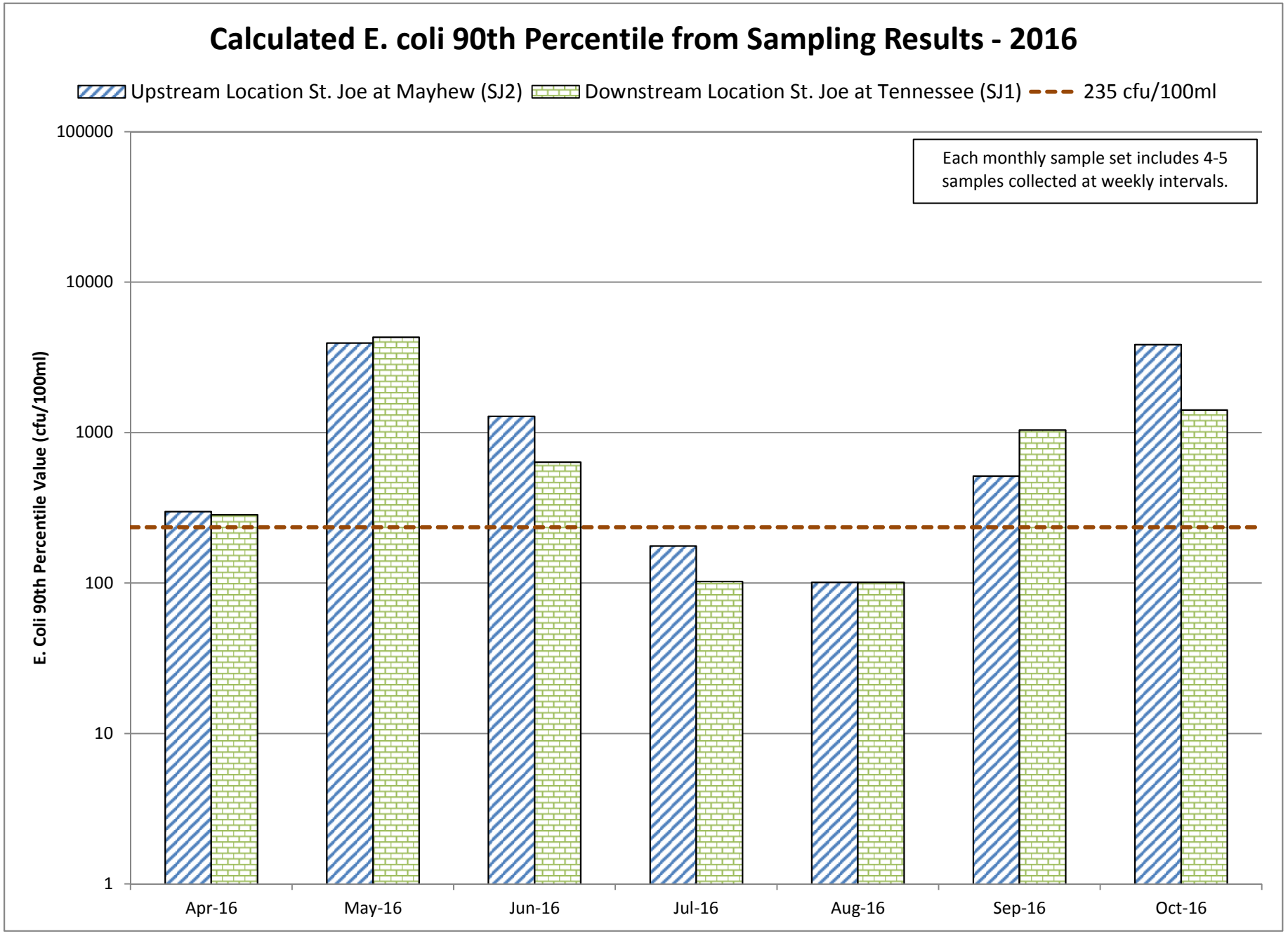

Calculated E. coli 90th Percentile from Sampling Results - 2010
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-10
May-10
Jun-10
Jul-10
Aug-10

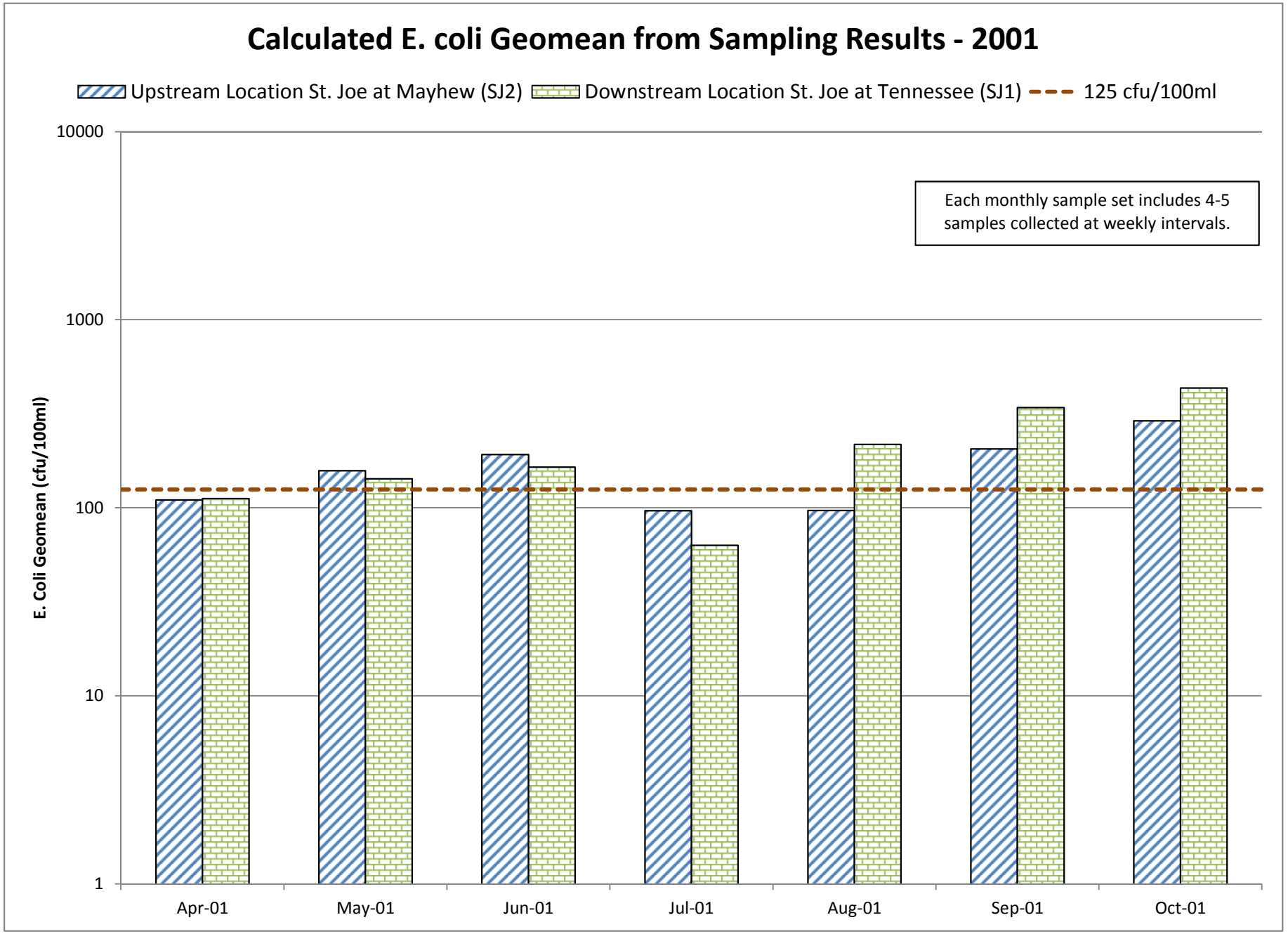

Calculated E. coli 90th Percentile from Sampling Results - 2011
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11

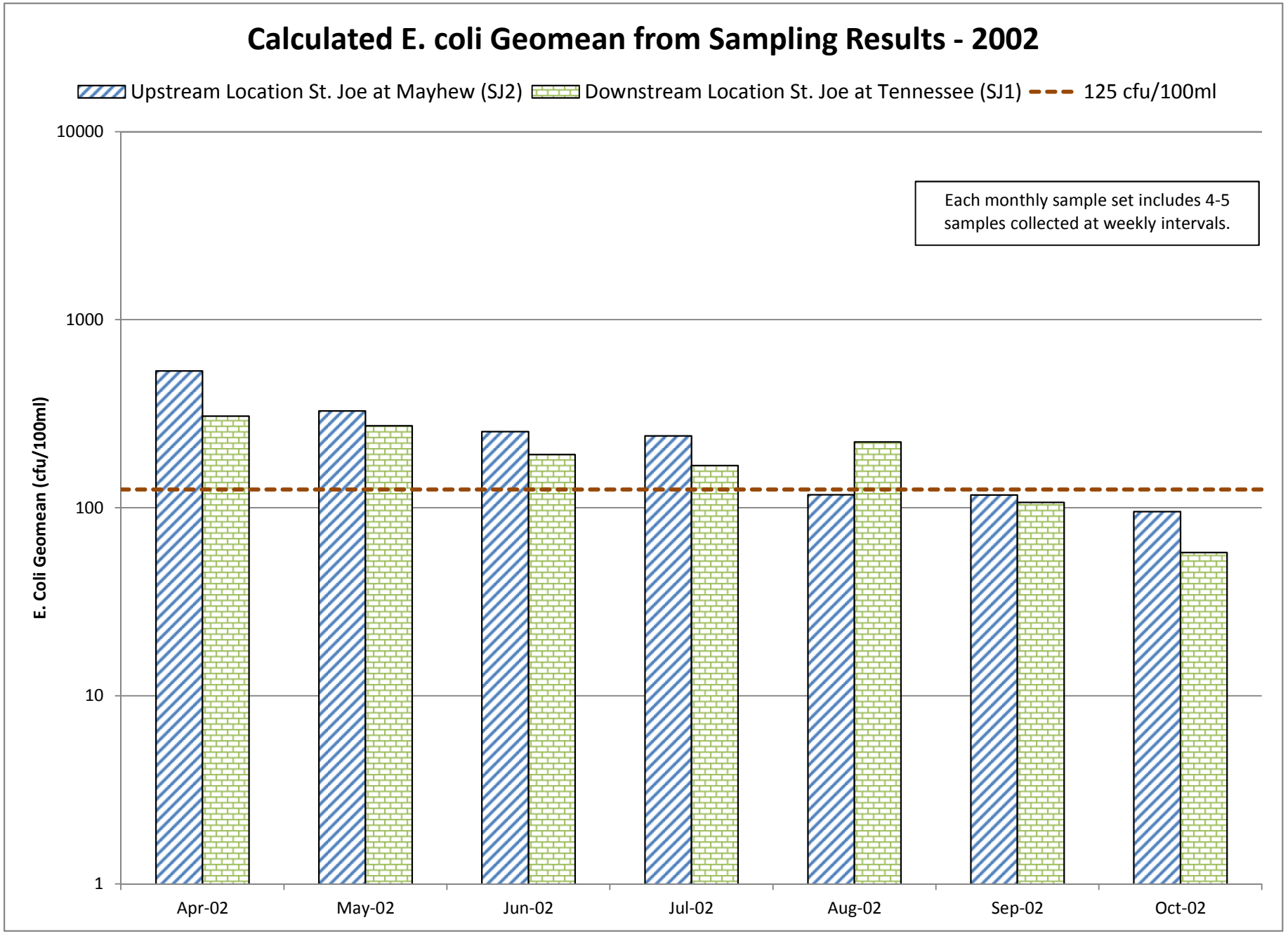

Calculated E. coli 90th Percentile from Sampling Results - 2013
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13

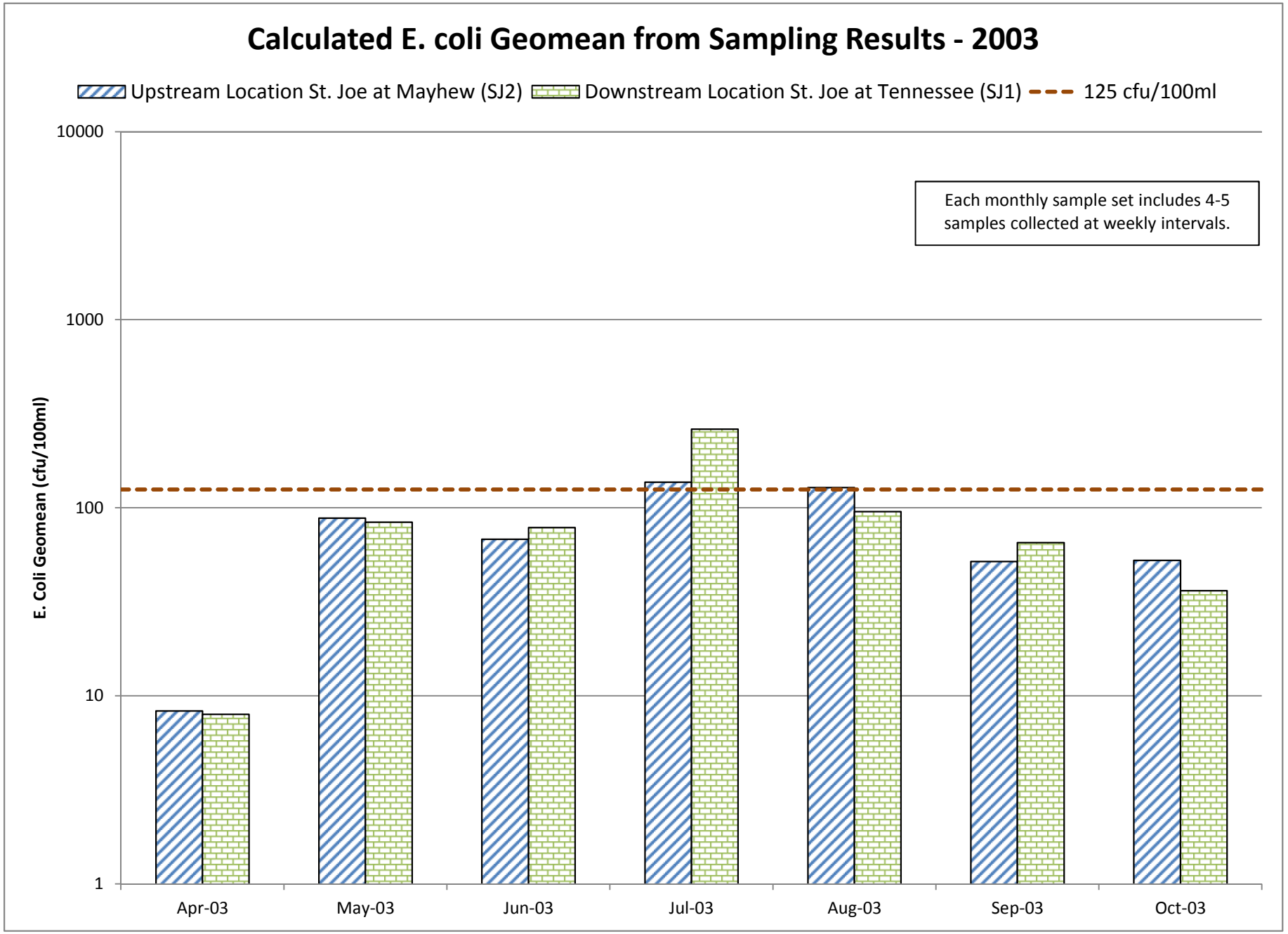

Calculated E. coli 90th Percentile from Sampling Results - 2014
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-14
May-14
Jun-14
Jul-14

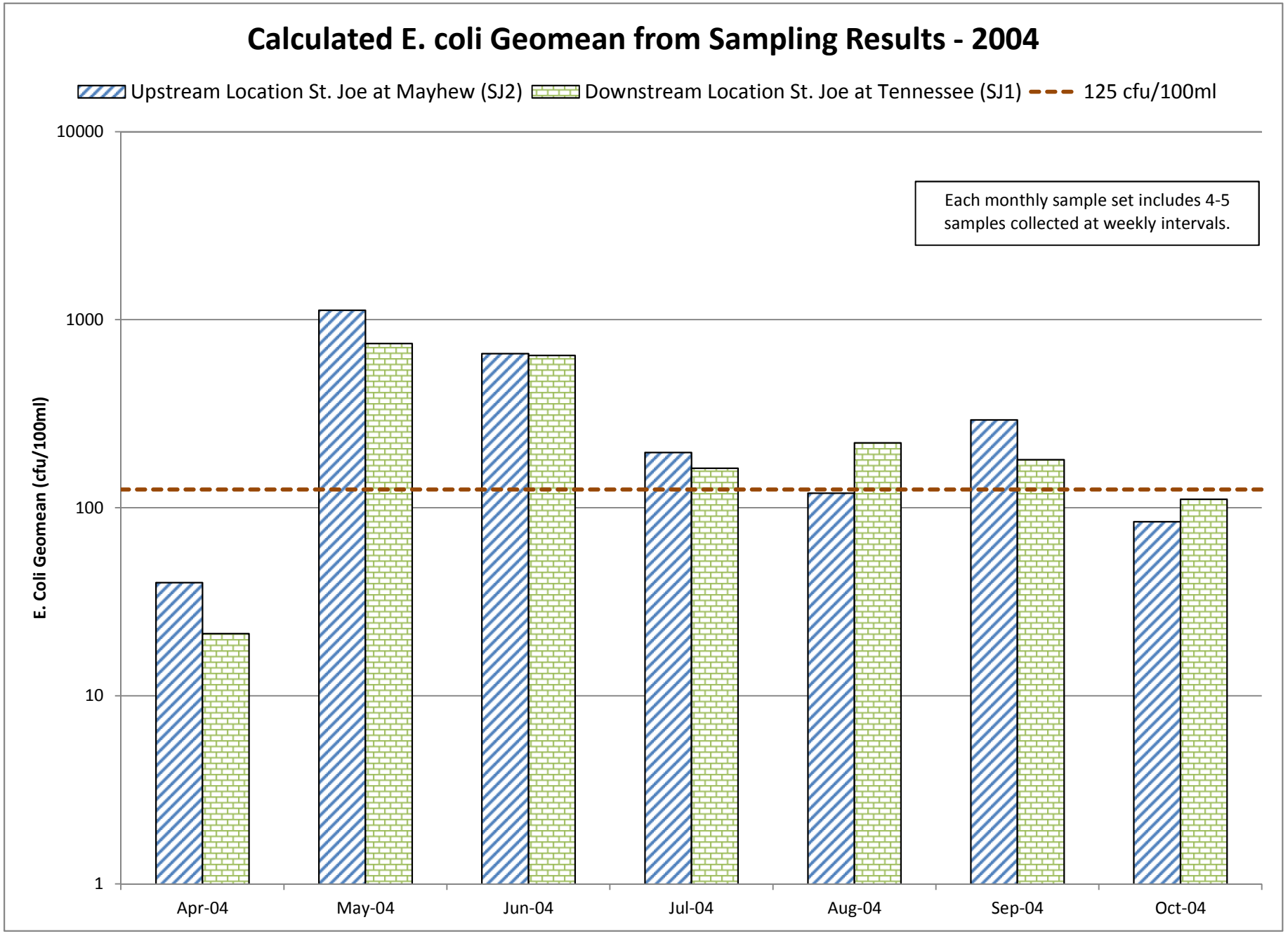

Calculated E. coli 90th Percentile from Sampling Results - 2015
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
Oct-15

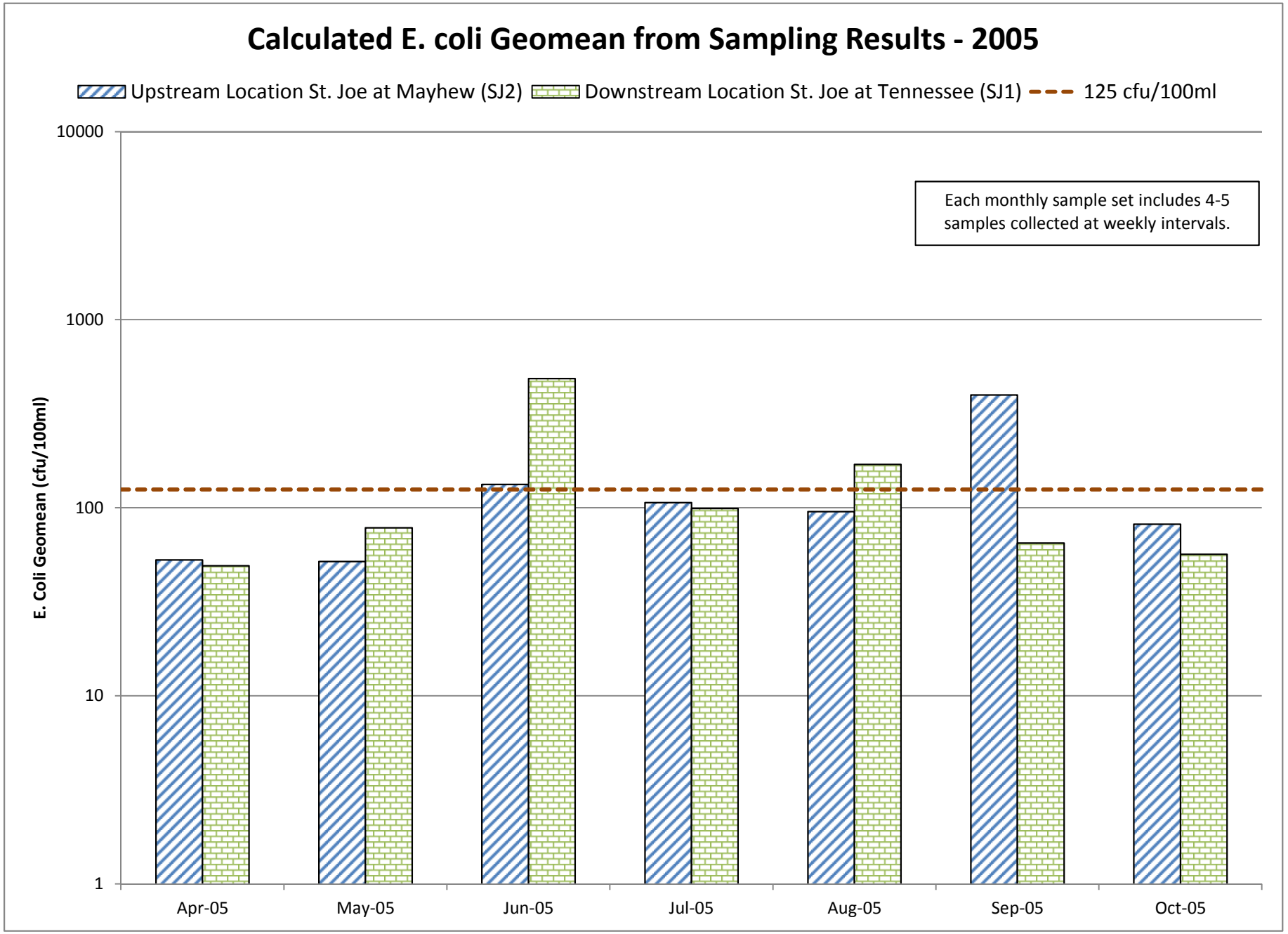

Calculated E. coli 90th Percentile from Sampling Results - 2016
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
235 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli 90th Percentile Value (cfu/100ml)
100000
10000
1000
100
10
1
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16

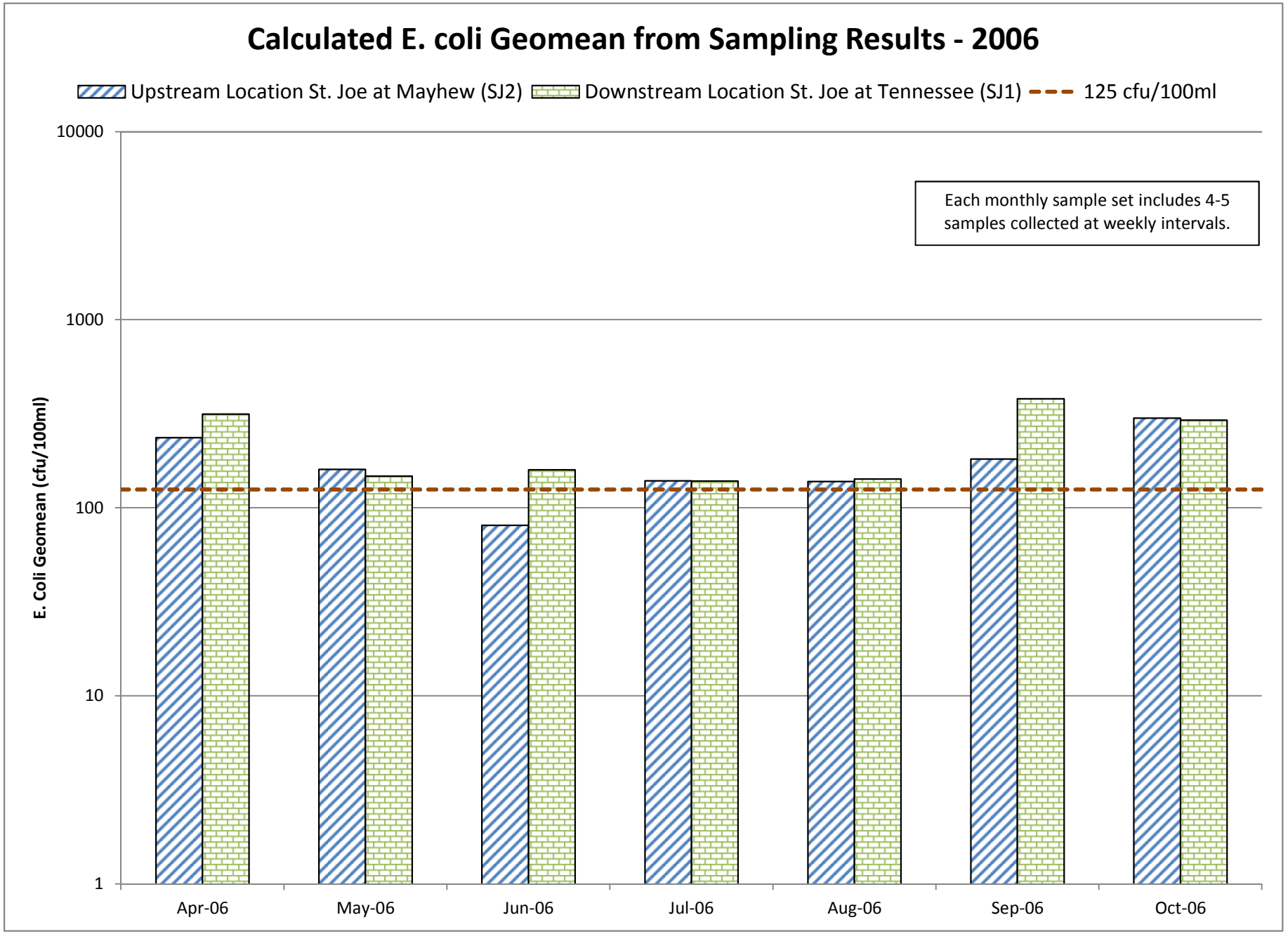

Calculated E. coli Geomean from Sampling Results - 2001
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
Oct-01

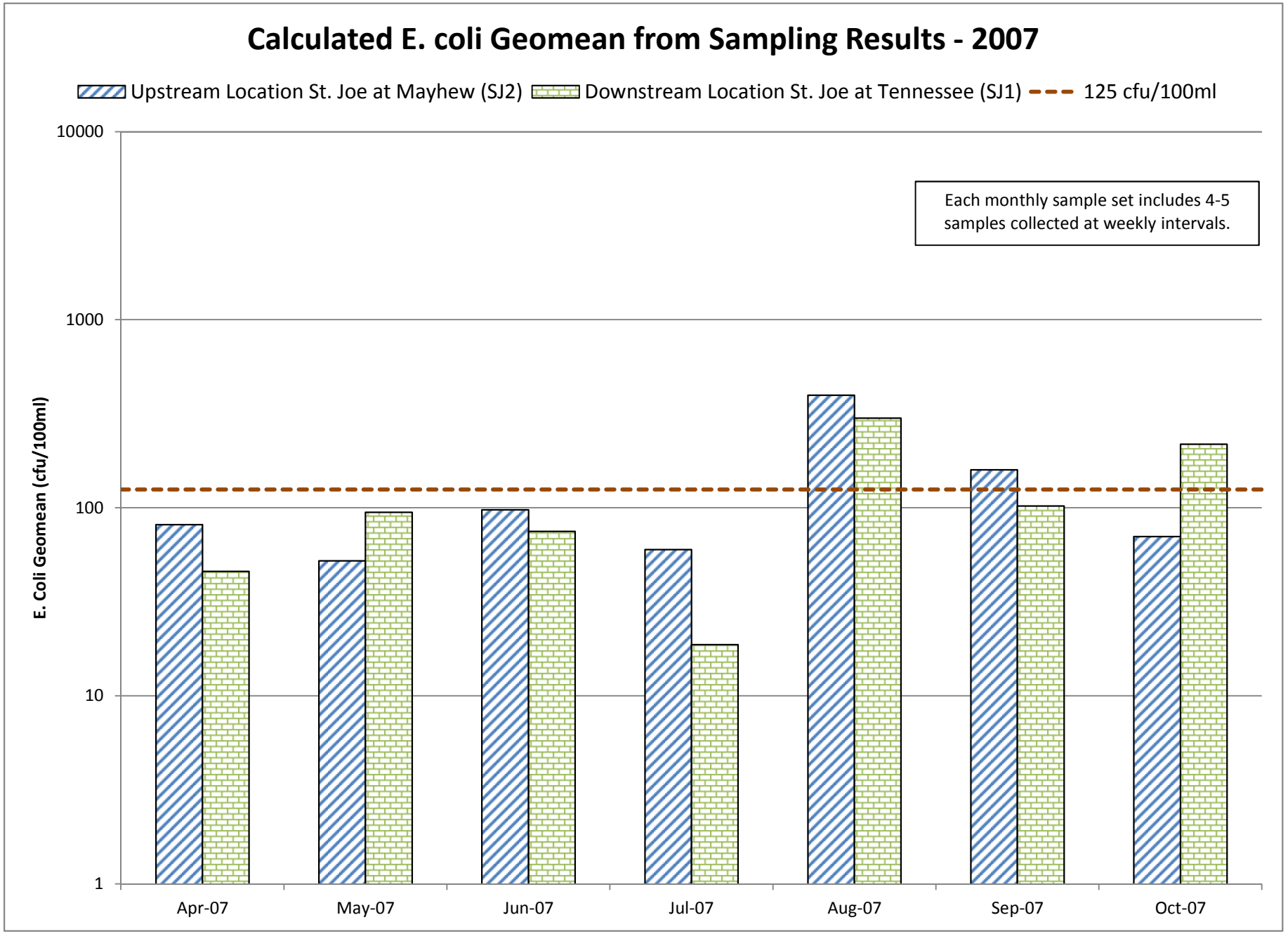

Calculated E. coli Geomean from Sampling Results - 2002
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02

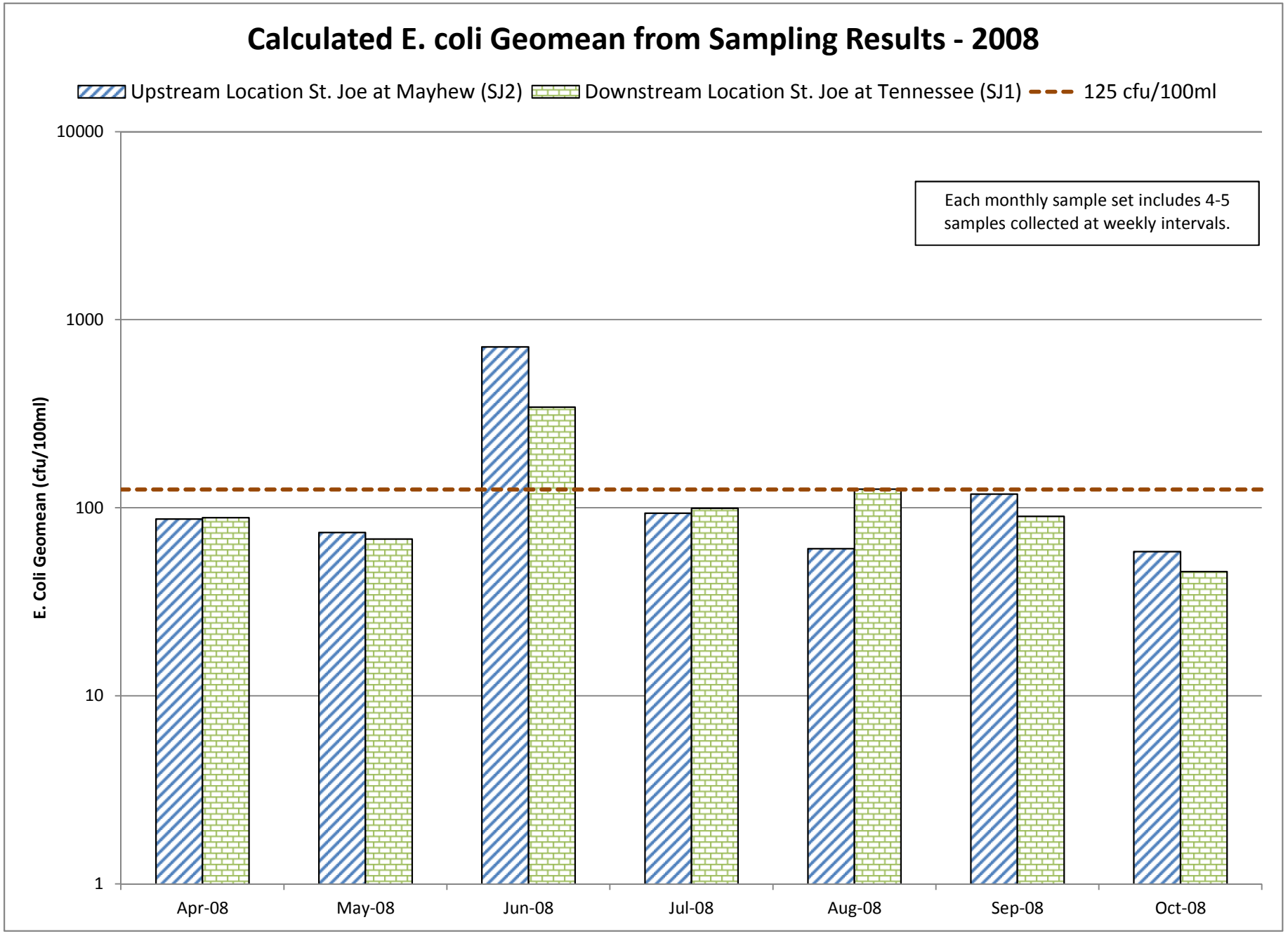

Calculated E. coli Geomean from Sampling Results - 2003
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03
Oct-03

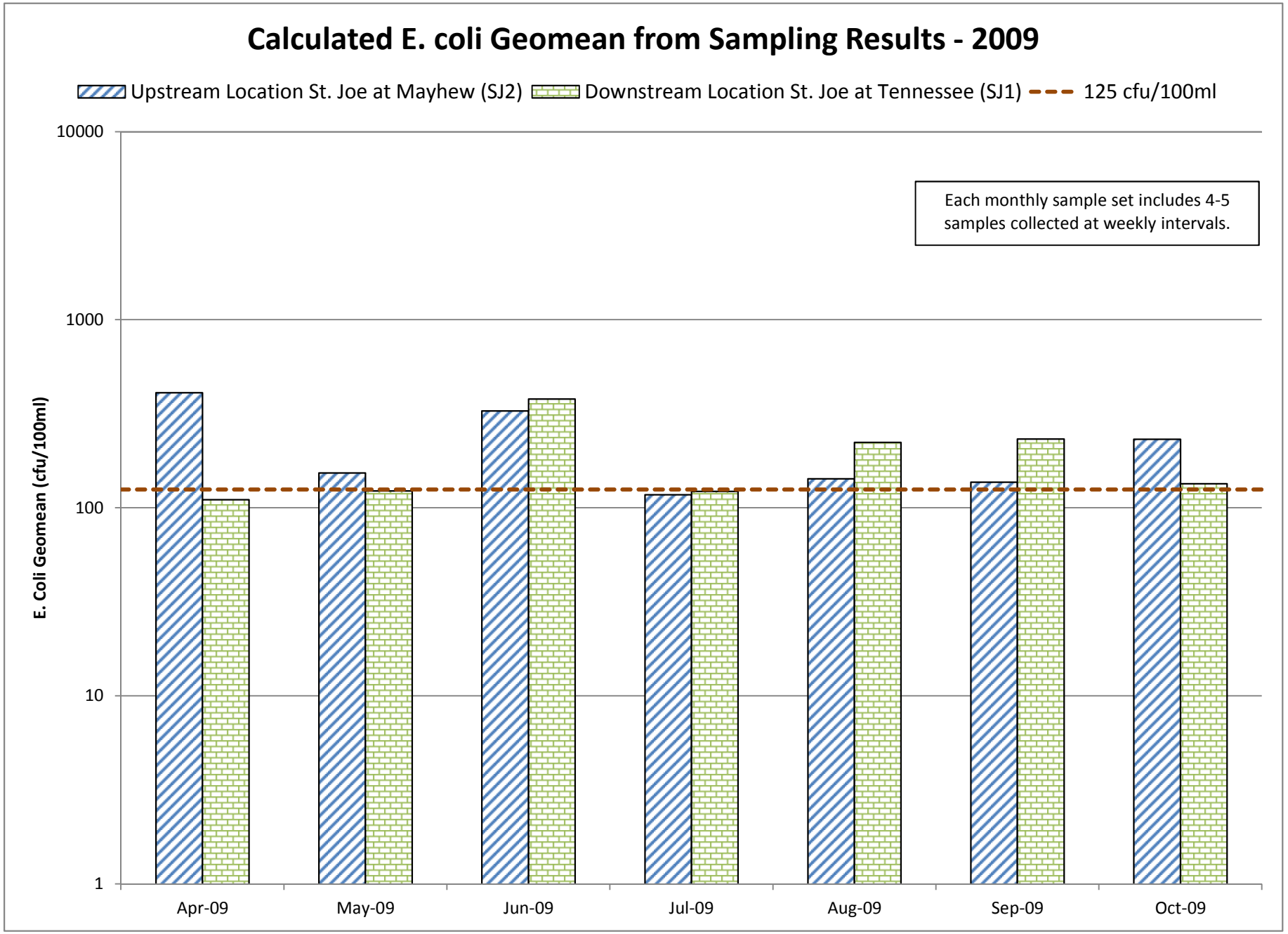

Calculated E. coli Geomean from Sampling Results - 2004
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-04
May-04
Jun-04
Jul-04
Aug-04
Sep-04
Oct-04

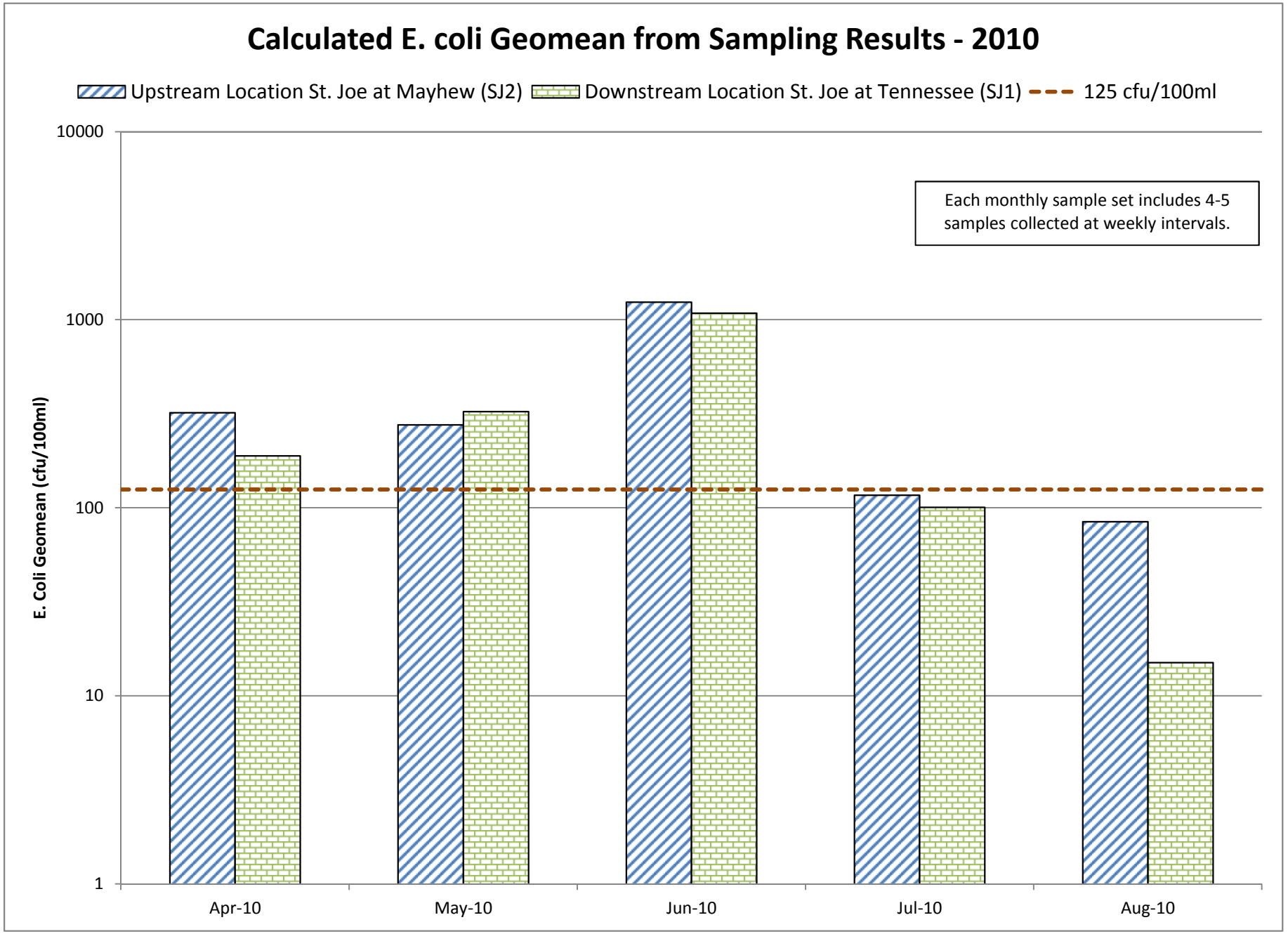

Calculated E. coli Geomean from Sampling Results - 2005
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-05
May-05
Jun-05
Jul-05
Aug-05
Sep-05
Oct-05

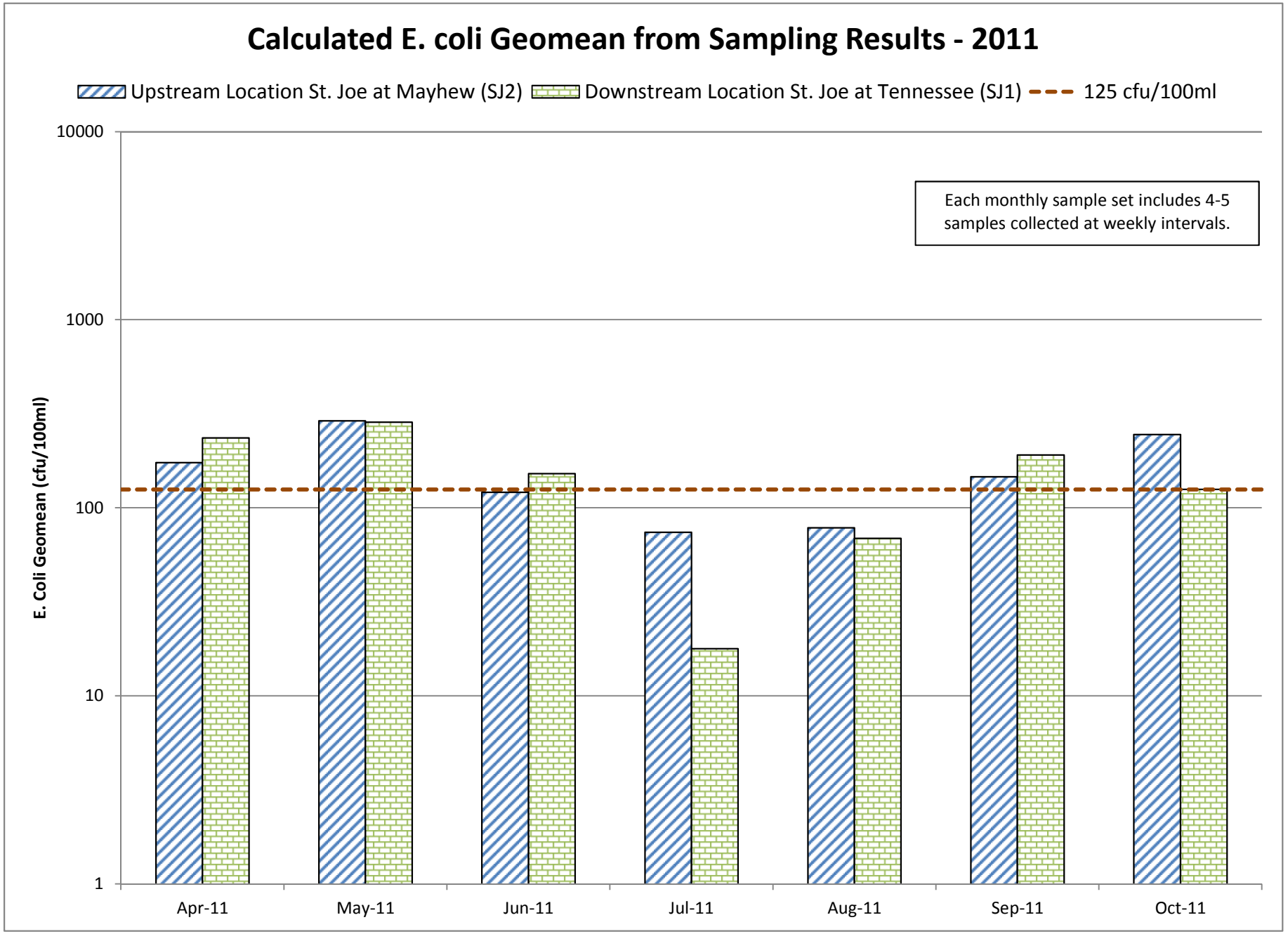

Calculated E. coli Geomean from Sampling Results - 2006
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06

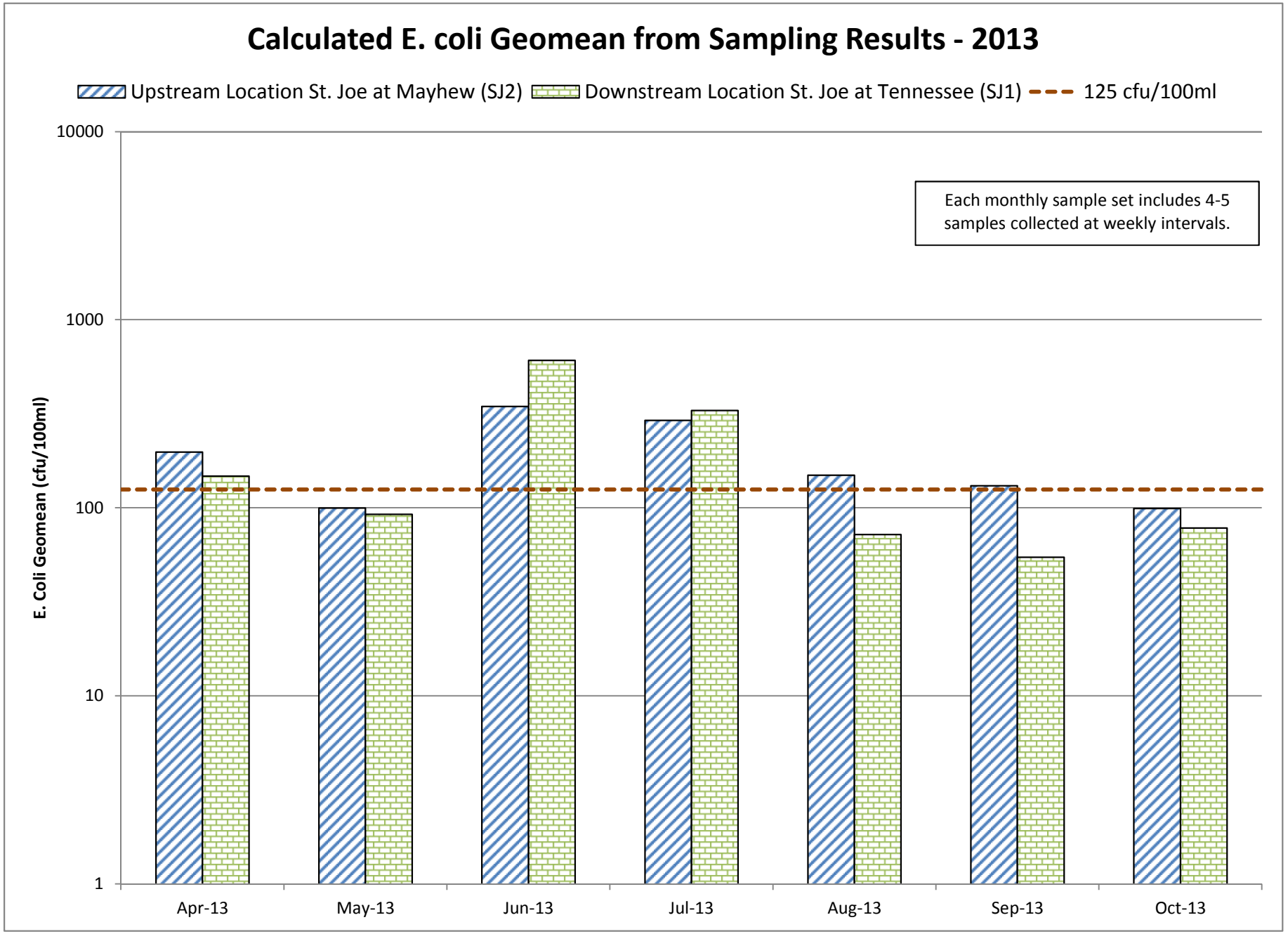

Calculated E. coli Geomean from Sampling Results - 2007
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-07
May-07
Jun-07
Jul-07
Aug-07
Sep-07
Oct-07

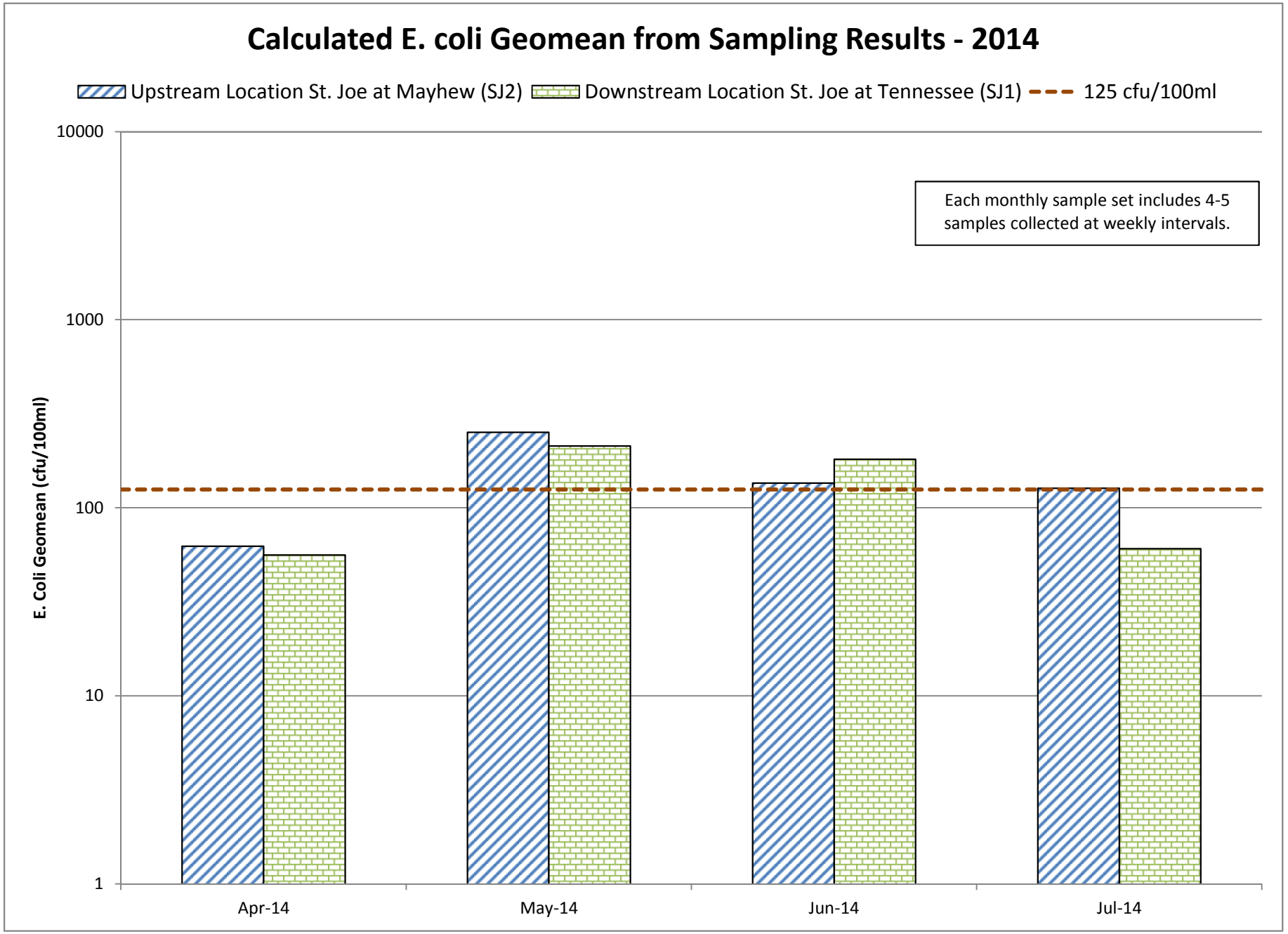

Calculated E. coli Geomean from Sampling Results - 2008
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-08
May-08
Jun-08
Jul-08
Aug-08
Sep-08
Oct-08

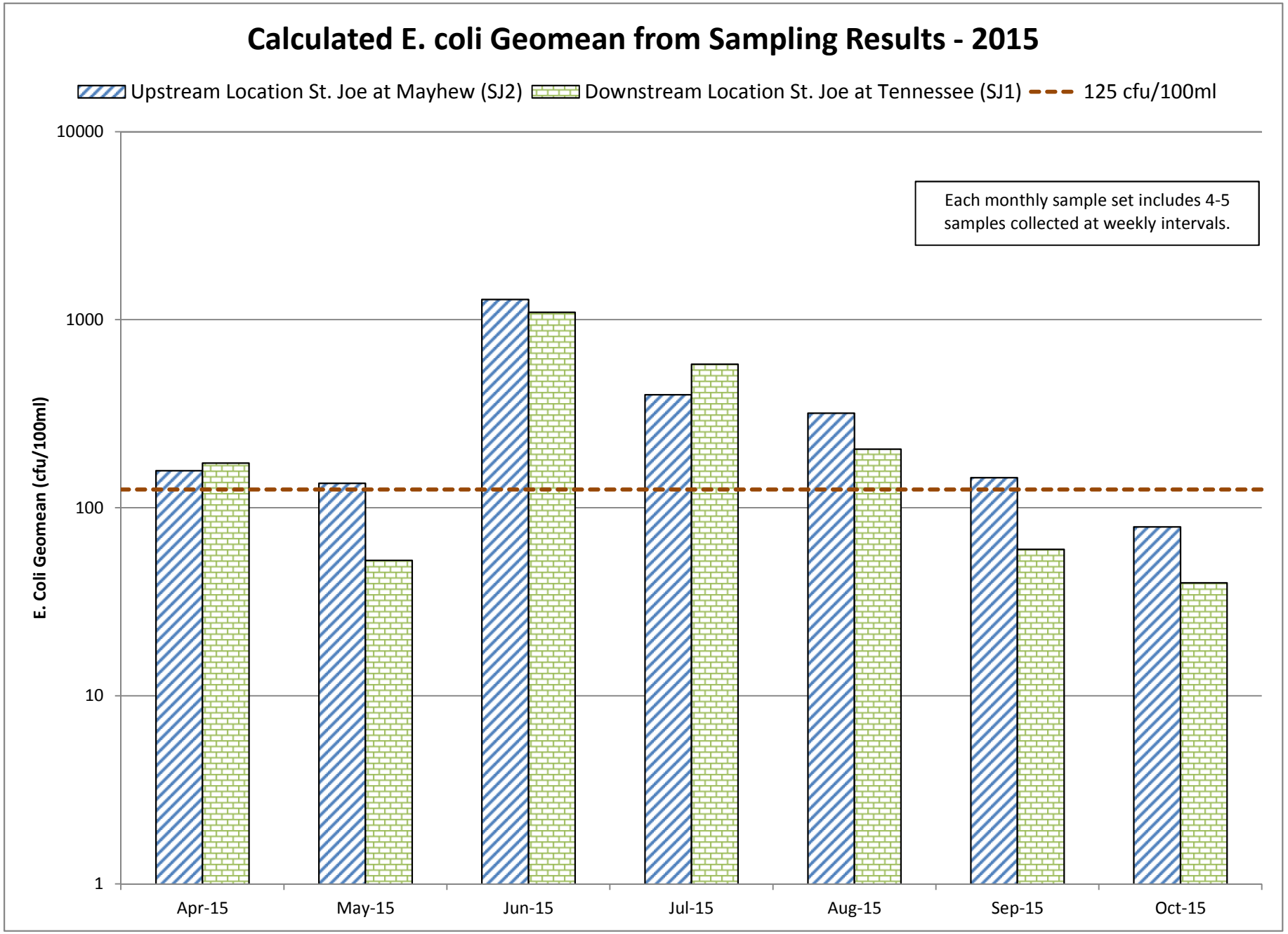

Calculated E. coli Geomean from Sampling Results - 2009
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-09
May-09
Jun-09
Jul-09
Aug-09
Sep-09
Oct-09

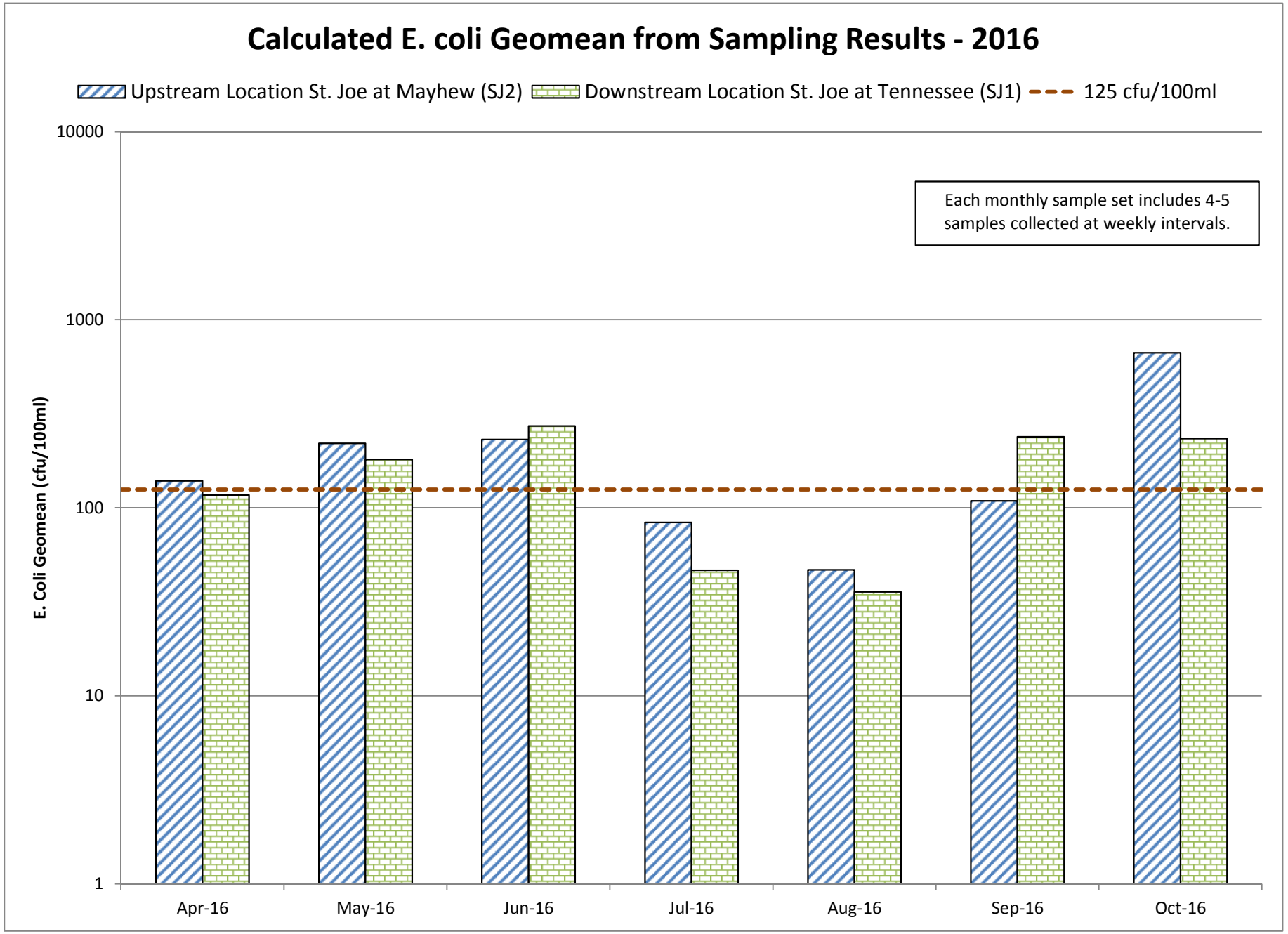

Calculated E. coli Geomean from Sampling Results - 2010
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-10
May-10
Jun-10
Jul-10
Aug-10


Calculated E. coli Geomean from Sampling Results - 2011
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-11
May-11
Jun-11
Jul-11
Aug-11
Sep-11
Oct-11


Calculated E. coli Geomean from Sampling Results - 2013
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-13
May-13
Jun-13
Jul-13
Aug-13
Sep-13
Oct-13


Calculated E. coli Geomean from Sampling Results - 2014
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-14
May-14
Jun-14
Jul-14


Calculated E. coli Geomean from Sampling Results - 2015
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-15
May-15
Jun-15
Jul-15
Aug-15
Sep-15
Oct-15


Calculated E. coli Geomean from Sampling Results - 2016
Upstream Location St. Joe at Mayhew (SJ2)
Downstream Location St. Joe at Tennessee (SJ1)
125 cfu/100ml
Each monthly sample set includes 4-5 samples collected at weekly intervals.
E. Coli Geomean (cfu/100ml)
10000
1000
100
10
1
Apr-16
May-16
Jun-16
Jul-16
Aug-16
Sep-16
Oct-16

ATTACHMENT 3

Text from CD Appendix 4 Section 4.6.4.1
Model-Based Approach to Assessing Compliance

Performance Criteria in terms of CSO activations, the City is proposing a model-based approach similar to the method recently approved for the City of Indianapolis, Indiana. In addition, given the importance of the assessment process, and recognizing that methods to assess average performance of CSO control measures per the CSO Policy are in their infancy, the City is allowing for the possibility that an improved alternative, or modified, approach may be identified in the future.

4.6.4.1 Model-Based Approach to Assessing Compliance

The City of Fort Wayne began its collection system modeling program in the late 1990s, and developed a fully dynamic, planning-level collection system model to support development of the Long-Term Control Plan. As explained in Chapter 2, the City's model was reviewed and approved for LTCP development purposes by U.S. EPA and IDEM in 2005.

Under the model-based approach, the City would update and utilize their collection system model to determine whether operational CSO Control Measures have achieved compliance with the Performance Criteria set forth in Table 4.2.4.1. At least two (2) years prior to the initiation of post construction monitoring on the first river-watershed, Fort Wayne shall propose to EPA and IDEM, in writing, the five years it has selected as a five year period for a typical year. The City would take the following steps under this approach, with each step guided by modeling industry standards and sound engineering judgment:

1. Collect CSO outfall data for a 12-month post-construction monitoring period in each watershed in accordance with Section 4.6.3.4.
2. Perform quality assurance and quality control of the data collected in Step 1.
3. Utilize the model (incorporating the improved collection system) in its previously-calibrated state and the rainfall data collected during the monitoring period, to run a continuous simulation of CSO discharges for the 12-month post-construction monitoring period.
4. Compare the continuous simulation outputs to the CSO monitoring data for the 12-month post-construction monitoring period to determine whether re-calibration of the collection system model is needed. Model re-calibration will not be needed if the model achieves at least the same degree of calibration as was achieved for pre-CSO Long-Term Control conditions during the LTCP development process, and there is a high degree of agreement between the model output and CSO monitoring data for activation frequency for the 12-month post-construction monitoring period. Otherwise, model re-calibration will be needed in accordance with Steps 5-7.
5. If re-calibration is needed, select two or more appropriate rainfall events from the 12-month post-construction monitoring period for model recalibration. The City will apply the standard of practice used in the collection system modeling industry in selecting the best candidate events for model calibration.
6. Develop an initial data set for use with the model and perform successive applications of the model with appropriate parameter adjustment until there is a

high degree of agreement between the model output and the CSO monitoring data for the selected recalibration events. In making such adjustments, the City will consider the inherent variability in both the collection system model and in flow monitoring data, and will exercise sound engineering judgment and best industry practices so as to not compromise the overall representativeness of the model.

7. Once the model has been re-calibrated in accordance with Step 6, the City will verify the re-calibrated model by again utilizing the model and the rainfall data collected during the 12-month post-construction monitoring period, to run another continuous simulation for the 12-month post-construction monitoring period. The City will again compare the continuous simulation outputs to the CSO monitoring data for the 12-month post-construction monitoring period as described in Step 4, to determine whether additional re-calibration of the collection system model is needed. Re-calibration will be determined to be adequate if the model achieves at least the same degree of calibration, as was achieved for pre-CSO Long-Term Control conditions during the LTCP development process, and there is a high degree of agreement between the model output and CSO monitoring data for activation frequency for the 12-month post-construction monitoring period. Otherwise, further re-calibration will be needed in accordance with these Steps 5-7 until the model achieves at least the same degree of calibration as was achieved for pre-CSO Long-Term Control conditions during the LTCP development process, and there is a high degree of agreement between the model output and CSO monitoring data for activation frequency for the 12-month post-construction monitoring period.
8. Once the City has satisfactorily re-calibrated the model in accordance with Steps 5 through 7 (or shown that recalibration is not necessary in accordance with Step 4), the City will then utilize the original model (if recalibration was determined not to be necessary in accordance with Steps 4-7) or the recalibrated model to run a continuous simulation for a representative five-year period agreed to with IDEM and U.S. EPA. The model results for this five-year simulation will be used to determine whether the City has achieved the Performance Criteria set forth in Table 4.2.4.1.
9. The City shall be deemed to have achieved the Performance Criteria if the five-year simulation shows that there were a total of 24 or fewer CSO events into the Maumee River and St. Marys River watershed for the five-year period, and a total of 6 or fewer CSO events into the St. Joseph River watershed for the five-year period, following construction of the necessary Control Measures in Table 4.2.4.1.
10. The overflow frequency performance criterion is based upon a "typical year," calculated using the 5-year continuous simulation of the collection system model, as described above. If the modeled average annual overflow frequency is less than or equal to 1.2 for the St. Joseph River and 4.8 for the Maumee and St. Marys Rivers, the system is deemed to be in compliance with the performance criteria of 1 and 4 overflow events per year. This "rounding" is appropriate due to the inherent variability in model predictions. If the modeled overflow frequency exceeds 1.2 for the St. Joseph River and/or 4.8 for the Maumee and St. Marys Rivers, then the City will prepare a Milestone Report of this negative result under

Paragraph 4.6.6.1. The City may include an analysis of the following in the Milestone Report: (1) the volume, frequency, and factors causing the additional overflow frequency, (2) any impact on water quality, including designated uses, from the additional overflow frequency, (3) control options, if any, to reduce the frequency towards 4/1 (as appropriate), (4) associated costs for any additional control options, (5) any expected benefits from such control options and (6) a recommendation as to whether the City should proceed under Section XXI.D, XXI.E or another provision of the Consent Decree.

It is important to note that percent capture has not been identified as a formal Performance Criterion for the City's LTCP. Based on discussions with U.S. EPA and IDEM during development of the final recommended plan, average annual overflow frequency was identified as the controlling Performance Criterion and is identified as such in Table 4.2.4.1. However, the City recognizes that percent capture can sometimes be useful in assessing performance of a combined sewer system, and will continue to develop estimates of percent capture based on the 5-year simulations described above. These estimates will be included in documentation of system performance included in the Milestone Reports described in Section 4.6.6.1.

The City also plans to use their collections system model to support the process of refining the planning-level LTCP concepts into specific CSO control projects. This will require selected improvements to the level of detail and calibration of the model on an as-needed basis over the next 18 years. This process of refining the model to meet specific project needs has always been anticipated, and is consistent with the modeling approach followed by the City since the 1990s. The model is a valuable and dynamic tool that the City will use as appropriate to further system understanding from a design, operation, and maintenance perspective as they pursue their goal of improving water quality on local rivers.

4.6.4.2 Alternate Compliance Assessment Approach

The City may propose an alternate compliance assessment approach other than that described in Section 4.6.4.1. Such an alternate compliance assessment approach may be implemented by the City, in lieu of that described in Section 4.6.4.1, if approved by U.S. EPA and IDEM and subject to other approvals, if any, required by Section XXI of the City's Consent Decree. In order to provide sufficient time for agency review and approval to allow timely implementation, any proposal by the City for use of an alternative compliance assessment approach should be submitted to U.S. EPA and IDEM no later than December 31, 2015.

4.6.5 Quality Control

The City has Standard Operating Procedures (SOPs) in place for both of the core activities in the Post-Construction Monitoring Program, CSO outfall flow monitoring and river water quality sampling. Both of these programs have been ongoing in their current form since at least 2004, allowing for 3 years of field experience and identification of

ATTACHMENT 4

St. Joe River CSOs Post-Construction Monitoring Analysis Memorandum

MEMO

ARCADIS Design & Consultancy for natural and built assets

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June 27, 2017

Arcadis Project No.:

02648125.0000

Subject:

St. Joe River CSOs Post-Construction Monitoring Analysis Memorandum – Final

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The purpose of this memorandum is to document the evaluation performed to assess whether or not a recalibration of City Utilities Engineering's (CUE's) model representation of the St. Joe River combined sewer subbasins is necessary before proceeding with the formal post-construction monitoring (PCM) model evaluation as required by CUE's consent decree. The intent of this memorandum is to be attached as an appendix in CUE's Milestone Report for the St. Joe River Combined Sewer Overflows (CSOs).

This memorandum is organized into the following sections: Executive Summary, Background, Rainfall Data Review, Flow Meter Data Review, St. Joe Subbasin Model Analysis, and Summary and Next Steps.

EXECUTIVE SUMMARY

Based on the evaluation documented in this memorandum, CUE's model does not need to be recalibrated. CUE can proceed with the final 1998-2002 typical year simulation for the St. Joe River subbasins to assess compliance for the six CSOs on the river. The reasons the current model calibration is adequate are as follows:

- CUE has collected the precipitation and CSO outfall data as required in LTCP Section 4.6.4.1; and

- CUE has applied the model for the 12-month period and determined that all metered overflow events were successfully predicted in the model.

BACKGROUND

This section provides a brief history of the St. Joe River CSOs, the consent decree performance criteria, and the implemented Long-Term Control Plan (LTCP) projects to achieve the performance criteria.

Consent Decree Requirements

The St. Joe River receives discharge from CSOs 052, 051, 053, 045, 044, and 068. As documented in Table 4.2.4.1 of the final LTCP (CUE, 2007), the St. Joe River CSOs have a performance criteria of one overflow event during the typical year. The final LTCP originally contemplated achieving full operation (AFO) in 2019.

As documented in Section 4.6.4.1 of the final LTCP, CUE's process for PCM is as follows:

- Collect CSO outfall data for 12-months following AFO and QA/QC the data;
- Compare the CSO outfall data to a 12-month model simulation;
- "Model re-calibration will not be needed if the model achieves at least the same degree of calibration as was achieved for pre-CSO Long-Term Control conditions during the LTCP development process, and there is a high degree of agreement between the model output and CSO monitoring data for activation frequency";
- If necessary, re-calibrate the model with two or more appropriate events;
- Verify the re-calibration with a final 12-month simulation;
- Apply the final model for the 5-year (1998-2002) typical year period; and
- Assess compliance with the performance criteria as 24 or fewer simulated CSO events on the Maumee and St. Mary's Rivers, and 6 or fewer simulated CSO events on the St. Joe River (CUE, 2007).

As presented above, it is important to note the emphasis on CSO outfall flow monitoring data in LTCP Section 4.6.4.1, both for data collection and evaluating whether or not the model should be recalibrated. In other words, flow monitoring data collected upstream in the collection system may support the assessment of the model calibration, but is not required by Section 4.6.4.1 of the LTCP.

As part of the PCM milestone report for the St. Joe River CSOs, CUE will need to populate Table 4.6.2.1 of the LTCP (CUE, 2007) for Control Measures 7 and 8, for both the monitoring data and model simulation. The table is re-produced and presented as **Table 1** of this memorandum. As part of the PCM Milestone Report, CUE will need to populate the first two rows of the table for both the monitoring data and the typical year performance. For the monitoring data columns, CUE can report the following in the table:

- CSOs 044, 045, 051, 053, 068 – 0 MG, 0 Overflows
- CSO 052 – 0.10 MG, 2 Overflows

Table 4.6.2.1
Post-Construction Monitoring for CSO Control Measures by River Watershed

Watershed	CSO Control Measure[1]		CSOs Controlled (By Overflow Permit ID)	Monitoring Data[2]		Typical Year Performance[2]		Overflow Frequency Performance Criteria Achieved (Yes/No)[4]	Comments
				CSO Volume (MG)	Overflow Frequency By Watershed	CSO Volume (MG)	Overflow Frequency By Watershed[5]		
St. Joseph River	7	Satellite Storage at St. Joseph River CSOs	45, 51, 53, 58						
	8	Satellite Disinfection at St. Joseph River CSOs[3]	57						
Maumee River	5	Pond Storage & Dewatering	57, plus Outfalls 002/003						
	10	Morton Street/C10101 Reroute	48						
	11	Wayne Street Parallel Interceptor	11, 12, 13, 23, 24, 25, 27, 28, 29, 32, 33, 36, 39, 50, 55, 60						
	14	Satellite Storage	64						
	9	Satellite Disinfection[3]	61, 62						
St. Marys River	12	St. Marys Parallel Interceptor	4, 5, 17, 18, 19, 20, 21						
	9	Satellite Disinfection[3]	54						

Table 1: LTCP Table 4.6.2.1 (CUE, 2007)

Consent Decree Milestones

Based on CUE's 6-month consent decree reporting, Status Report 15 (CUE, 2015) documents that the St. Joe River Control Measures, Control Measures 7 and 8, achieved full operation during the March 1, 2015 – August 31, 2015 reporting period. Therefore, the 12-month monitoring period was established as September 1, 2015 – September 1, 2016, and the PCM milestone report would be submitted to IDEM and US EPA on or before September 1, 2017.

RAINFALL DATA REVIEW

This section discusses the rainfall data for the September 1, 2015 – September 1, 2016 period that was reviewed by the project team. The project team made slight adjustments to the rainfall data based on the review, and assigned CUE's rain gauges to the current model subcatchments.

Model Subcatchment Assignments

Figure 1 presents the model subcatchments and gauge network in the vicinity of the combined sewer system. As shown in the figure, ten of the 13 gauges for which data was provided are in close proximity to the combined sewer system and were assigned to subcatchments as shown in the figure. For model nodes with rainfall dependent inflow and infiltration (RDII) represented through RTK parameters, EPA SWMM does not formally present a subcatchment for the drainage areas, so these nodes were assigned gauges based on the closest proximity between the model node and the gauge location.

The remaining three of the 13 gauges reviewed for the analysis (Getz Road, Dupont Library, and Lima Road) are not shown in Figure 1, as they are well outside of the combined sewer area. These three gauges represent rainfall in the northern separate sanitary area and were assigned to RDII nodes as appropriate, except for Lima Road since it did not record data in the PCM period. Finally, Figure 1 presents four gauges for which data was not available during the 12-month PCM Period. A summary of the gauge locations used in the analysis and summarized in this memorandum is as follows:

- Data reviewed and assigned in the model analysis (10): Adams, Anthony, Belle Vista, Brentwood, Bunche, City County, Fairfield, Harrison Hill, Price, Study;
- Data reviewed and assigned to RDII nodes in the sanitary system, but not shown in Figure 1 (2): Dupont Library, Getz Road;

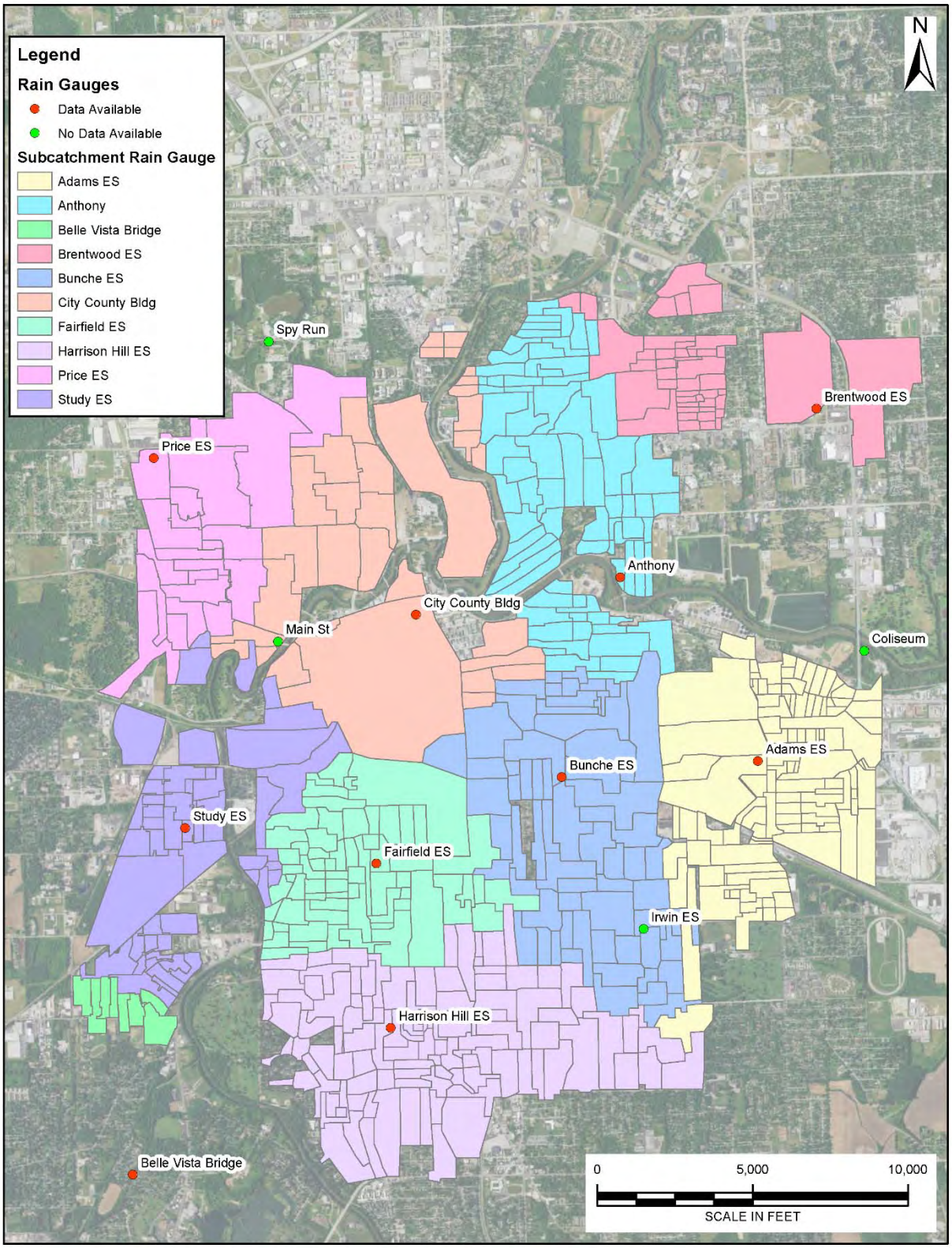


Figure 1: Rain Gauge and Model Subcatchment Locations

- Data not available during PCM Period and not shown in Figure 1 (1): Lima Road; and
- Data not available during PCM Period and shown in Figure 1 (4): Coliseum, Irwin, Main Street, Spy Run.

Rainfall Data Review

Based on direction from CUE staff, the project team reviewed the rainfall data for the following:

- Event classification based on Rainfall Frequency Atlas of the Midwest (Huff and Angel, 1992).
- Spatial variation across the gauge network
- Telemetry errors where a period of precipitation is read in a single 5-minute interval
- Events where only a single gauge reported rainfall

Table 2 presents the ten largest events by average rainfall for the 12-month period. It should be noted that events are classified based on the specific duration of precipitation in lieu of a fixed duration for all events. This was done to understand the relative importance of each event to the collection system. For example, suppose two inches of rain fell in a single hour. This would be classified as a 25-year storm. If the same two inches of rain were reviewed assuming a fixed six-hour event duration, it would be classified as a 2- to 5-year storm event.

As shown in the table, no event was consistently in excess of a 1-year storm for the majority of the gauging stations. However, the May 10 event had a single gauge at a 10- to 25-year event (Belle Vista) and the August 18 event had a single gauge at a 10-year event (Anthony).

Rainfall Event	Average Gauge Network Rainfall, in	Classification for Majority of Gauges	Airport Gauge Rainfall, in	Classification for Airport Gauge
9/4/2015	1.01	2 Month - 9 Month	1.10	2 Month
10/27/2015	0.95	2 Month - 6 Month	0.98	< 2 Month
12/26/2015	1.08	2 Month - 3 Month	1.45	4 Month
1/9/2016	0.88	2 Month	1.11	< 2 Month
2/24/2016	0.87	2 Month - 3 Month	0.81	< 2 Month
5/10/2016	2.01	2 Month - 5 Year	2.77	2 Year to 5 Year
6/4/2016	1.20	2 Month - 9 Month	1.70	1 Year to 2 Year
6/15/2016	0.83	2 Month - 9 Month	1.38	9 Month to 1 Year
8/18/2016	0.85	2 Month - 1 Year	0.31	< 2 Month
8/24/2016	1.00	2 Month - 2-Year	0.94	2 Month to 3 Month

Table 2: Top 10 Events by Average Rainfall

For the events in Table 2, the rainfall collected at the airport rain gauge is relatively consistent, with some effects of spatial variation shown. This comparison was made at CUE's request since long-term data from the airport gauge was used to derive the typical year rainfall for PCM compliance simulations.

Table 3 presents a summary of eleven rain events flagged due to suspect data in the review of the 12 months of data from the 13-gauge network. As shown in the table, based on the review, three events were unmodified, one event at a single gauge was removed, and seven were modified based on the rainfall from adjacent gauges. Overall, the annual data is of good quality, with an annual average precipitation of 28.7" as measured by the 13 rain gauges used in this analysis. Further, rainfall data from the Airport gauge indicates that the 12-month PCM period was very close to a typical year in terms of total rainfall – annual precipitation at the Airport gauge for this 12-month period was 34.55", similar to the typical year average of 35.4" (the average annual rainfall for the City's 5-year (1998-2002) typical year period).

Event Date	Rain Gage	Return Period	Return Period of the Other Rain Gages	Solution
12/24/2015	Belle Vista	5-yr to 10-yr	~2-mo	Distribute Rain over 12/23 and 12/24
12/29/2015	Belle Vista	2-yr to 5-yr	2-mo to 6-mo	Distribute Rain over 12/28 and 12/29
12/29/2015	Getz Road	>100-yr	2-mo to 6-mo	Distribute Rain over 12/28 and 12/29
1/2/2016	Fairfield	6-mo to 9-mo	No other gages reported rain events	Remove rainfall
1/11/2016	Study	>100-yr	~2-mo	Replace with average of nearby gauges
2/26/2016	Fairfield	6-mo to 9-mo	~2-mo	Replace with average of nearby gauges
4/6/2016	Dupont Library	2-yr to 5-yr	<2-mo	Distribute Rain over 3/24 through 4/6
5/10/2016	All gages vary	Gages range from 25-yr to 2-mo		Keep – Spatially Varied
6/9/2016	Getz Road	>100-yr	No other gages reported rain events	Distribute Rain over 5/14 through 6/9
7/29/2016	Getz Road	9-mo to 1-yr	Only 1 other gage reported a <2-mo event (Study)	Keep – Spatially Varied
8/18/2016	Anthony	10-yr	2-mo to 1-yr	Keep – Spatially Varied

Table 3: Corrections to 13-Gauge Network Rainfall Based on Technical Review

As an example of events modified based on the rainfall data review, **Figure 2** presents the rainfall from the 13-gauge network from December 24th through December 31st, 2015. As shown in the figure, two telemetry errors are observed for the December 24th and 28th events. For these observed errors, the project team corrected the data by maintaining the total rainfall, but temporally distributing it consistent with the nearby gauges.

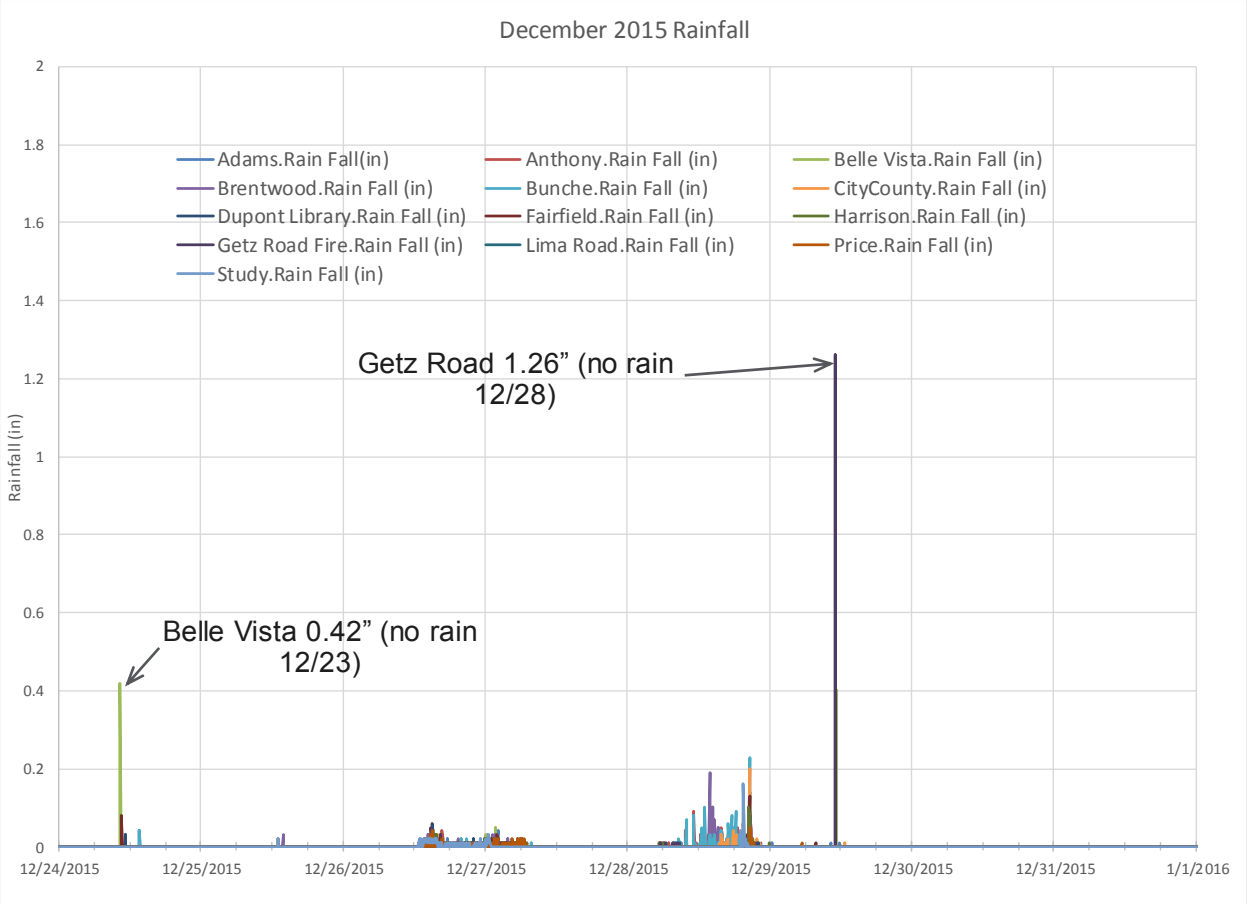


Figure 2: Observed Telemetry Errors December 24th – December 31st, 2015

FLOW METER DATA REVIEW

This section presents the review of outfall flow monitoring data provided by CUE for the St. Joe CSOs and tributary collection system. Monthly level-velocity scattergraphs are presented in **Appendix A.**

Outfall Meter Data

Meter data was provided for one CSO structure on the east side of the St. Joe River: CSO 052. For the other five CSOs, CUE confirmed that no overflows were monitored during the 2015-2016 PCM period from their preparation of CSO Discharge Monitoring Reports (DMRs); therefore, no outfall meter data review was necessary at these locations. CSO 052 data is presented for September 2015 to August 2016. For an overflow pipe, the level-velocity scatter presented as expected, there is limited scatter since the majority of the time the pipe is empty, but the observed depth, velocity, and flow data is consistent through the 12-month period. Based on the review of scattergraphs in Appendix A, the outfall monitoring data is appropriate for use in assessing the model calibration as required in CUE's Long-Term Control Plan (CUE, 2007).

As shown in Appendix A, CSO 052 reported three verified overflow events during the monitoring period. Two of these were verified overflow events due to wet weather in August 2016. The third event was

observed during a wet-weather event on September 19, 2015 but field investigation indicates it was due to a blockage in the regulator and not due to excess wet-weather flows. This blockage was immediately cleared. One other potential overflow event was unverified and determined to be a non-event on March 31, 2016. This was done using redundant instrumentation and is described in more detail in the following report section on page 10.

ST JOE SUBBASIN MODEL ANALYSIS

This section presents the model review, preparation, and application for the 12-month PCM period, and comparison to the data collected by CUE from September 1, 2015 to September 1, 2016. **Figure 3** presents the St. Joe River CSO Subbasins that were the focus of the analysis.

Model Review and Preparation

The EPA SWMM v5.1.009 model files provided by CUE represent the current combined sewer collection system with Control Measures 7 and 8 completed. Modeling inputs were updated to reflect the monitoring period. Climatology data for the simulation period was updated with daily maximum and minimum temperatures for the City of Fort Wayne. The evaporation rates used in the simulation were computed in the model from the daily temperature values. Five-minute interval rainfall data from the 13 gauge network was imported into the model for the simulation period. As shown in Figure 1, rain gauge assignments to subcatchments and RDII hydrographs were based on geospatial location of the rain gauge in relation to the subcatchments and the manhole locations with assigned RDII flow. River intrusion to the combined sewer collection system outside of the St. Joe collection system was provided by CUE and modeled as direct inflow at six locations throughout the system.

Initial Model Testing

In advance of completing a 12-month simulation, initial shorter duration models were tested. The initial model tests included simulating four individual rain events and one full month of rainfall. The individual rain events represent small, large, and spatially varied rain events which occurred during the monitoring period. The selected model test periods are described in Table 4.

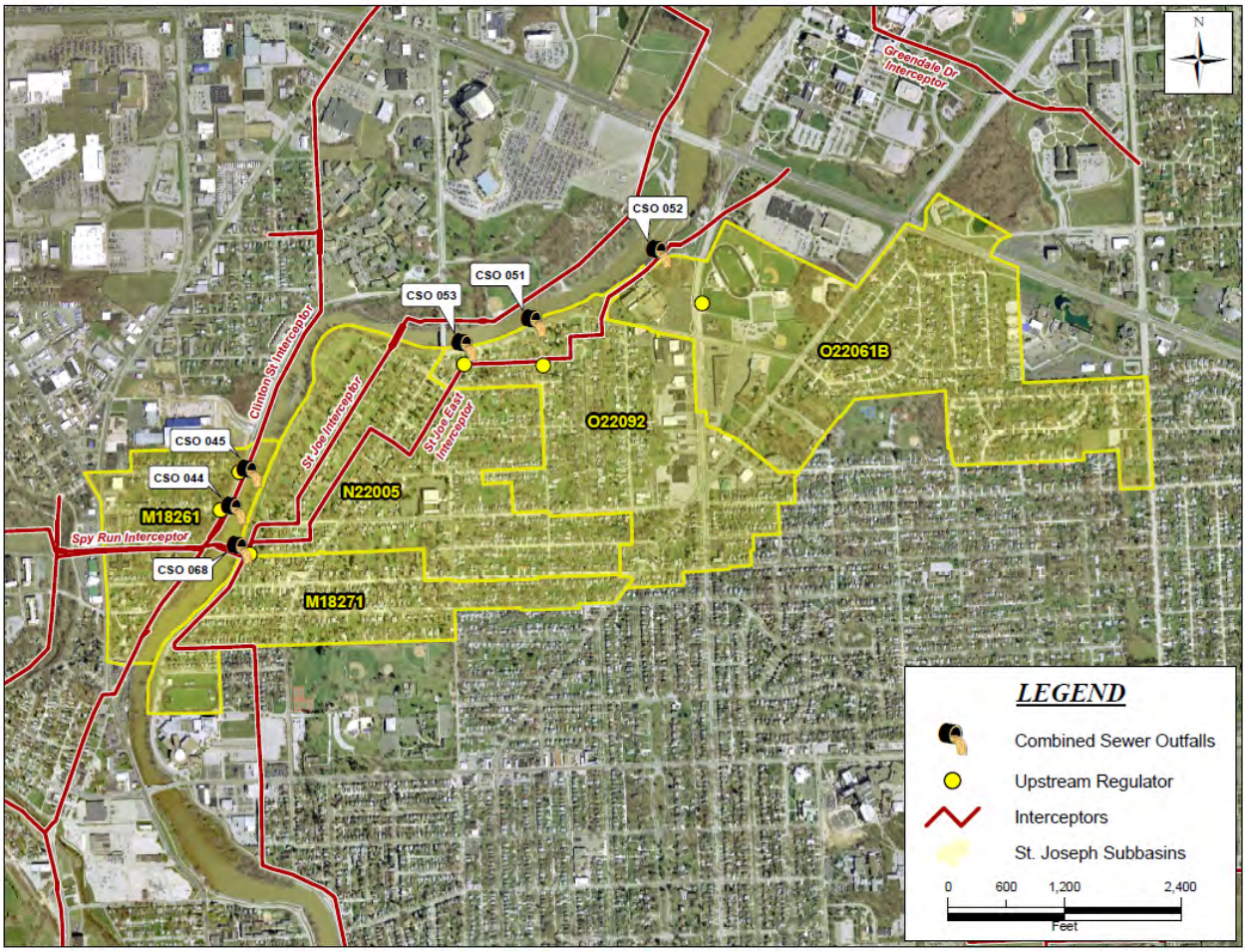


Figure 3: St. Joe River CSO Subbasins

Event Date	Average Event Rainfall, in	Return Period Classification of Majority of Rain Gauges
10/27/2015	0.95	2 month – 6 month
4/28/2016	0.71	2 month
6/4/2016	1.20	2 month – 9 month
7/21/2016	0.61	2 month – 1 year
August 2016	3.4	N/A

Table 4: Initial Model Test Periods

Simulation results from the model test periods were reviewed to develop confidence in the model predictions. Model results review included hydraulic grade line evaluations and comparisons with metered data including flow rate, depth, and CSO activations. The initial test simulations were stable (low continuity error) and the collection system results were a good fit to metered data over a wide range of conditions, confirming the model's ability to perform the critical 12-month PCM simulation.

Final 12-Month Model Simulation

The final model simulation duration extends for 12 months, from September 1, 2015 through September 1, 2016. Wet-weather and dry-weather runoff calculations were assigned a five minute and one hour time step, respectively. A variable flow routing time step based at 10 seconds was applied to reduce model instabilities and improve continuity. Simulation runoff quantity and flow routing continuity were -0.4% and -0.06% respectively. The low continuity errors reflect a high level of certainty in the hydraulic and hydrologic results.

The review of the St. Joe River CSOs results focused on the six CSO locations: 068, 044, 045, 053, 051, and 052. Metering data recorded two true CSO activations during the simulation period, all occurring at CSO 052. Given the configuration at CSO 052, the City's monitoring installation uses several sensors: a pressure transducer at the actual regulator, which serves as a "yes/no" indicator of activation, and a full depth/velocity meter in the outfall pipe to measure flow rate. Because the outfall pipe can be impacted by groundwater infiltration, a true CSO activation is only registered when the pressure transducer indicates overflow at the regulator structure. For example, a potential fourth event was initially observed in the CSO 052 outfall meter data at the end of the month of March 2016, but CUE confirmed this event was not an actual overflow by using the pressure transducer. In this case, the briefly measured flow in the overflow pipe was groundwater infiltration.

Comparison to PCM Metering Data

The 12-month simulation results in the St. Joe River Basins were compared to the metered depth and flow data. There is an overall consistency in the flow data throughout the model in comparison with metered data and known collection system performance Comparisons between metered and modeled flow and depth were completed for the top ten rain events listed in Table 3, plus an additional event in September 2015. The percent difference between modeled and metered data is provided in **Table 5** for each rain event. CSO locations 068, 053, 051, 044, and 045 had zero flow or depth for the full simulation duration.

Date	Data Set	CSO 052		CSO 044		CSO 045		CSO 051		CSO 053		CSO 068	
		Depth, ft	Flow, MGD	Depth, ft	Flow, MGD	Depth, ft	Flow, MGD	Depth, ft	Flow, MGD	Depth, ft	Flow, MGD	Depth, ft	Flow, MGD
9/4/2015-9/6/2015	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	1.6[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
9/19/2015-9/20/2015	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	2.0[2]	3.0[2]	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-[2]	-	-	-	-	-	-	-	-	-	-
10/27/2015-10/29/2015	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	0.01[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
12/26/2015-12/28/2015	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	0.02[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
1/8/2016-1/11/2016	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	0.03[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
2/24/2016-2/25/2016	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	0.03[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
5/9/2016-5/12/2016	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	1.4[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
6/4/2016-6/6/2016	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	0.03[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
6/15/2016-6/16/2016	Model	0	0	0	0	0	0	0	0	0	0	0	0
	Meter	0.5[1]	0	0	0	0	0	0	0	0	0	0	0
	% Difference	-	-	-	-	-	-	-	-	-	-	-	-
8/17/2016-8/20/2016	Model	0.6	2.2	0	0	0	0	0	0	0	0	0	0
	Meter	4.6	7.5	0	0	0	0	0	0	0	0	0	0
	% Difference	-88%	-71%	-	-	-	-	-	-	-	-	-	-
8/24/2016-8/25/2016	Model	0.1	0.04	0	0	0	0	0	0	0	0	0	0
	Meter	1.8	1.9	0	0	0	0	0	0	0	0	0	0
	% Difference	-97%	-98%	-	-	-	-	-	-	-	-	-	-

Note[1]: Inconsequential depth reading at CSO 052 because overflow rate was zero (confirmed with pressure transducer). Note[2]: Field investigation indicate this overflow was due to a blockage in the regulator.

Table 5: Top 10 Rain Event Flow and Depth Comparison

The two true CSO 052 activations occurring during the August 17-20, 2016 and August 24-25, 2016 rain events match the metered data activations, with variation in the peak depth and flow comparison. For outfall metering, matching activation is the highest priority since the outfall meter cannot be field verified during a wet-weather event. While the peak flow and depth for the two true CSO 052 activations in the model are lower than the metered data there is agreement between the model output and CSO monitoring data for activation frequency.

Graphical comparison of the August 17-25, 2016 event period for metered and modeled flow, depth, and velocity for CSO 052 are provided in **Figure 4**, with the model output shown in blue, and meter data shown in orange. As presented in Figure 4, the metered depth and flow exceeds the model, but the observed and simulated CSO activations are correct. CUE had expected the meter data to be higher due to the observed groundwater infiltration in the overflow pipe downstream of the regulator structure. Also, the lack of access to a CSO outfall meter during a wet-weather event prevents the meter from being formally field-calibrated, meaning that the meter could be over-representing actual flow conditions in the pipe.

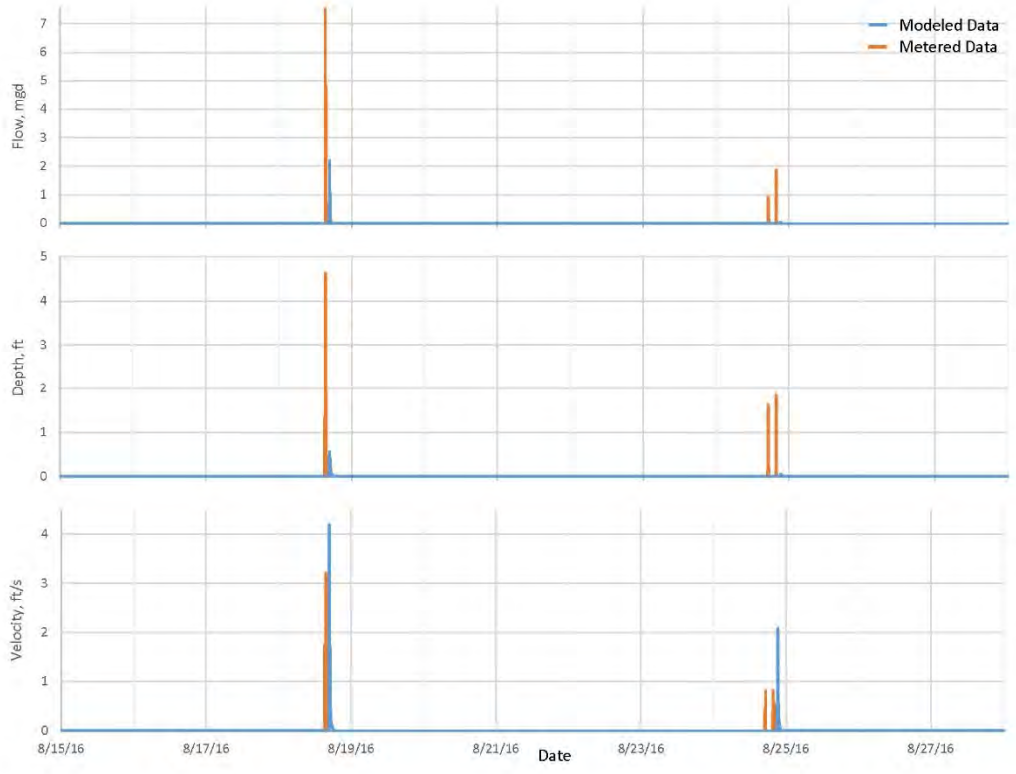


Figure 4: CSO 052 August 17-25, 2016 Model Results

SUMMARY AND NEXT STEPS

Summary

Based on the evaluation documented in this memorandum, CUE's model does not need to be recalibrated. CUE can proceed with the final 1998-2002 typical year simulation for the St. Joe River subbasins to assess compliance for the six CSOs on the river. The reasons that the current model calibration is adequate are as follows:

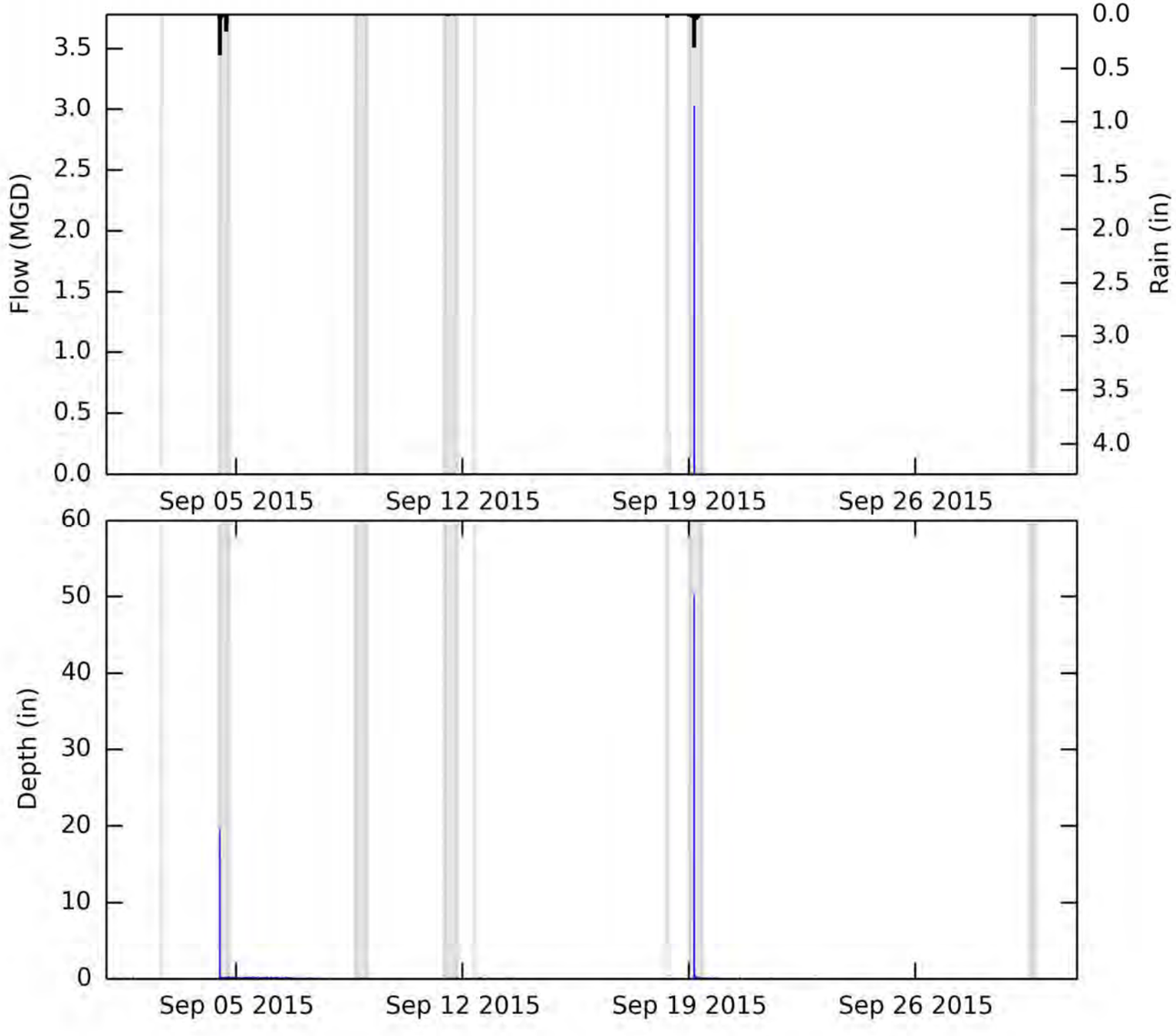
- CUE has collected the precipitation and CSO outfall data as required in LTCP Section 4.6.4.1; and
- CUE has applied the model for the 12-month period and determined that all metered overflow events were successfully predicted in the model.

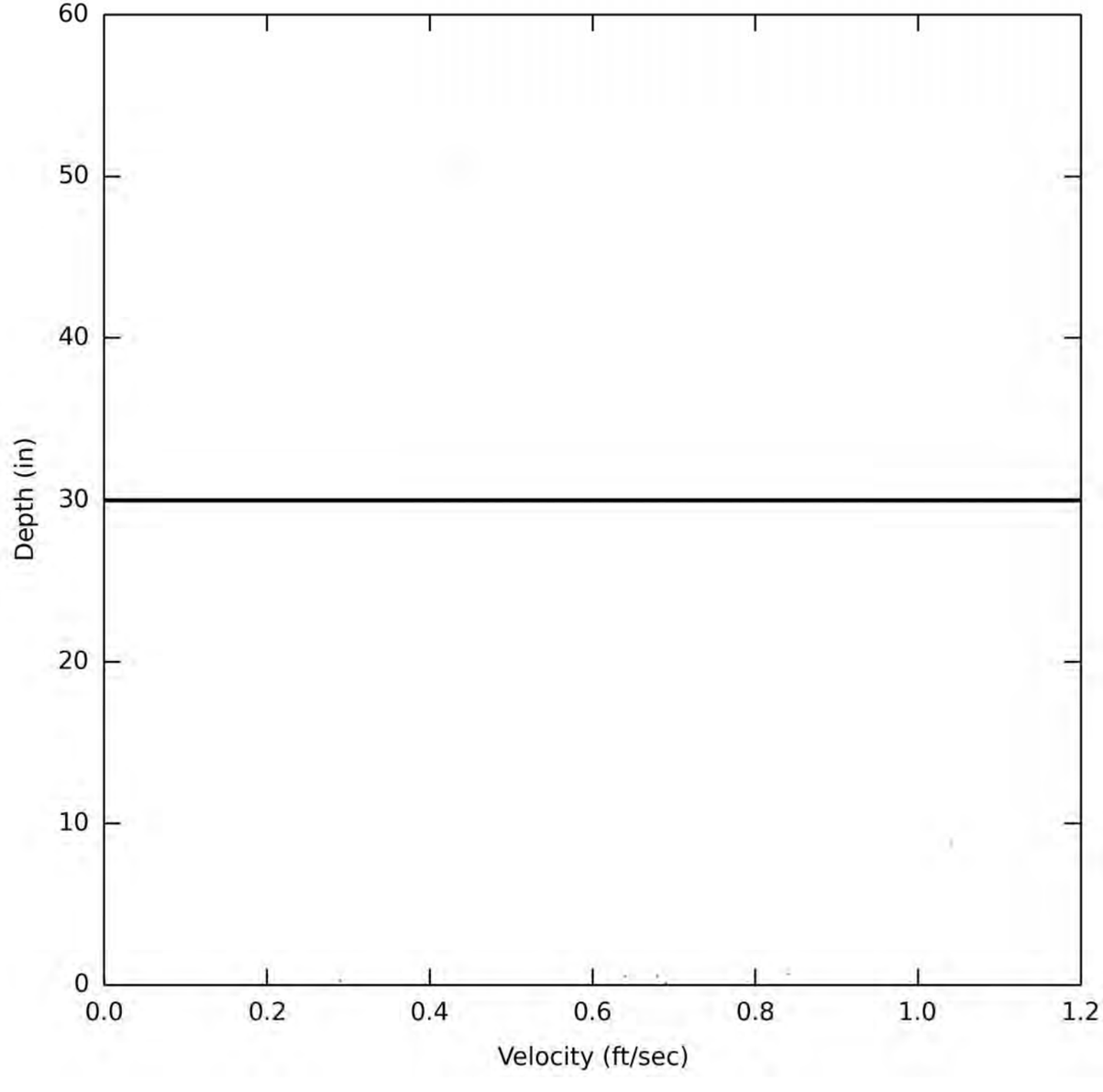
Next Steps

CUE can proceed with the final 1998-2002 typical year simulation for the St. Joe River subbasins and develop the PCM Milestone Report.

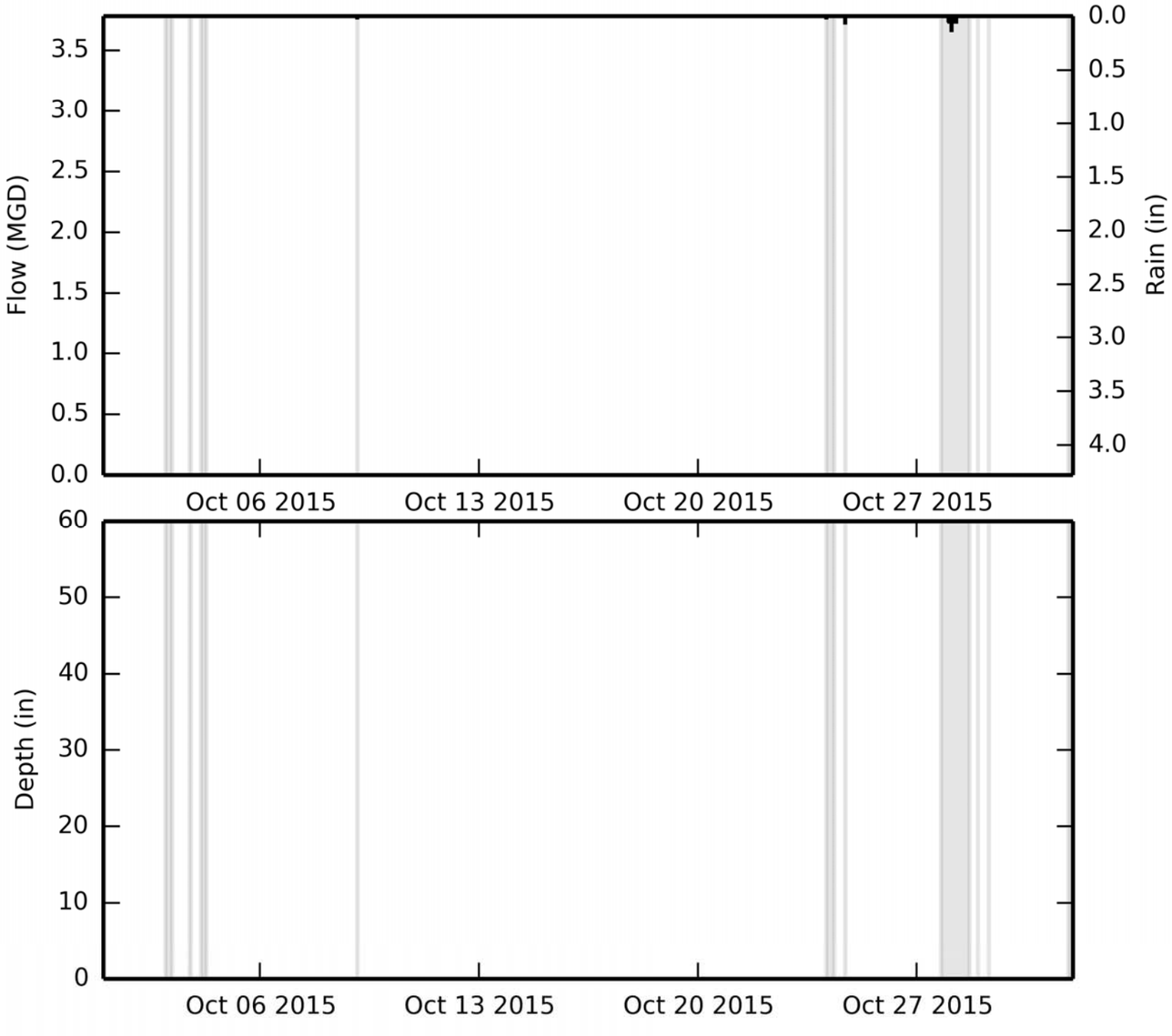
APPENDIX A: CSO 052 METER SCATTERGRAPH

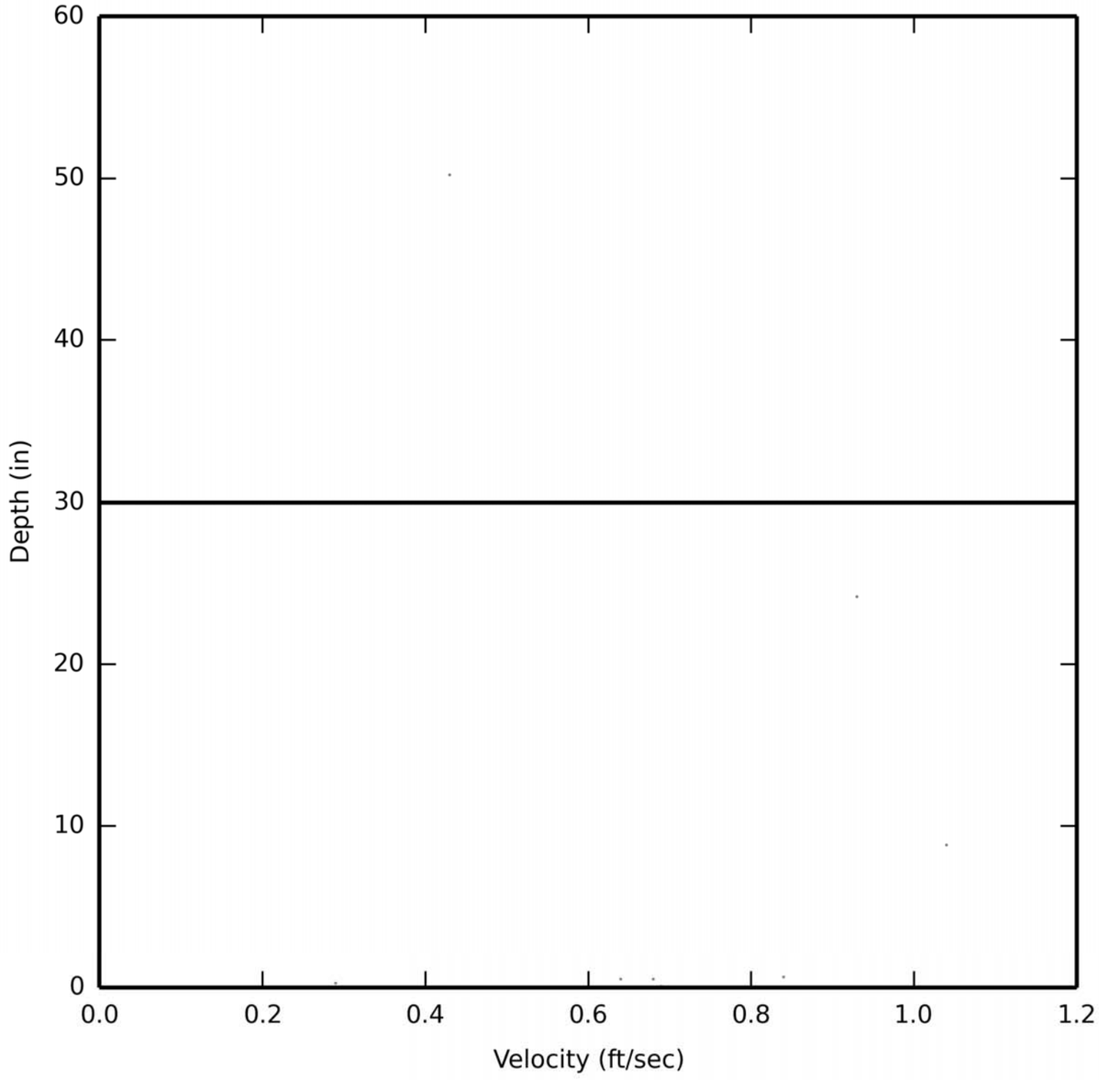
Meter CSO052B - 9/2015 RG: Anthony Basin: St Joe Conduit Diameter: 30



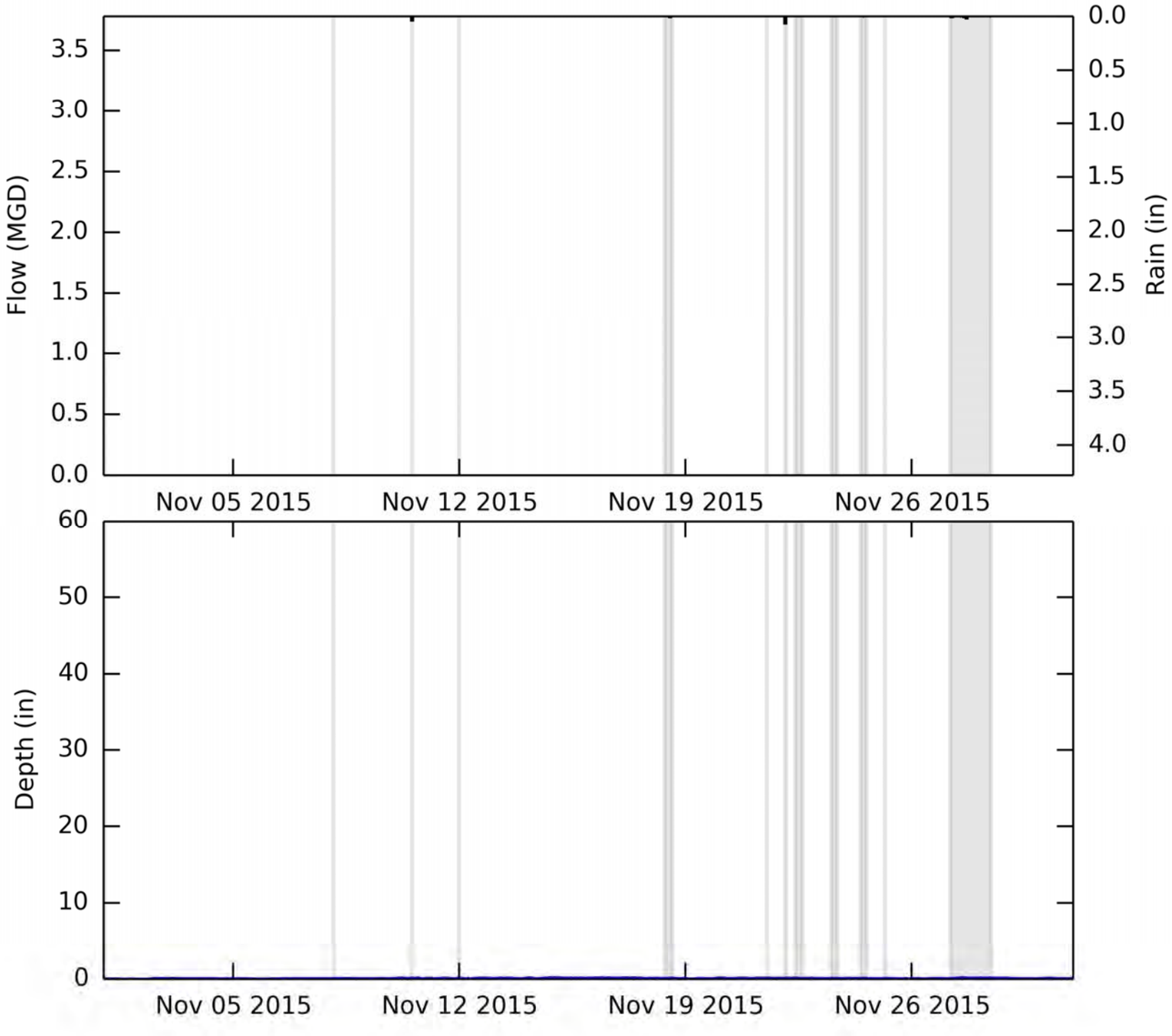


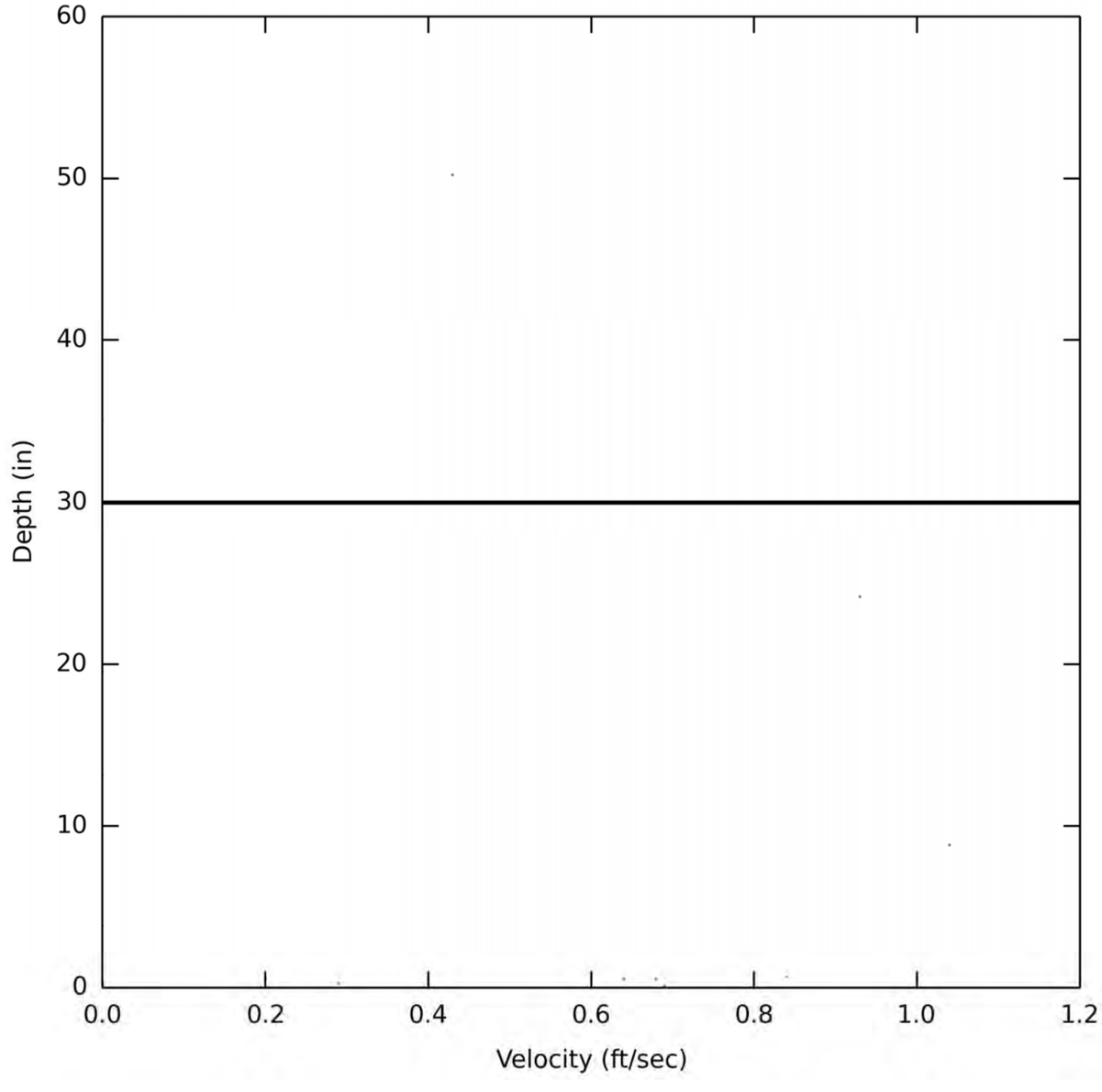
Meter CSO052B - 10/2015 RG: Anthony Basin: St Joe Conduit Diameter: 30



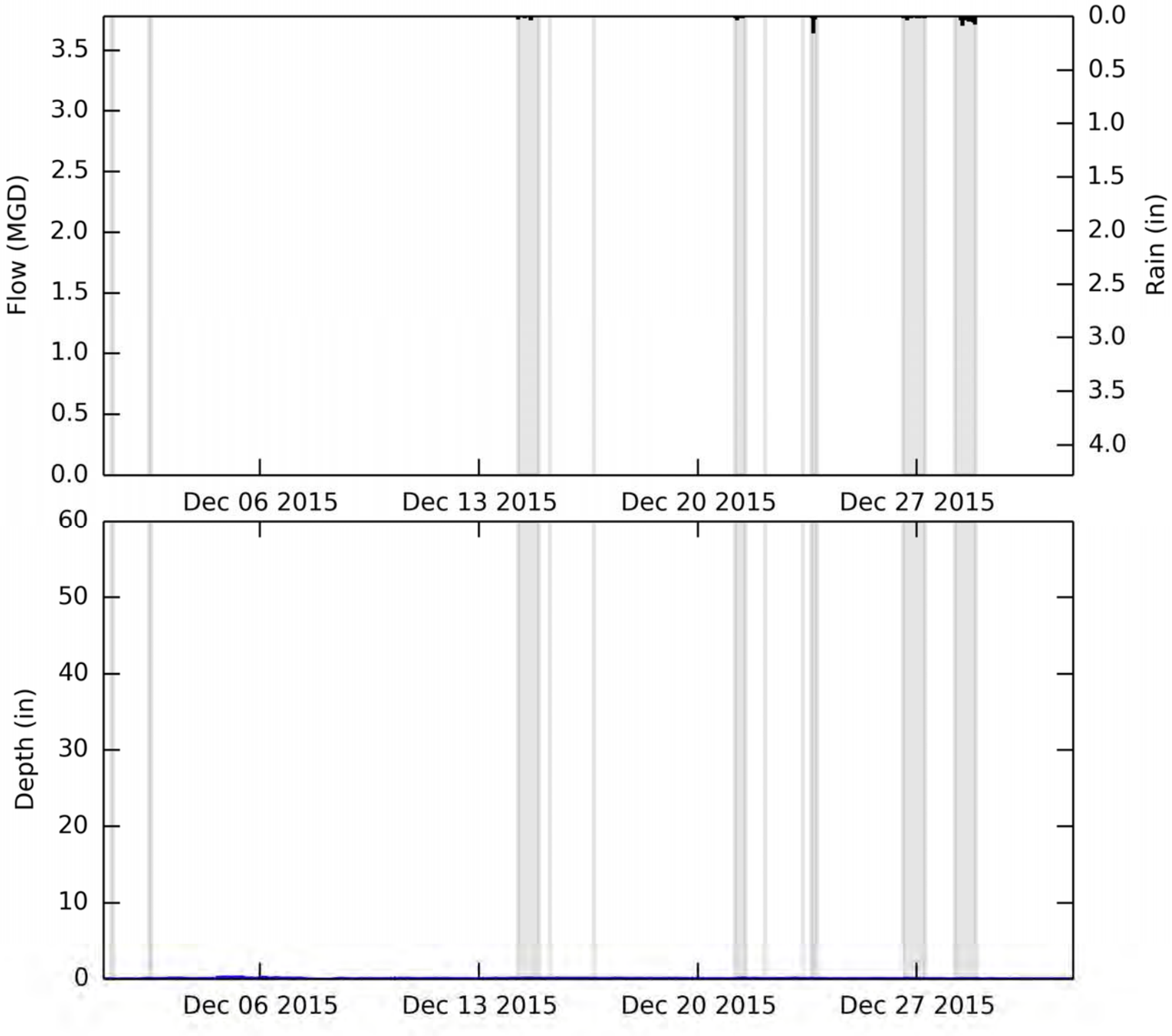


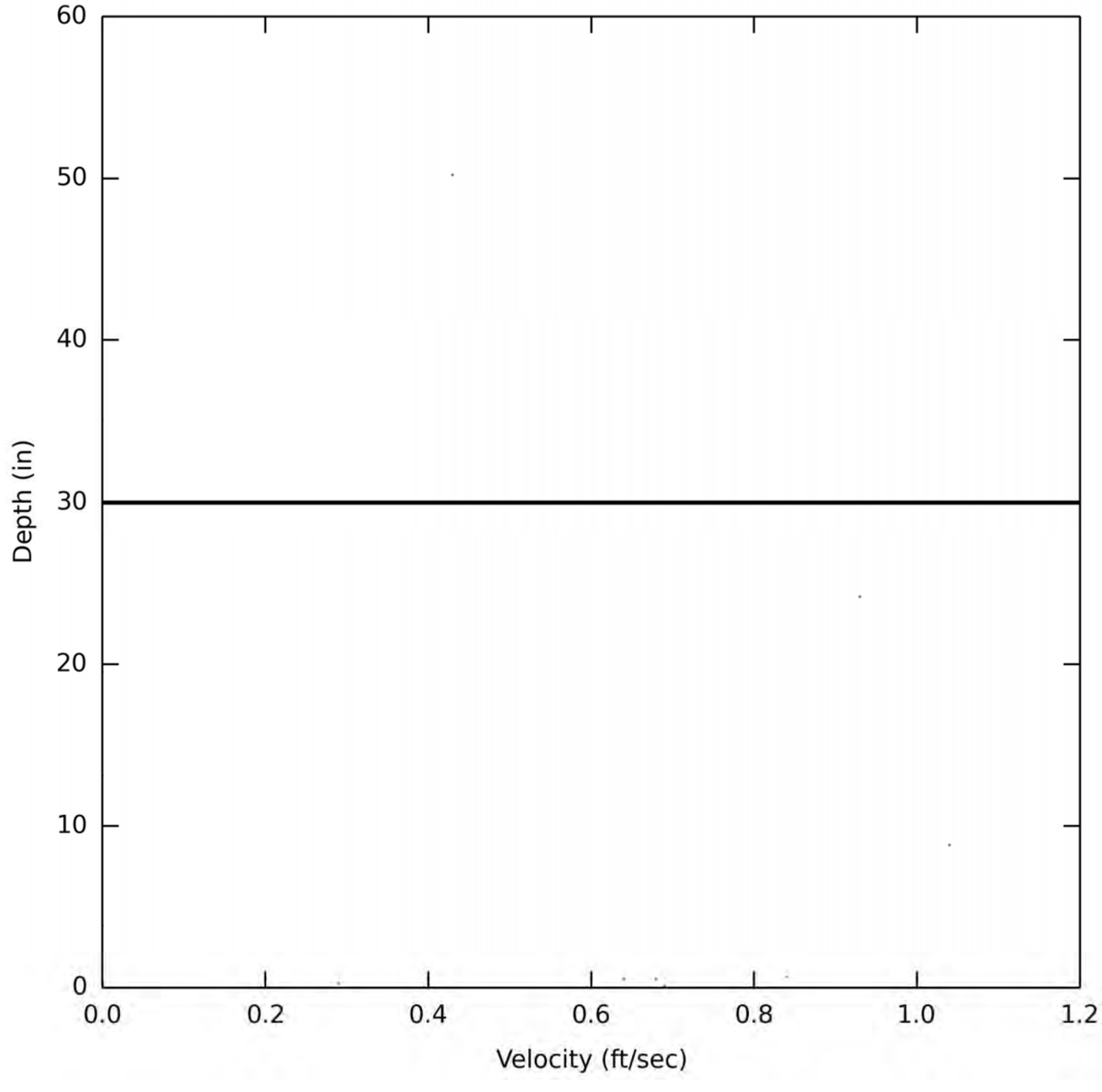
Meter CSO052B - 11/2015 RG: Anthony Basin: St Joe Conduit Diameter: 30



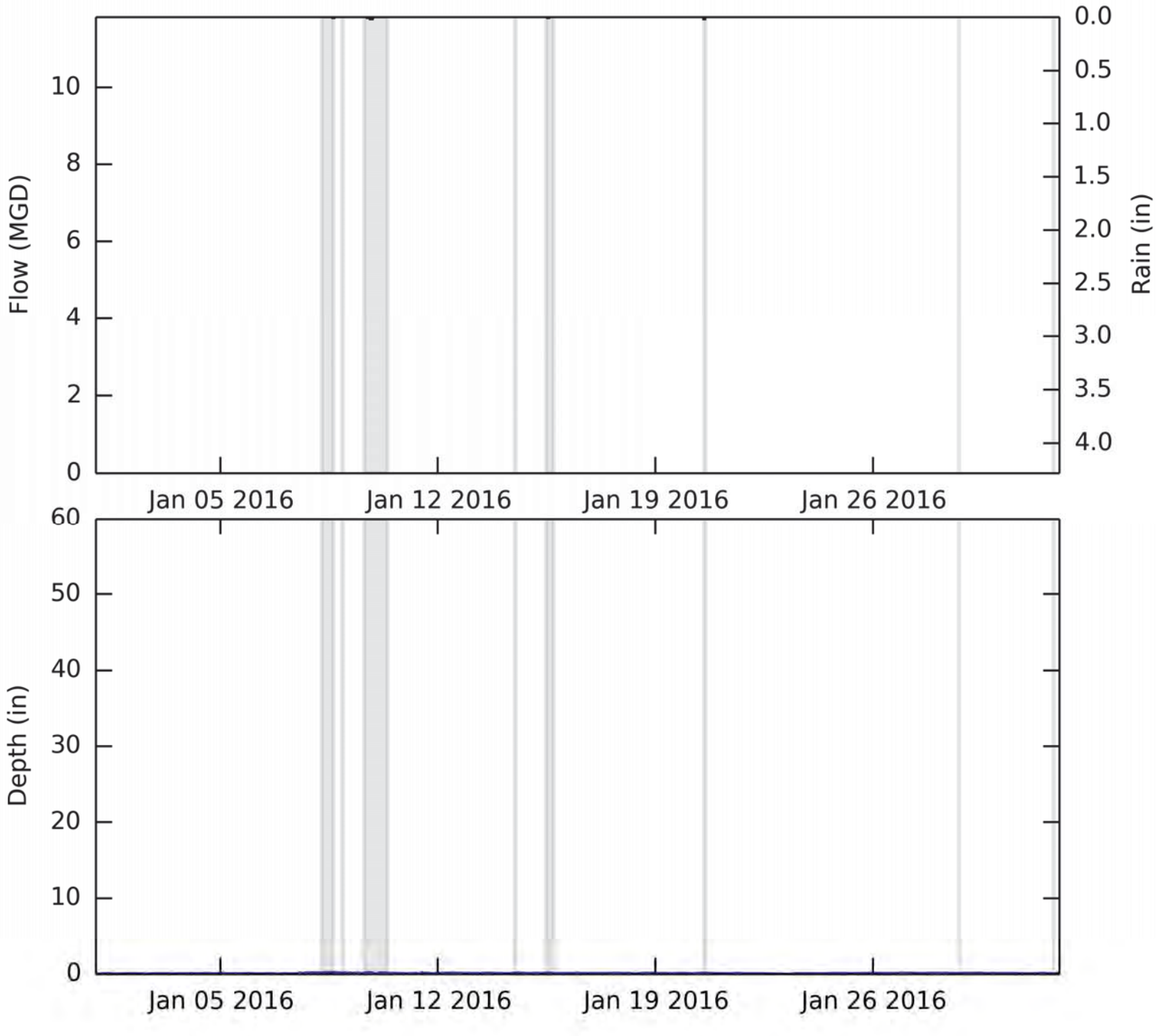


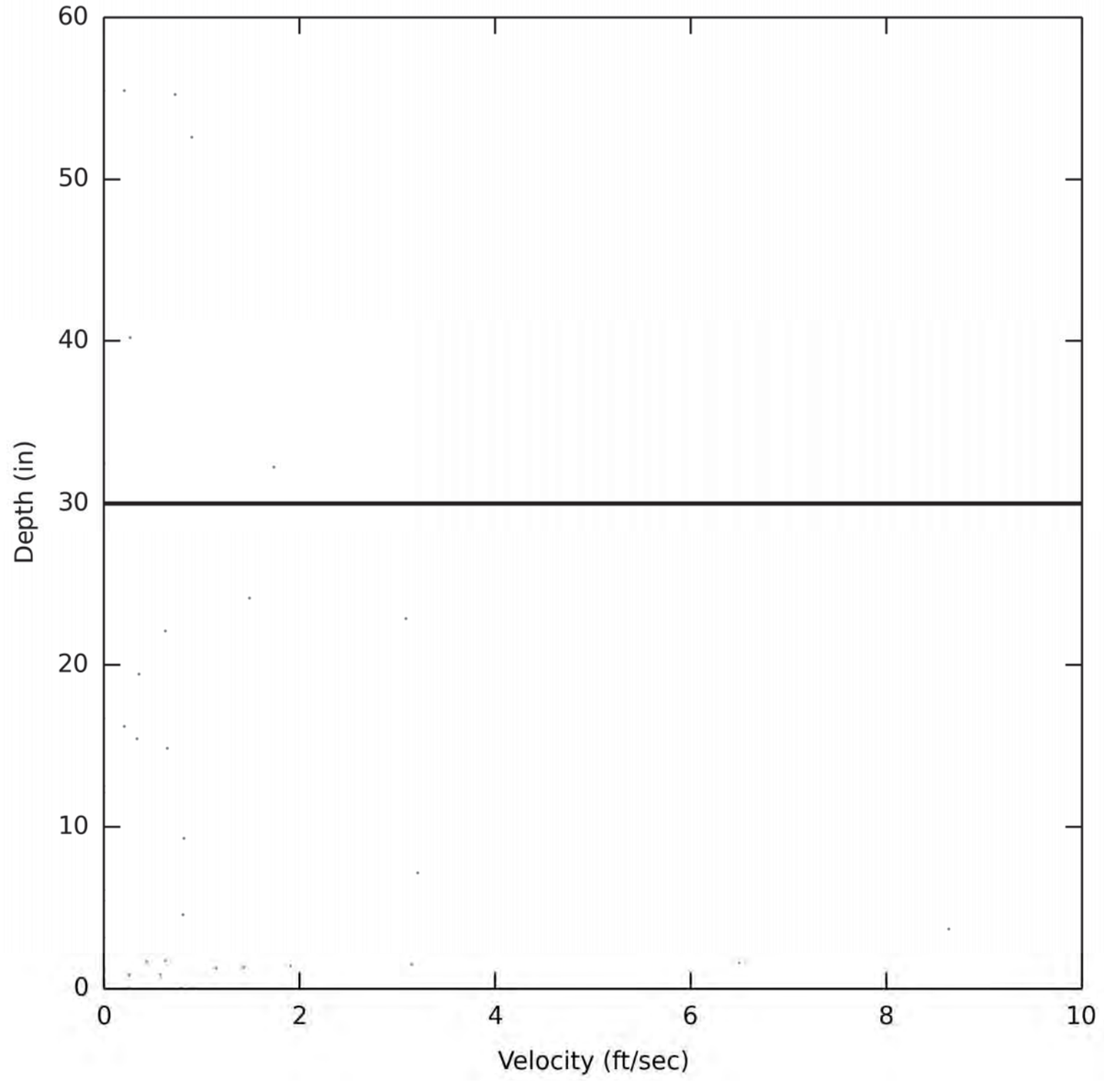
Meter CSO052B - 12/2015 RG: Anthony Basin: St Joe Conduit Diameter: 30



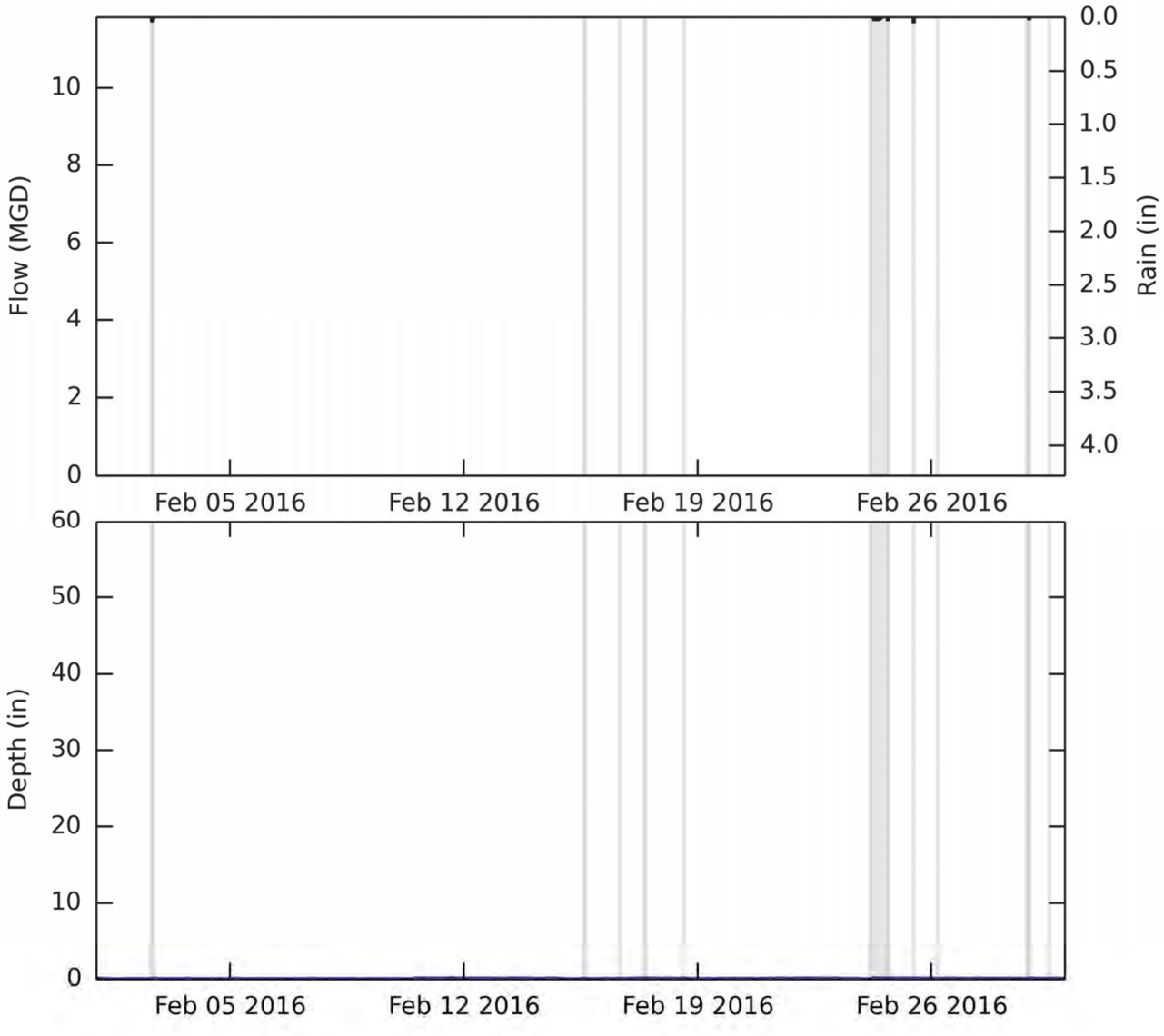


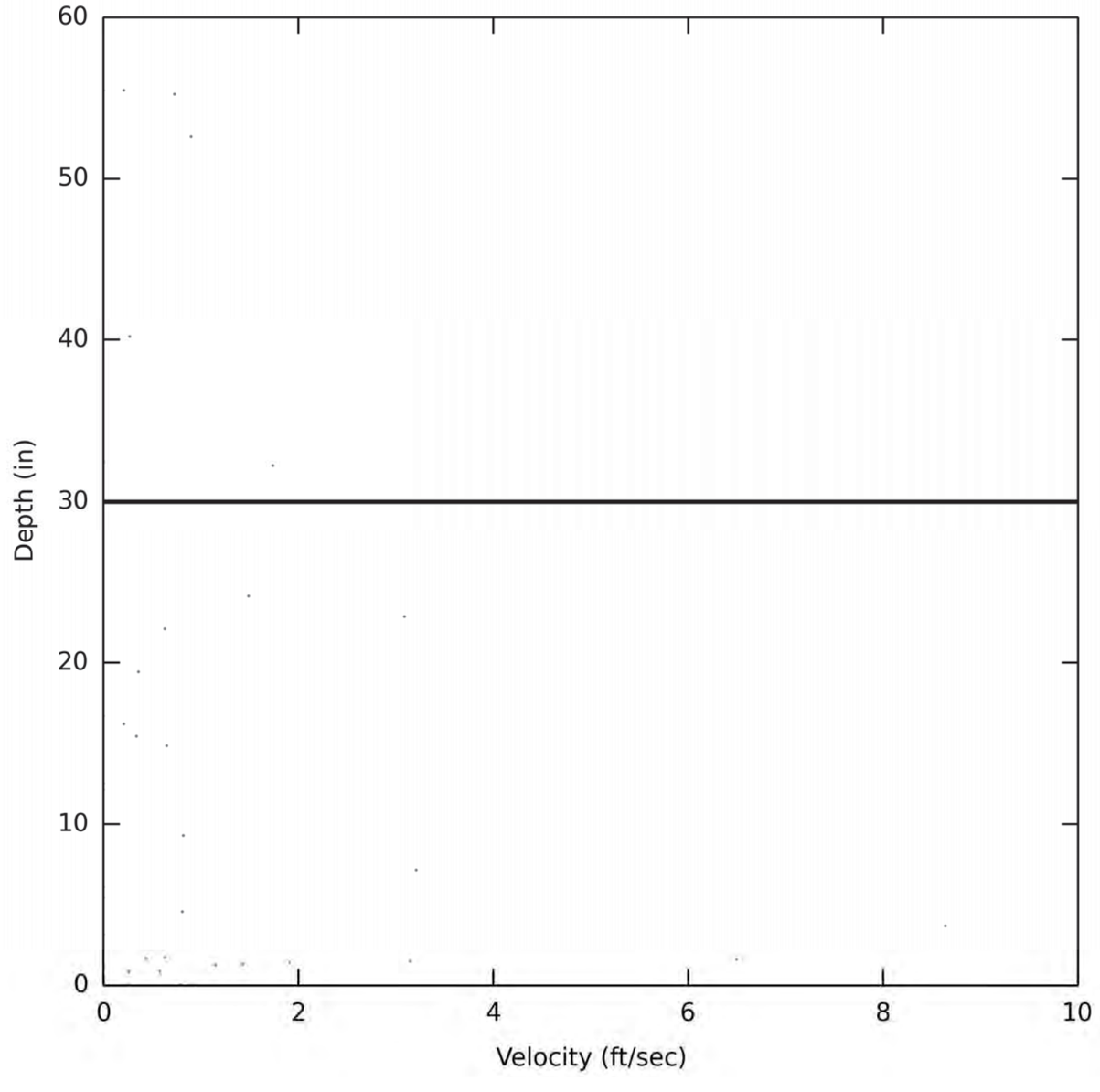
Meter CSO052B - 1/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30



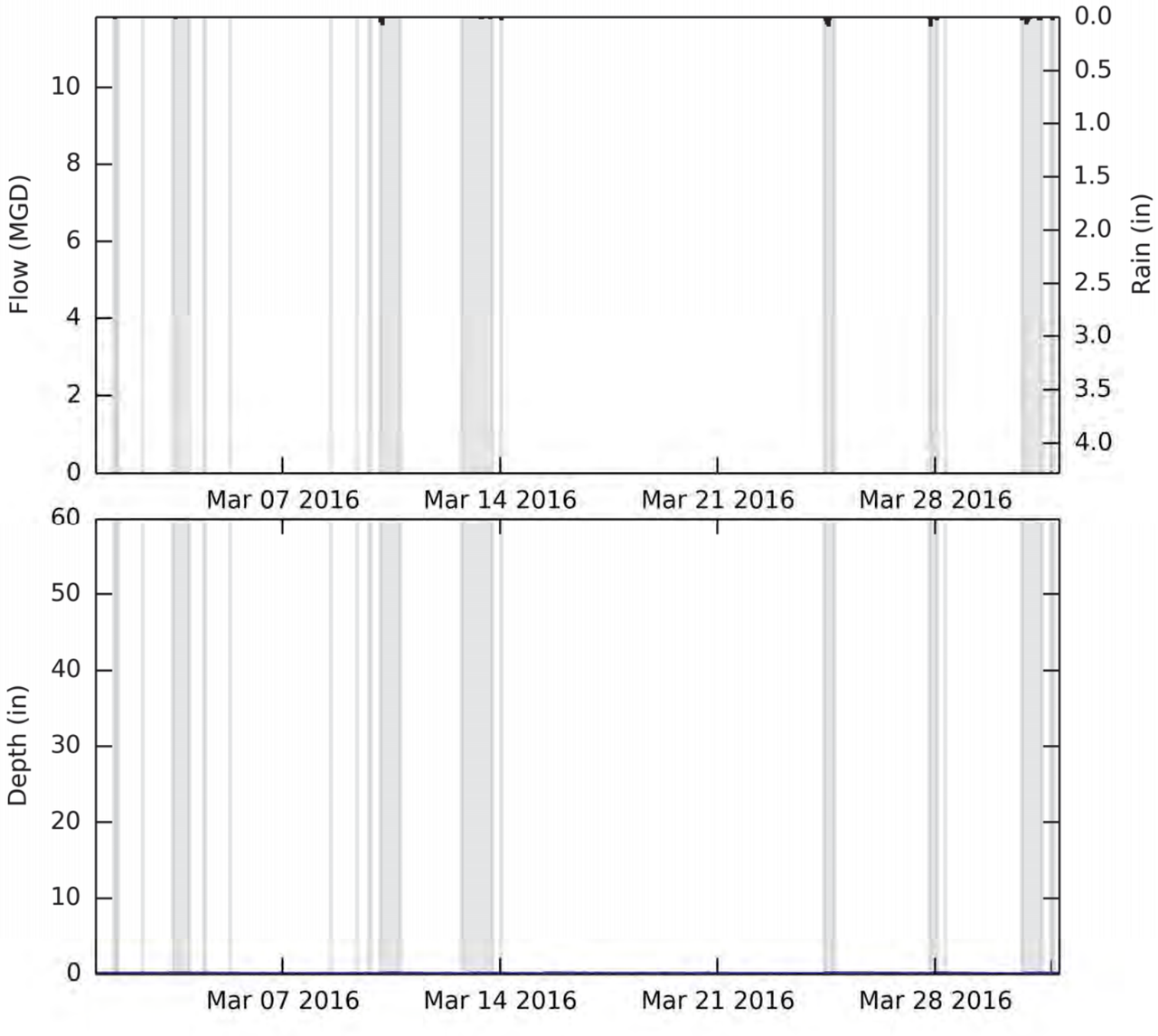


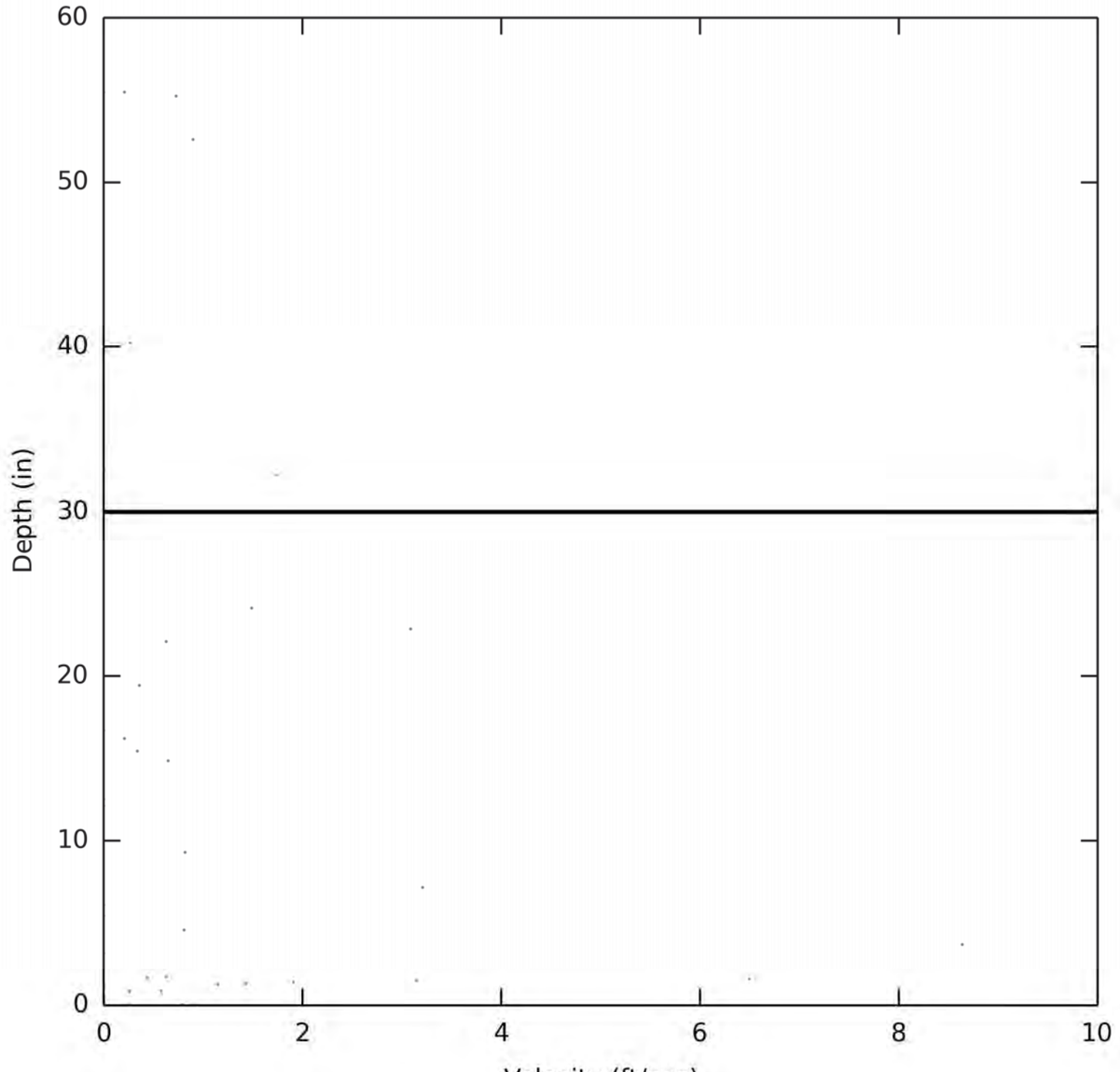
Meter CSO052B - 2/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30





Meter CSO052B - 3/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30





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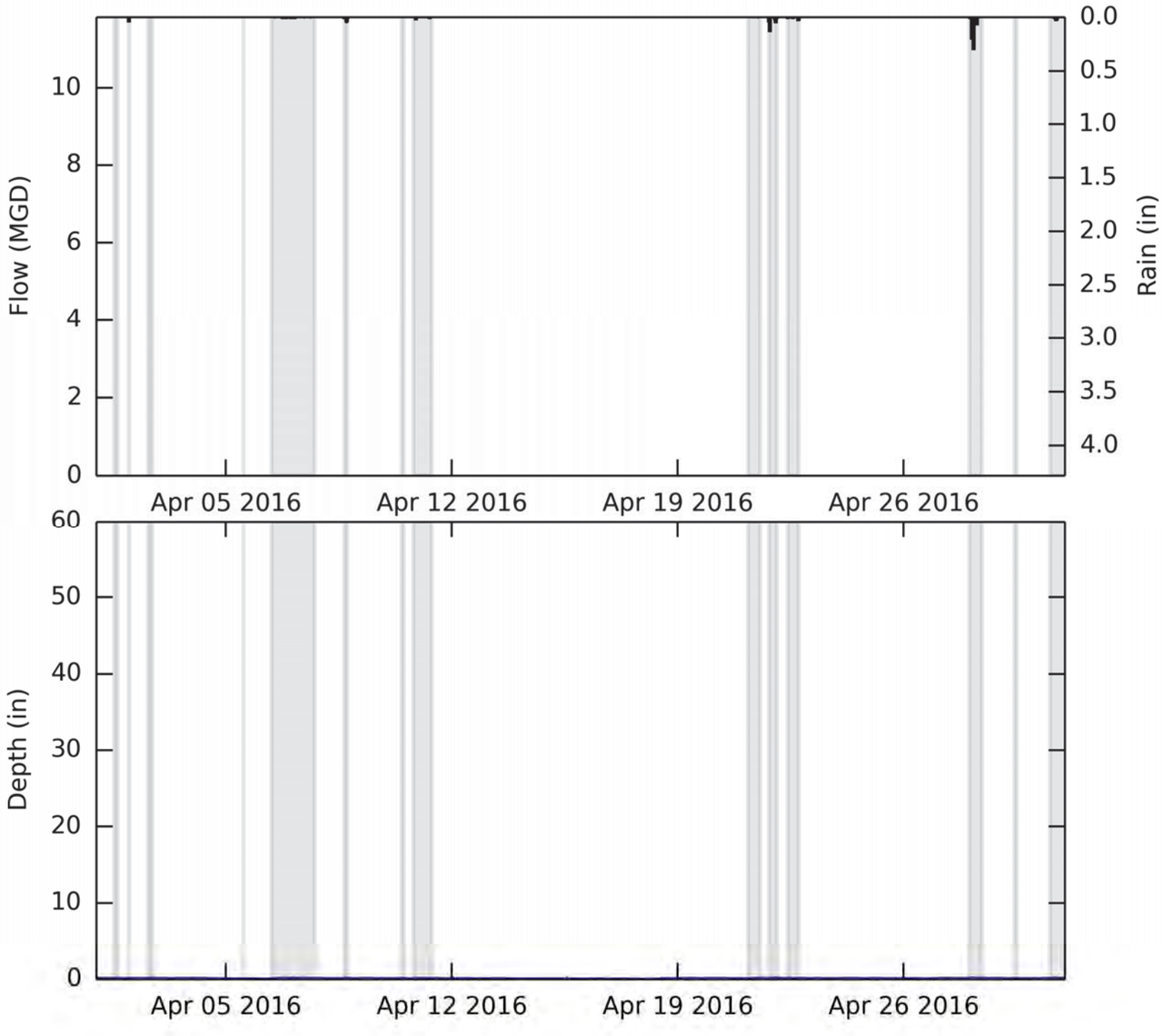
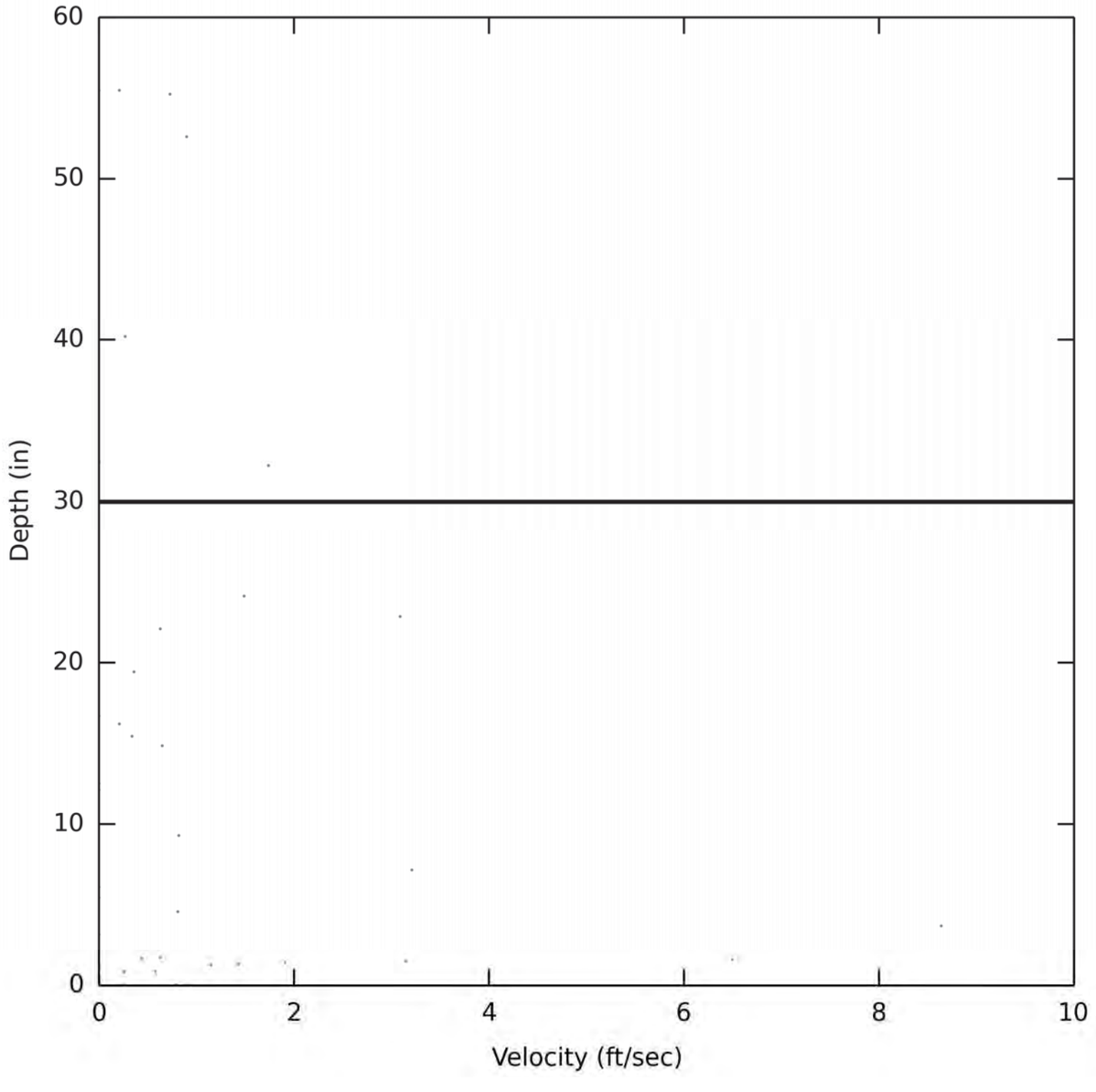
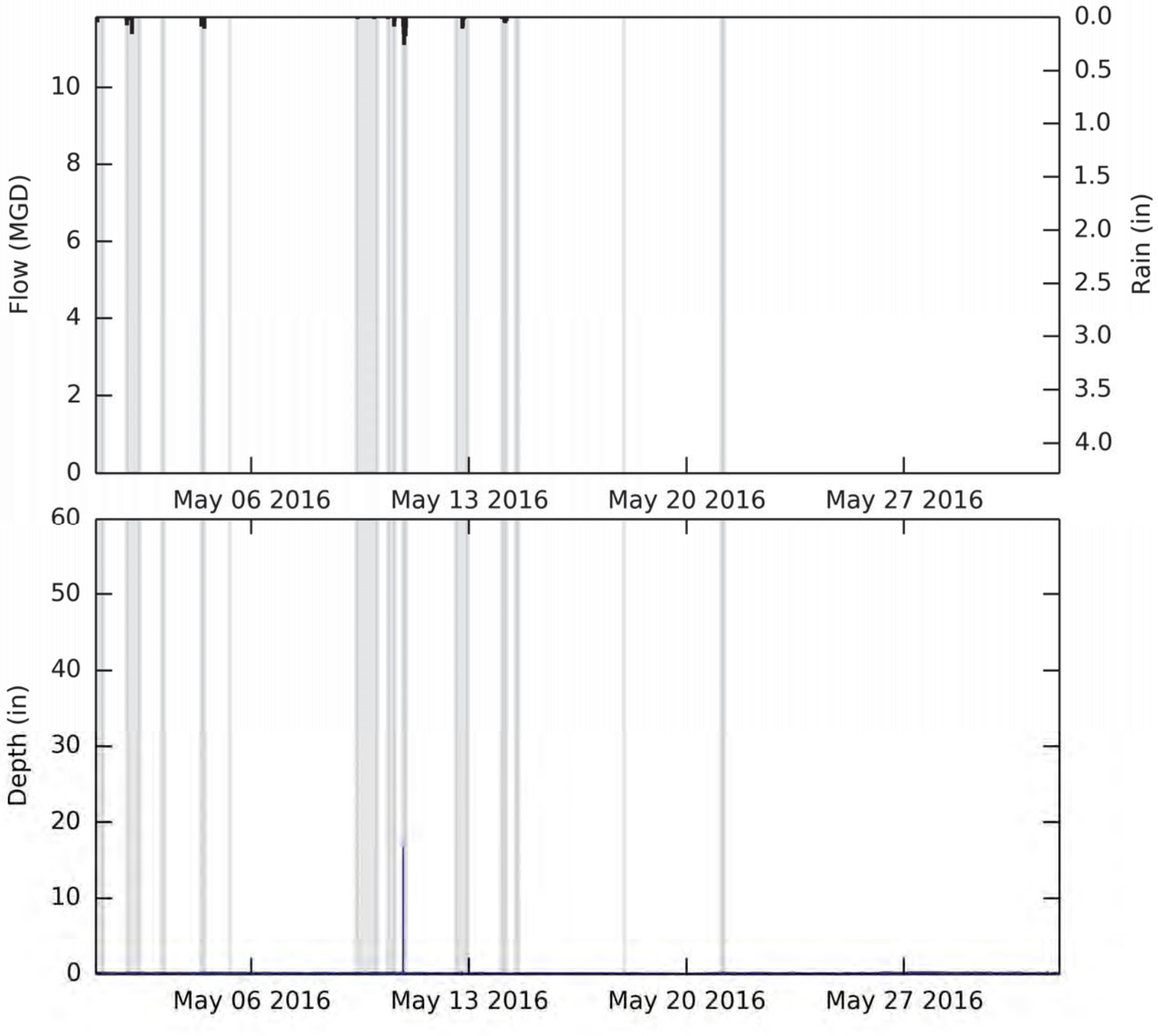
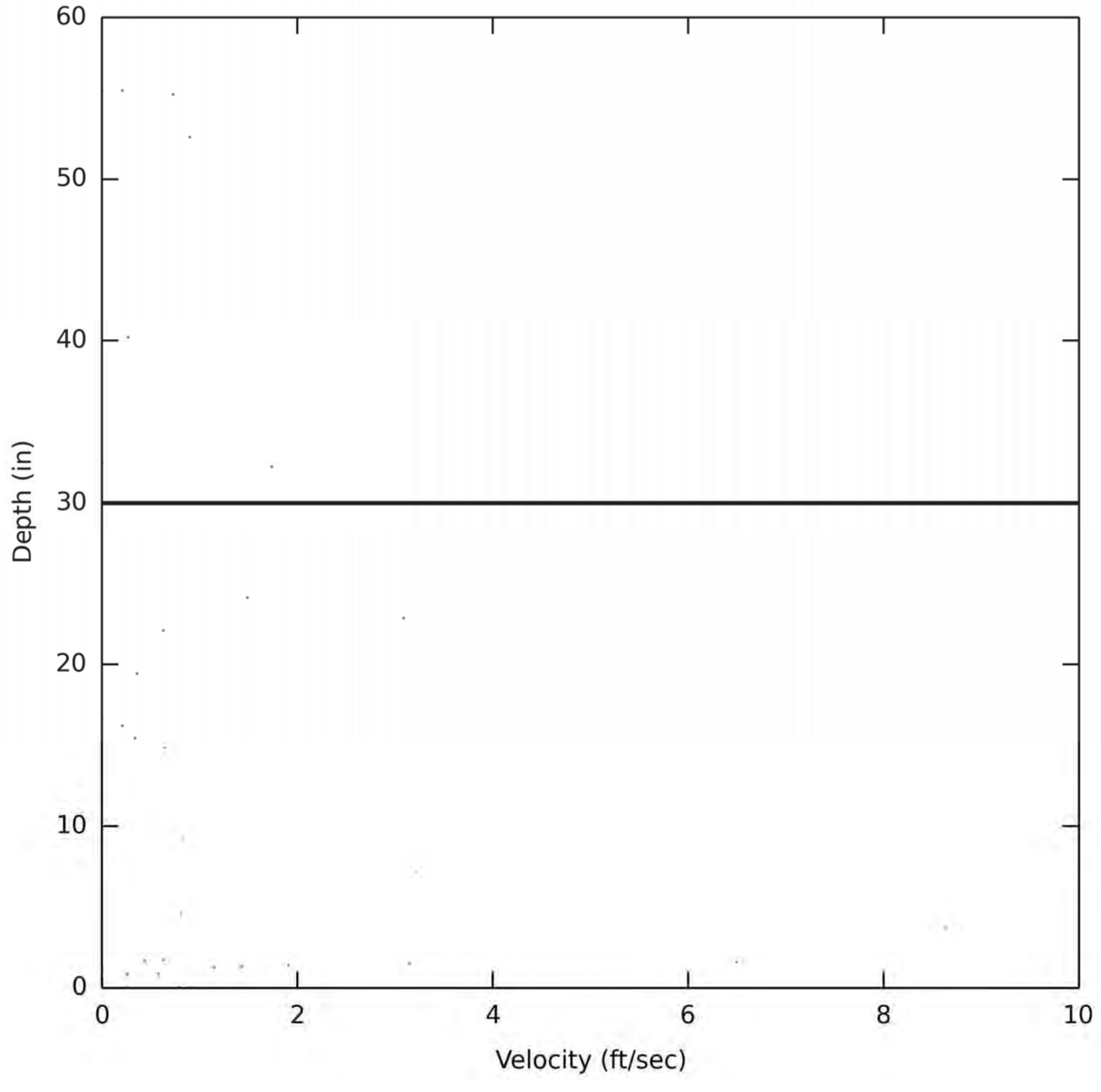


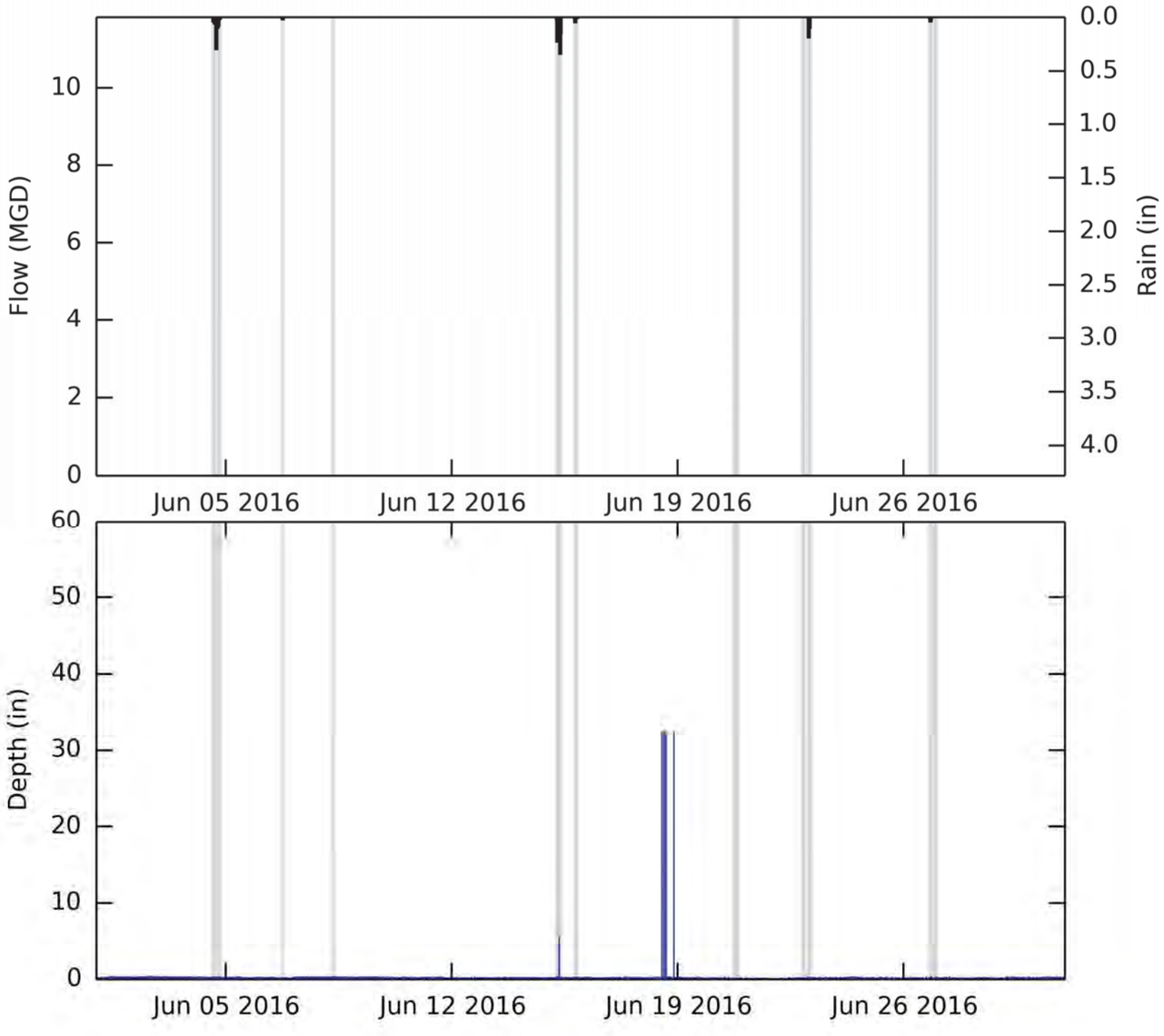


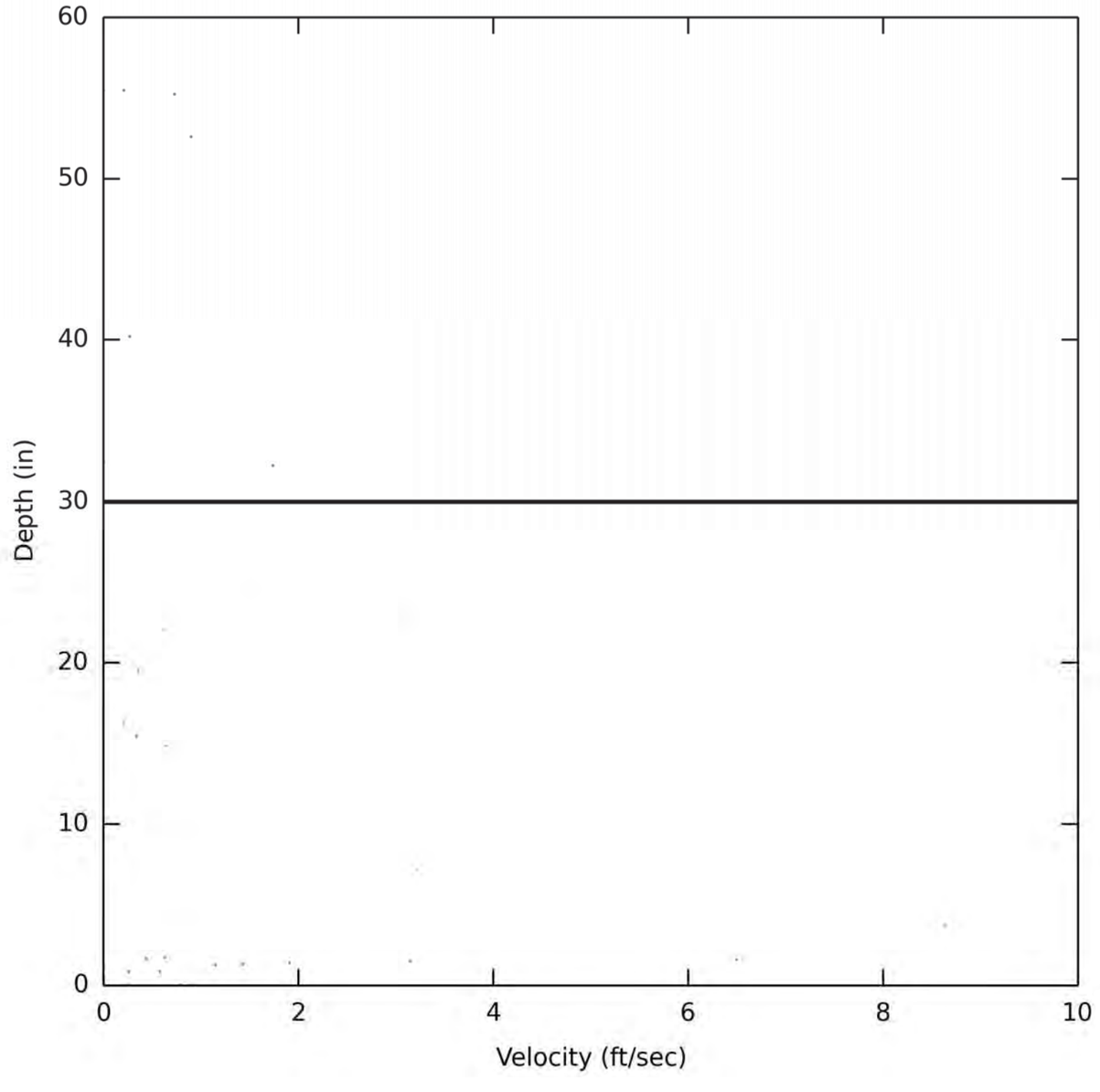
Meter CSO052B - 5/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30



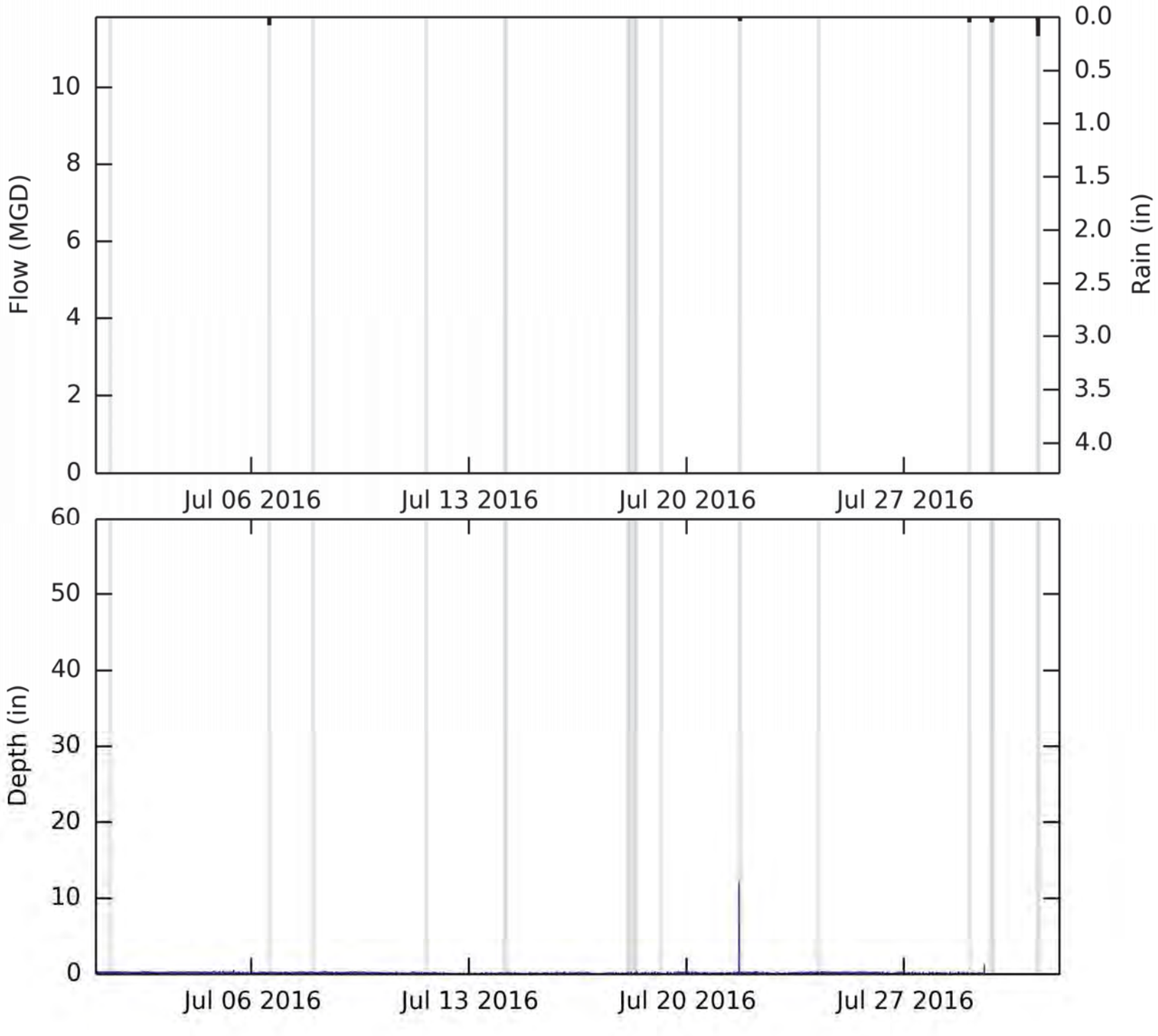


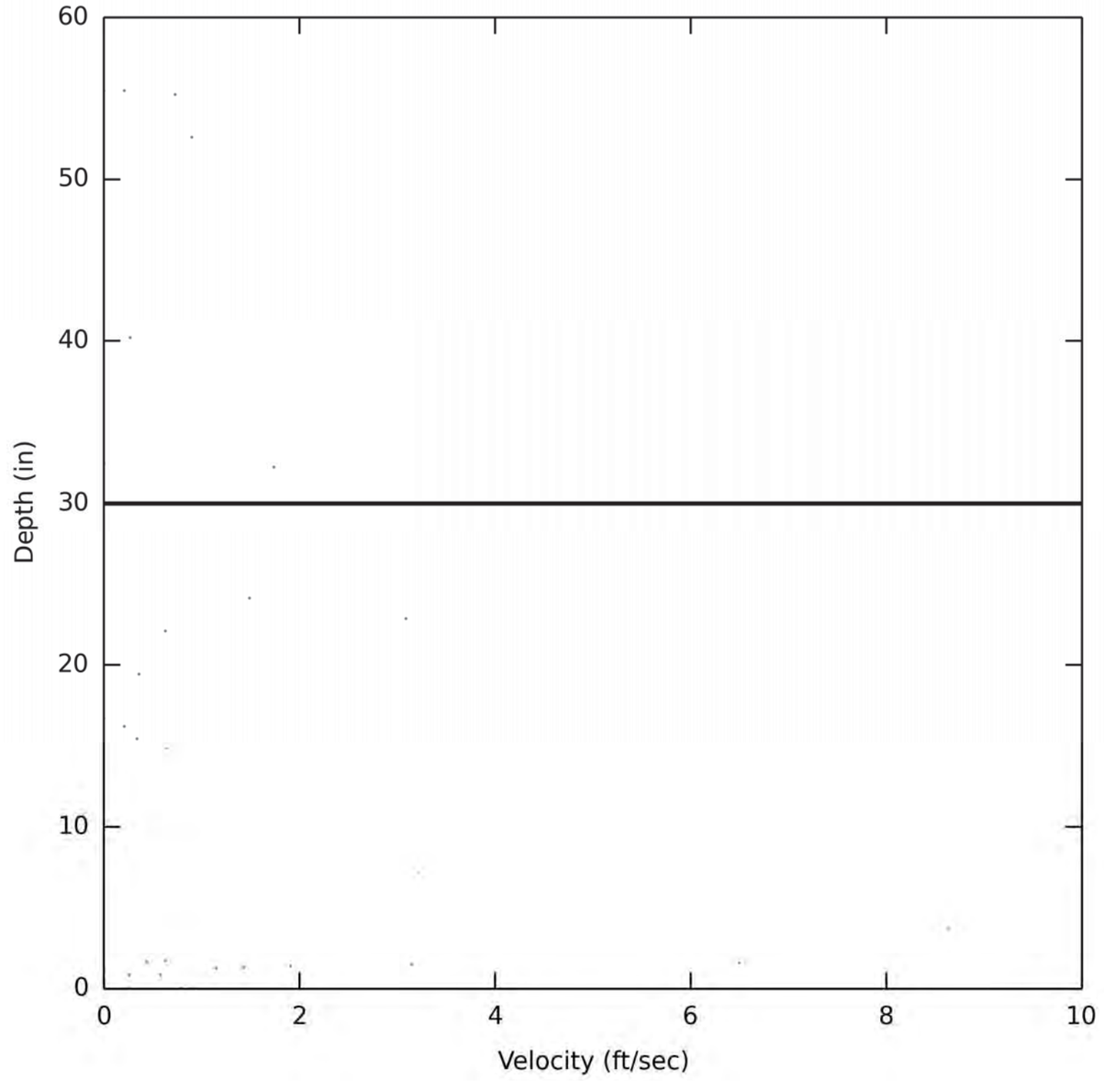
Meter CSO052B - 6/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30





Meter CSO052B - 7/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30





Meter CSO052B - 8/2016 RG: Anthony Basin: St Joe Conduit Diameter: 30