

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION

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UNITED STATES OF AMERICA, )  
 THE STATE OF OHIO, AND )  
 THE OHIO RIVER VALLEY WATER )  
 SANITATION COMMISSION, )  
 )  
 Plaintiffs, )  
 )  
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 v. )  
 )  
 THE BOARD OF COUNTY )  
 COMMISSIONERS OF HAMILTON )  
 COUNTY, OHIO AND THE CITY )  
 OF CINCINNATI, OHIO, )  
 )  
 Defendants. )

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Civil Action No. C-1-02-107  
Judge Michael R. Barrett  
Magistrate Karen L. Litkovitz

**MATERIAL MODIFICATIONS TO THE CONSENT DECREES’  
WET WEATHER IMPROVEMENT PROGRAM**

**Background**

Plaintiff Regulators, the United States of America, on behalf of the United States Environmental Protection Agency, the State of Ohio, on behalf of the Ohio Environmental Protection Agency, and the Ohio River Valley Water Sanitation Commission, and Defendants, the Board of County Commissioners of Hamilton County, Ohio and the City of Cincinnati, Ohio (collectively, the Parties), entered into two Consent Decrees to resolve the Plaintiffs’ claims in

this action -- the Interim Partial Consent Decree on Sanitary Sewer Overflows (SSO Decree) and the Consent Decree on Combined Sewer Overflows, Wastewater Treatment Plants and Implementation of Capacity Assurance Program Plan for Sanitary Sewer Overflows (Global Decree or CSO Decree), both of which were entered by this Court on June 9, 2004 (Docs. 130 and 131, respectively).<sup>1</sup>

The Regulators approved Defendants' Final Wet Weather Improvement Program (WWIP) on January 6, 2010, Doc. 412-3. The WWIP currently consists of the main body of the WWIP plus 8 attachments<sup>2</sup>:

- Attachment 1A (Phase 1 project list and schedule),
- Attachment 1B (Phase 1 project list with detailed descriptions, design criteria and performance criteria),
- Attachment 1C (Original Lower Mill Creek Partial Remedy (LMCPR) description),
- Attachment 2 (Phase 2 project list with detailed descriptions, design criteria and performance criteria),
- Attachment 3 (Information inputs for RI analysis),

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<sup>1</sup> The Parties subsequently modified the Decrees through a Revised First Amendment to the Decrees, which provided a phased scheduling process for the work and was entered by this Court on August 10, 2010 (Doc. 455); and an amendment to the Global Decree to extend the date by which the Defendants had to submit a Phase 2 schedule to the Regulators, conditioned on the incorporation of a "Bridge Schedule" for approximately \$49 million in remedial measures into the Wet Weather Improvement Program (WWIP). *See* Order Granting United States' Motion for Entry of Amendment to the Consent Decree (Doc. 1468), and the attached Global Decree and WWIP modifications (Docs. 1468-1, 1468-2) (Sept. 18, 2018).

<sup>2</sup> The 2010 WWIP included seven attachments. An eighth, Attachment 6, was added by a non-material modification on June 28, 2023, Doc. 2065-1.

- Attachment 4 (Allowance information),
- Attachment 5 (EHRT Design and Performance Criteria), and
- Attachment 6 (Exhibit 1A to the Court's September 18, 2018, Order (Doc. 1468-2, PageID ##32490-32516); Modifications to the Wet Weather Improvement Plan [sic] (June 29, 2018)).

Paragraph XXIX.A of the Global Decree provides:

Except as further set forth in this Paragraph, there shall be no material modification of this Consent Decree without written approval by all of the Parties and the Court; and any non-material modification of this Consent Decree shall be in writing and signed by the Parties. Modifications (whether material or not) to this Consent Decree that are specifically allowed under the terms of this Consent Decree may be made in accordance with the terms of this Consent Decree.

Doc. 131, p. 93.

The WWIP has been duly modified a number of times since 2010, including most recently, by a few non-material modifications made to the WWIP on June 28, 2023. *See* Non-Material Modifications to the Wet Weather Improvement Program, Doc. 2065-1. The Non-Material Modifications include a brief history of other modifications previously made to the WWIP. Henceforth in this document, the term WWIP means the Defendants' Final Wet Weather Improvement Program (WWIP), approved on January 6, 2010, Doc. 412-3, and all modifications made thereto through June 28, 2023.

By their signatures on this document, the Parties have agreed to additional modifications to the WWIP, as discussed below, which the United States asserts constitute material modifications to the Consent Decrees, and thus must also be approved by the Court (after a period for public comment). The modifications consist of two changes to the body of the WWIP

and changes to Attachments 1A, 1B, 2 and 5 to the WWIP. The modifications are discussed below in Paragraphs A-I. The modified language is shown in redline in the Modified Wet Weather Improvement Program (Modified WWIP), attached hereto as Exhibit 1.

After the Court has ruled on these material modifications, the Parties will conform the Modified WWIP to the Court's ruling, if necessary, and will file a clean version of the Modified Wet Weather Improvement Program document with a notice to the Court.

### **Explanation of Modifications**

#### **A. SSO 700**

On December 19, 2022, the Plaintiffs approved Defendants' SSO 700 Remedial Plan in accordance with Paragraph VI.C.3 of the SSO Decree, Doc. 130, as amended by the Revised First Amendment to the Consent Decrees. Doc. 455. Defendants have already implemented interim requirements to reduce and treat discharges from SSO 700 (the "SSO 700 Interim Remedial Measures Plan" and the "SSO 700 Reliability Improvements"), substantially reducing the number and volume of discharges from SSO 700 and upstream SSO locations. From the time of its first operation more than 15 years ago, the SSO 700 treatment facility has had a dramatically positive impact on water quality in the Mill Creek. When it first became operational, overflows at this outfall dropped from as many as 44 per year to as few as five, with a reduction of as much as 75 million gallons of untreated overflow annually. See Doc. 412-6 (2010 Declaration of Mark Klingenstein, P.E., at paragraphs 21 and 22). The Reliability Improvements over the last few years have further improved water quality. Defendants estimate that, as a result of their recent measures, sanitary sewer discharges in the East Branch Mill Creek watershed (area tributary to SSO 700) during a 2-year design storm have been reduced from

approximately 26 million gallons to less than 7 million gallons, and enumerated SSO activations have been reduced from 4 to 2. Further, all overflow from the treatment facility tanks is now disinfected. Collectively, these improvements have significantly reduced the frequency and volume of untreated overflows at the SSO 700 outfall, such that the limited remaining overflow is much smaller than several other higher- volume and higher-prioritized system overflows. The SSO 700 Remedial Plan requires Defendants to construct 24.8-million-gallons of storage and conveyance capacity (in addition to the 4.8 million gallons already constructed as part of the SSO 700 Interim Remedial Measures Plan) to further reduce SSO 700 discharges, consistent with the goal of eliminating discharges from SSO 700.

Attachment 2 to the WWIP includes 288 specific remedial measures, including the SSO 700 Remedial Plan. The Attachment 2 measures are listed in a priority order and must be implemented in priority order in accordance with a schedule that is developed in accordance with the WWIP's phased scheduling requirements, absent an alteration or modification in accordance with the provisions of the Global Consent Decree and WWIP. Currently, the SSO 700 Remedial Plan is at Index Line 229, the 45<sup>th</sup> project in Attachment 2. Doc. 412-3, p. 25. The Parties agree that, because the SSO 700 Interim Remedial Measures Plan and SSO 700 Reliability Improvements have significantly reduced the number and volume of untreated discharges from SSO 700 and upstream SSOs, the need to implement a permanent solution for SSO 700 is now less of a priority than addressing the billions of gallons of untreated discharges that are still occurring from Defendants' CSOs. Further, if Defendants are provided time to evaluate the SSO 700 Remedial Plan in conjunction with their evaluation of the Lower Mill Creek Final Remedy, which remedy is currently at the end of the Attachment 2 priority list, there is a possibility that

Defendants will develop an alternative remedy for SSO 700 that achieves the same or better level of control as the current SSO 700 Remedial Plan at a substantially lower cost. Given these circumstances, the Parties agree that it is appropriate to move implementation of the SSO 700 Remedial Plan to the end of the priority list to be implemented as a part of a later phase of work that is yet to be scheduled. Specifically:

- i. The SSO 700 Reliability Improvements to optimize the existing storage capacity at SSO 700, which Defendants have already completed, should remain at their current prioritization in Attachment 2, but be redesignated as Index Line 229a, and the project name for Index Line 229a contained a typographical error in a previous modification and should be corrected to remove the redundant text “SSO 700” from the project name;
- ii. The SSO 700 Remedial Plan should be moved from its current prioritization in Attachment 2 (Index Line 229) to the end of the priority list (Index Line 459) to be implemented in conjunction with the Lower Mill Creek Final Remedy (Index Line 453); and
- iii. Several conveyance sewer segments set forth in Attachment 2, Index Lines 224-227, are also associated with the SSO 700 Remedial Plan and will be constructed with the other SSO 700 Remedial Plan projects at Index Line 459; and various Index Lines are moved in priority as follows: Index Line 224 is moved in priority to Index Line 455, Index Line 225 to Index Line 456, Index Line 226 to Index Line 457, and Index Line 227 to Index Line 458.

B. Newly Identified Outfalls and Newly Created Outfalls

The WWIP currently requires implementation of measures to address discharges from all CSO and SSO outfalls specifically identified in the WWIP. The WWIP does not currently address discharges from CSO and SSO outfalls that were not known when the WWIP was approved in 2010. In addition, there has been one instance in which Defendants created a new, temporary outfall from which discharges occurred while Defendants were implementing other remedial measures. The Parties agree that the WWIP should be modified to include provisions to address such new conditions if they arise again in the future – that is, to ensure that (a) any newly discovered discharges are remedied as soon practicable, taking into account all of the other work that is being implemented in accordance with the WWIP, and that (b) discharges from any newly created outfalls are a violation of a requirement of the WWIP unless the Regulators have approved the creation of the newly created outfall, and Defendants have complied with the conditions of such approval.

Specifically, the main body of the WWIP should be revised to include new Paragraphs D and E, entitled “Newly Discovered Outfalls” and “Newly Created Outfalls”<sup>3</sup>:

**D. Newly Discovered Outfalls**

**1. If Defendants determine in accordance with their Sewer Overflow Response Plan attached as Exhibit 6 to the Interim Partial Consent Decree on Sanitary Sewer Overflows as updated in 2018 or as may hereinafter be revised that there will be continuing capacity-related discharges from any CSO Outfall, SSO Outfall or Unpermitted Overflow Outfall that is not listed in Attachments 1B or 2 (collectively, “Discovered Outfall(s)”), Defendants shall notify the**

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<sup>3</sup> The proposed modifications set forth in this document make no changes to the dispute resolution provisions in the consent decrees or the WWIP, which continue to apply as set forth therein. See SSO Decree, Doc. 130, Section XIV, pp. 58-62; Global Decree, Doc. 131-2, pp. 75-80; and WWIP, Paragraph C.4, p.12.

Regulators via the next quarterly report required by Paragraph XV.A of the CSO Decree as revised by the Revised First Amendment to Consent Decrees (“CSO Decree”) of Defendants’ determination. “Discovered Outfall(s)” does not include basement backups. Defendants shall eliminate discharges from Discovered Outfalls as expeditiously as practicable, but not later than 3 years after the date of the quarterly report in which Defendants notified the Regulators of such discharges, except as provided in Paragraph D.2 below. Defendants shall report the progress of their efforts in subsequent quarterly reports.

2. Defendants need not eliminate discharges from Discovered Outfalls in accordance with Paragraph D.1 if, within 18 months of the date of the quarterly report, Defendants submit to the Regulators for review, approval and implementation in accordance with Paragraph C.4 of this WWIP a plan with specific measures, Design Criteria, Performance Criteria, and any necessary modification to an applicable CSO NPDES permit.

- a. For discharges from Discovered Outfalls that are SSO Outfalls, the plan shall also include measures that have the goal of eliminating capacity-related discharges from the specific SSO Outfall;
- b. For discharges from Discovered Outfalls that are CSO Outfalls, the plan shall also include measures necessary to ensure that the discharges will be eliminated or will comply with the Clean Water Act, US. EPA’s CSO Policy, Chapter 6111 of the Ohio Revised Code and the rules promulgated thereunder, the Compact and the pollution control standards promulgated thereunder, and Defendants’ Current Permits (“Applicable Requirements”); and
- c. Other requirements
  - (i) It is expected that Discovered Outfalls will be eliminated or controlled via a project or bundle already listed in Attachment 2, and that the plan presented pursuant to this section will identify any needed additional Design Criteria or Performance Criteria, and be scheduled in accordance with the terms of the WWIP.
  - (ii) If the plan presented does not add the Discovered Outfall to an existing WWIP project or bundle, once it is approved by the Regulators or resolved via dispute resolution, the plan will be deemed to be a project in Attachment 2 and incorporated into the Phase 2 Schedule of Work.

- (iii) Defendants shall solicit public comments 45 days prior to the submission of the plan to incorporate into the Phase 2 Schedule of Work to the Regulators. At a minimum, Defendants will email Sierra Club to solicit comments and otherwise post the opportunity for comment on the MSD website and social media platforms.

3. Unless the conditions in Paragraph D.2 have been met with regard to any specific discharge and Defendants' plan has been approved by the Regulators or established through dispute resolution, any discharge from any Discovered Outfall that occurs 3 years after the date of the quarterly report in which Defendants notified the Regulators of such discharge shall be a violation of a requirement of the WWIP in accordance with Paragraph XVII.F.2 of the CSO Decree.

4. If the conditions in Paragraph D.2 have been met and Defendants' plan has been approved by the Regulators or established through dispute resolution, then any discharge from any such Discovered Outfall after the date for Substantial Completion of Construction in the applicable plan for the Discovered Outfall shall be a violation of a requirement of the WWIP in accordance with Paragraph XVII.F.2 of the CSO Decree unless the discharge is from a CSO Outfall specified in the NPDES Permit in effect at the time of the discharge, in which case the discharge shall be a violation of a requirement of the WWIP if the discharge does not comply with the Applicable Requirements.

#### E. Newly Created Outfalls

Defendants shall not create any new CSO Outfalls, SSO Outfalls or Unpermitted Overflow Outfalls (collectively, "New Outfall(s)") unless Defendants first request and obtain approval from the Regulators for the creation of such New Outfall. "New Outfall(s)" do not include existing enumerated outfalls that are temporarily relocated and will be addressed by completion of an identified WWIP project or bundle. "New Outfall(s)" also do not include basement backups. The Regulators' approval for the creation of a New Outfall may include conditions governing operation and maintenance of the New Outfall; and/or conditions such as remedial measures, schedules and Performance Criteria governing reduction, treatment or elimination of discharges from the New Outfall. Any discharge from any New Outfall shall be a violation of a requirement of the WWIP in accordance with Paragraph XVII.F.2 of the CSO Decree except for discharges from New Outfalls whose creation has been approved by the Regulators. Such discharges shall be a violation of a requirement of the WWIP if Defendants do not comply with the conditions included with the Regulators' approval of the creation of the New Outfall.

C. Mill Creek WWTP Outfall and Sludge-Handling Improvements

Defendants are required to implement measures in the Sewer System during Phase 2 that will reduce CSOs by increasing the Sewer System's conveyance capacity so that wet weather flows that would otherwise be discharged as CSOs would instead be conveyed to the Mill Creek wastewater treatment plant (WWTP) for treatment at the existing WWTP or through a Chemically Enhanced Primary Treatment facility (CEPTF) that will be constructed during Phase 2 in accordance with Index Line 248 in Attachment 2. For the Mill Creek WWTP and the CEPTF to be able to treat the increased flows, it may be necessary for Defendants to make improvements to the Mill Creek WWTP's discharge outfall and sludge-handling capabilities. It is also possible that no such improvements will be necessary. The original 2010 WWIP required Defendants to make the outfall and sludge-handling improvements during Phase 1. However, the extent to which these improvements are needed (if at all) can best be determined when Defendants design the CEPTF, during Phase 2. Moreover, to the extent that these improvements will have any benefits in terms of improving treatment of discharges from the Sewer System and treatment plants, those benefits will not occur until after the Phase 2 increased conveyance and Mill Creek CEPTF measures are constructed and thus, from an environmental perspective, there would be no benefit in constructing the measures during Phase 1. Thus, the Parties agree that Attachments 1A, 1B and 2 should be modified to move the requirements to design and construct the outfall and sludge handling improvements out of Phase 1 and into Phase 2 as follows:

- i. In Attachment 1A, (a) Index Lines 103, 104 and 105 in the WWIP for Project IDs 10145500, 10145560 and 10145580 (Mill Creek Bundle), which had been included in the original WWIP as a single consolidated "bundle" row, should be

revised to remove Index Lines 103 and 105 and Project IDs 10145500 and 10145580 (leaving only Index Line 104 and ID number 10145560 in Attachment 1A) and to change the Project from “Mill Creek WWTP (Bundle)” (which term would have encompassed the outfall and sludge handling improvements specified in the removed Index Lines 103 and 105) to “Mill Creek WWTP Secondary Bypass Weir” (which is the third of the three projects that made up the “Mill Creek Bundle,” and is a project unrelated to this modification); and (b) Note 2 should be added to explain that projects 10145500 and 10145580 (the outfall and sludge handling projects previously in Index Lines 103 and 105) have been moved to Attachment 2 (Phase 2);

- ii. In Attachment 1B, Index Lines 103 and 105 pertaining to the outfall and sludge-handling improvements should be removed and an explanatory Note 10 added; and for Index Line 104, the Bundle Identifier “(D)” should be removed and the Bundle Identifier note for “(D)” (at the end of Attachment 1B) should be changed from “The Mill Creek WWTP Bundle on Attachment 1A consists of these projects” to “Left Blank”; and
- iii. In Attachment 2, (a) the lines that were previously Index Lines 103 and 105 in Attachment 1B pertaining to the outfall and sludge-handling improvements should be included in newly-created Index Lines 247a and 247b, with “Descriptions/Design Criteria” specifying that they are “[t]o be evaluated in conjunction with Index Line 248” (the Mill Creek CEPTF), and a new explanatory Note 15 added regarding the relationship between the Mill Creek

CEPTF and evaluating outfall and sludge handling improvements;; and (b) Index

Line 248 should also be revised to add Note 15.

D. Werk and Westbourne EHRTF

A key component of the original WWIP for addressing CSOs is construction of ten Enhanced High Rate Treatment Facilities (EHRTFs), which are intended to treat and disinfect CSOs and would be widely distributed throughout the Sewer System. One of the EHRTFs is a 106 million gallon per day (MGD) facility at Werk & Westbourne. Defendants have concerns about the costs of such a large facility and believe that, with time, they can develop alternative approaches that would allow them to achieve the same or better environmental result at Werk & Westbourne with a much smaller EHRTF. Given those concerns, the Parties agree that the Werk & Westbourne project should be broken up into two phases: construction of an expandable, 35 MGD EHRTF during Phase 1, and construction of additional EHRTF capacity during Phase 2 so that the total EHRTF capacity is at least 106 MGD. The 35 MGD EHRTF, which has already been constructed, has provided significant environmental improvement. Overflow volume has been reduced from 550 million gallons to 100 million gallons per typical year, and untreated sewage discharges have been reduced from 72 events to 12 events per typical year. Additionally, according to Defendants, the odor issues, which were the primary reason that this was a high priority project, have been largely eliminated. Dividing this project will provide Defendants time to develop potential alternative approaches that will achieve the same or better environmental results at a lower cost to ratepayers. The 35 MGD EHRTF is also large enough to allow for a meaningful study in accordance with Attachment 5 to the WWIP of its effectiveness

to inform design, construction, and operation of (or possible modification of the requirements to construct) the other required EHRTFs.

Specifically, the Parties agree:

- i. In Attachment 1B, the Description/Design for the Werk & Westbourne Grating in Index Line 109 should be revised to require construction of a 35 MGD EHRT Pilot Demonstration Project during Phase 1 and to include a new explanatory Note 11;
- ii. In Attachment 2, a new Index Line 454 for the Werk & Westbourne Grating should be added to require construction of an EHRTF sized so that, in conjunction with the 35 MGD EHRTF constructed during Phase 1, total EHRT capacity is at least 106 MGD, with 64.7 MG per typical year for the Plan Remaining CSO; and
- iii. In Attachment 5, the description of the Werk and Westbourne Pilot should be revised to conform with the agreed modification.

As noted above, Defendants proceeded to build only 35 MGD of the required 106 MGD of EHRT capacity in anticipation of this Court's approval of the material modification. The EHRT capacity is expandable, and Defendants recognize that, if the Court does not approve the material modification, Defendants will be required to build the entire 106 MGD of EHRT capacity.

E. Attachment 5's EHRTF Pilot Testing Requirements

Attachment 5 to the WWIP requires that all the EHRTFs required by the WWIP must be designed to achieve certain specific treatment levels for removing total suspended solids and e. coli bacteria. However, the precise design parameters necessary to achieve these treatment

levels are not completely known. Thus, Attachment 5 to the WWIP required Defendants to perform studies on the effectiveness of the two specific EHRTFs that were scheduled to be constructed during Phase 1 of implementation of the WWIP, with the results of those studies informing the design, construction and operation of the remaining EHRTFs to be constructed during Phase 2. The two EHRTFs are the Werk & Westbourne EHRTF described above and an EHRTF that was originally planned to be constructed as part of the Original Lower Mill Creek Partial Remedy. WWIP Paragraph A.2. In accordance with Paragraph A.2.a of the WWIP, Defendants developed and, the Regulators approved, a Revised Original Lower Mill Creek Partial Remedy designed to achieve the same or better level of control as the original Lower Mill Creek Partial Remedy without the use of an EHRTF. Consequently, only one EHRTF, the Werk & Westbourne EHRTF, was constructed during Phase 1. Since the time that the WWIP was originally developed, there have been many, extensive studies of enhanced high-rate treatment technologies conducted throughout the United States. In light of those studies and the information that will be gained from the Werk and Westbourne EHRTF, there is no longer a need for further pilot testing to inform the design, construction and operation of the remaining EHRTFs to be constructed during Phase 2. Consequently, the Parties agree that Attachment 5 should be modified to recognize that only one EHRTF was constructed during Phase 1 and that only one EHRTF (the Werk & Westbourne EHRTF) is required to be studied.

F. Wooden Shoe Regulator Project, Attachment 2, Index Line 370

The “Wooden Shoe Regulator project” specified in Index Line 370 in Attachment 2 to the original WWIP to address discharges from the outfall now known as CSO 217 (it had previously been numbered as CSO 217A) was a 75 MGD EHRTF. Under the original plan, there was

expected to be a large volume of overflow that would be discharged from CSO 217, approximately 100 million gallons per typical year, and the EHRTF would have been designed to treat all but 23.3 million gallons of those flows in the typical year. In 2013, the Regulators approved the Lower Mill Creek Final Remedy, which required Defendants to construct a partial sewer separation project and a 1.5-million-gallon underground storage facility to address overflows in this area. Substantial completion of this project was achieved on November 21, 2019.

The sewer separation, in conjunction with implementation of real time controls, substantially reduced the volume of sewage that needs to be addressed at CSO 217. The bulk of the remaining flows are stored in the 1.5-million-gallon underground storage facility and eventually released back to the Sewer System for conveyance to the Mill Creek wastewater treatment plant for full secondary treatment. As a result of the modified measures, Defendants' modeling predicts that there will only be 1 - 2 million gallons of untreated sewage discharges per typical year from CSO 217, rather than 23.3 million gallons of untreated sewage discharges as was contemplated under the original WWIP. The modified measures will not cause any increases in overflow volumes at other CSO locations.

This project also has other benefits. One component of the project repurposed a portion of the existing combined sewer to a storm sewer that conveys stormwater directly to the Mill Creek. Rerouting these flows directly to Mill Creek frees-up interceptor capacity for combined flows in the watershed and reduces the use of electricity and other elements needed for treatment.

For these reasons, the Parties agree to change the project in Index Line 370 to remove the 75 MGD EHRTF and replace it with the now completed partial sewer separation and 1.5-million-gallon underground storage facility.

G. Addition of Phase 2C Schedule

On August 30, 2023, the Regulators approved the Defendants' Phase 2A Wet Weather Improvement Program Schedule of Work Submission submitted to the Regulators on August 28, 2023 ("Phase 2A Schedule"). As explained in the approval letter, this is a limited number of projects that are currently in the WWIP and that are due to be substantially completed by December 31, 2024. Defendants have proposed to the Regulators a significant change in remedy as part of the next phase of work to address certain CSOs -- specifically, to substitute three centralized EHRTFs to replace many of the current WWIP measures (including numerous dispersed EHRTFs) for these CSOs. The Regulators believe this may be appropriate, and the Parties are currently negotiating this potential change in approach. The Regulators approved this limited schedule to put Defendants under an enforceable schedule to complete certain existing WWIP projects while the Parties focus on developing the potential EHRTF projects and a deadline for submission of the next phase of work that would likely include them, if approved. Under the approved Phase 2A Schedule, Defendants' proposed Phase 2B Schedule must be submitted by June 30, 2024.

The Parties had originally envisioned that the remedial work necessary to bring the Sewer System into compliance would be conducted over three phases (Phase 1, Phase 2A, and most likely, a Phase 2B). These phases of work must be "as expeditious as practicable" based on certain considerations detailed in the WWIP. Doc. 412-3, p. 7. The WWIP currently permits

Defendants to request additional phases of work “only if they can demonstrate that the additional schedule is necessary to avoid severe financial hardship and that the schedule for completion of remedial measures in that subpart is as expeditious as practicable. . . .” *Id.* at p. 8. Because the Regulators are approving a limited short Phase 2A Schedule, with significant work still to be completed, the Parties agree that this short schedule should not “count” as one of their two remaining major schedules of work before a heightened financial burden must be shown. It is the Parties’ intention to have the more robust Phase 2B schedule in place before the end of Phase 2A to ensure there are no delays in implementing the necessary work. i.e., a Phase 2B and a Phase 2C Schedule, and Paragraph B.1.b of the WWIP should be revised as follows:

B. WWIP Phase 2

1. Schedule of Work:

...

b. The proposed Phase 2 schedule required under Paragraph B.1 above shall include all remaining WWIP projects unless Defendants choose to submit to the Regulators a proposed Phase 2 schedule for only a subpart of the remaining WWIP projects (“Phase 2A”), with the remainder of the WWIP projects to be scheduled as part of ~~an~~ additional subparts (“Phase 2B” and “Phase 2C”) to be scheduled at ~~a~~ later specified dates. If Defendants choose to submit a schedule for only a subpart of the remaining WWIP projects, then the Phase 2A, ~~and 2B and 2C~~ schedules shall ~~both~~ be as expeditious as practicable, based on the considerations and factors described in Paragraph B.1 above. Defendants may request schedules for additional subparts beyond Phase ~~2CB~~ only if they can demonstrate that the additional schedule is necessary to avoid severe financial hardship and that the schedule for completion of remedial measures in that subpart is as expeditious as practicable based on the considerations and factors described in Paragraph B.1 above.

H. Remaining Overflow Volume for CSO 656/Index Line 281

The required project in Attachment 2, Index Line 281 (Wooster @ Red Bank Div. Dam), addresses CSO 656 and consists of “Regulator Improvements [to] remove downstream flow restriction @ Beechmont Sluice Gate.” However, the “remaining overflow volume” (ROV) (i.e., a performance criterion) entry for this project in the 2010 WWIP stated “In 71920” which was a mistake because the Line 281 project and the Eastern Delta Avenue project associated with 71920 are not related. The Parties agree that “In 71920” in the “remaining overflow volume” column for Index Line 281 in Attachment 2 should be changed to “16.9” (MG per year), which reflects 95% capture and control of wet weather flows at CSO 656.

I. WWIP Project Cost Totals for Index Lines 73, 186, 246 and 460

Various changes need to be made in the “Remaining Costs 2006 Dollars” columns of Attachment 1B and 2. In Attachment 1B Column G, Index Line 73 should be changed to \$790,954,816, and Index Line 182 should be changed to \$865,057,510. In Attachment 2, Column F, Index Line 246 should be changed to \$1,700,117,714, and Index Line 460 should be changed to \$2,077,237,782.

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The Parties further agree, and the Court by entering this Order finds, that settlement of this matter without further litigation is in the public interest and that entry of this Order approving the material modifications to the WWIP described above and set forth below is fair, reasonable, and in the public interest.

NOW, THEREFORE, upon consent of the Parties, 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 WWIP is modified as set forth in redline above and in Exhibit 1 (redlined WWIP Attachments 1A, 1B, 2, and 5) to effectuate the modifications discussed above.

2. All provisions of the WWIP, other than the material modifications described above and set forth in redline above and in the attached Exhibit 1, are effective and shall remain in full force and effect in accordance with their terms, regardless of the Court's action on the material modifications described above and set forth below.

The material modifications described in this document are entered and approved  
this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_.

**MICHAEL R. BARRETT**  
United States District Court Judge  
United States District Court  
Southern District of Ohio

U.S. et al. v. Hamilton County et al.  
Civil Action No. C-1-02-107  
Signature Page for Material WWIP Modifications

**FOR THE UNITED STATES:**

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U.S. et al. v. Hamilton County et al.  
Civil Action No. C-1-02-107  
Signature Page for Material WWIP Modifications

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U.S. et al. v. Hamilton County et al.  
Civil Action No. C-1-02-107  
Signature Page for Material WWIP Modifications

**FOR THE STATE OF OHIO**



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U.S. et al. v. Hamilton County et al.  
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**FOR THE OHIO RIVER VALLEY WATER  
SANITATION COMMISSION**



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U.S. et al. v. Hamilton County et al.  
Civil Action No. C-1-02-107  
Signature Page for Material WWIP Modifications

**FOR THE BOARD OF COMMISSIONERS OF  
HAMILTON COUNTY**



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U.S. et al. v. Hamilton County et al.  
Civil Action No. C-1-02-107  
Signature Page for Material WWIP Modifications

**FOR THE CITY OF CINCINNATI**



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# **EXHIBIT 1**

**Revised Redlined WWIP  
Attachments 1A, 1B, 2 and 5**

<b>For Settlement Communication Purposes Only</b>					
<b>REVISED ATTACHMENT 1A</b>					
<b>Phase 1 Milestone Schedule</b>					
<b>WWIP INDEX</b>	<b>PROJECT ID</b>	<b>PROJECT</b>	<b>PTI Submittal Milestone</b>	<b>Start Construction Milestone</b>	<b>End Construction Milestone</b>
109	10130740	Werk & Westbourne	12/31/2013	9/1/2016	4/30/2018
106	10143920				
107	10143940				
108	10143960	Westwood Northern (Bundle)	6/30/2015	6/30/2016	6/30/2017
97	10142240	Blue Rock	12/31/2013	12/31/2014	12/31/2015
98	10171840				
99	10171860	Lower Little Miami (Bundle)	12/31/2012	12/31/2013	12/31/2015
66	10120360	Pebble Creek WWTP			6/30/2009
87	10120420	Diamond Oaks		12/31/2009	12/31/2010
91	10120460	Towers East	12/31/2011	12/31/2012	12/31/2013
78	10130560	Muddy Secondary			6/30/2010
79	10130565	Muddy Pump Upgrade			6/30/2010
81	10130680	Harwinton			12/31/2010
96	10131220	Glenview	12/31/2016	12/31/2017	12/31/2018
89	10144441	1852 Columbia		12/31/2011	12/31/2012
70	10141440	Millbrook 1			6/30/2009
72	10141520	Arrowood			6/30/2009
82	10141540	Winton 1			12/31/2010
83	10141560	Winton 2			12/31/2010
102	10142020	Daly Road	12/31/2014	12/31/2015	12/31/2016
97	10142440	7601 Production			6/30/2009
90	10144880	Mill Grit		12/31/2010	6/30/2013
92	10144884	Mill Secondary	12/31/2009	12/31/2010	12/31/2014
76	10145180	Mill Diversion			12/31/2009
74	10145280	Mitchell RTC			11/1/2009
75	10145300	Badgely RTC			11/1/2009
77	10145320	Lick RTC			5/31/2010
69	10150012	Polk Phase 3B			6/30/2009
84	10160005	Sycamore 3			12/31/2010
85	10160010	Sycamore 4			12/31/2010
88	10170081	Montgomery		12/31/2011	12/31/2012
71	10170560	Woodruff			6/30/2009
80	10170780	LM WWTP Thickening			6/30/2010
93	10171980				
94	10171920				
95	10171900	Eastern Delta (Bundle)		12/31/2013	12/31/2015
68	10172090	Kenwood			6/30/2009
86	10180600	Mill Incinerator			12/31/2010
<del>103</del>	<del>10145500</del>	<del>Mill Creek WWTP (Bundle)</del>			
104	10145560	Mill Creek WWTP Secondary			
<del>105</del>	<del>10145580</del>	<del>Bypass Weir (NOTE 2)</del>	12/31/2014	12/31/2015	12/31/2016
100	10131180				
101	10131240	Muddy Creek WWTP (Bundle)	12/31/2013	12/31/2014	6/30/2017
110	10141080				
111	10143220	North Side Upper (Bundle)	12/31/2016	12/31/2017	12/31/2018
114	10170080				
115	10170100				
116	10171580				
117	10171620				
118	10171740				
119	10171780	Upper Duck All (Bundle)	12/31/2016	12/31/2017	12/31/2018
112	10145660	Revised LMCP (Bundle)	12/31/2016	12/31/2017	12/31/2018
NOTES:					
1 "BUNDLE" MEANS THE AGGREGATED GROUP OF FINAL WWIP PROJECTS. THE MILESTONE DATE LISTED ABOVE FOR EACH ACTION FOR EACH BUNDLE IS THE FINAL DATE BY WHICH ALL OF THE PROJECTS WITHIN A DISTINCT BUNDLE MUST MEET THE SPECIFIED PROJECT STATUS.					
2 ATTACHMENTS 1A AND 1B TO THE WWIP ORIGINALLY INCLUDED THREE PROJECTS AS PART OF A MILL CREEK WWTP BUNDLE DURING PHASE 1 OF THE WWIP: PROJECT ID NUMBERS 10145500, 10145560 AND 10145580 (INDEX LINES 103, 104 AND 105 IN THE ORIGINAL ATTACHMENTS 1A AND 1B TO THE WWIP). PROJECT IDS 10145500 AND 10145580 (INDEX LINES 103 AND 105) HAVE BEEN REMOVED FROM ATTACHMENTS 1A AND 1B AND ADDED INTO ATTACHMENT 2 AS INDEX LINES 247A AND 247B AND SHALL BE EVALUATED AS PART OF PROJECT 10144882 MILL CREEK WWTP CHEMICALLY ENHANCED PRIMARY TREATMENT (ATTACHMENT 2, INDEX LINE 248).					

For Settlement Communication Purposes Only

REVISED WWIP ATTACHMENT 1B		Project Completion	Sunk Cost	Remaining Costs (Note 8)	CSO SSO Identifier	Description/Design (NOTE 4)	Technology	Plan CAPP	Plan Remaining CSO (MG/year)
INDEX		Actual	2006 Dollars	2006 Dollars					
1	10141660 Norman Ave.	Jan-04	\$ 137,501		SSO 585	Relief sewer to Elim. SSO 585 - 285 ft of 12"	CONV	2 yr	
2	10141480 Mill Rd. Sewer	Apr-04	\$ 1,855,869			Phase 2 - Relief sewer to replace sewer - 2200 ft of 30"	CONV		
3	10142040 Compton Rd.	Apr-04	\$ 210,603			Relieve WIBs w/sewer - 62 ft of 12"	CONV		
4	10144980 Ross Run Grit Pit	Apr-04	\$ 523,746			Grit Pit	-		
5	10170040 SSO 570 & 1017 in Madeira	Jun-04	\$ 3,357,676		SSO 570 & 1017	Elim. SSOs 570 & 1017 w/Sewer. 3800 ft of 24 - 30 inch	CONV	2 yr	
6	10141260 Springdale - Sharonville Sewer	Jul-04	\$ 2,401,605		SSO 915	Contract 3 - Relief sewer to eliminate SSO 915 - 7842 ft of 8-30"	CONV	2 yr	
7	10141720 Goodman Ave.	Aug-04	\$ 1,607,061		531, 577, SSO 1002, 1005, 1024	Relief sewer to Elim. SSOs 531, 577, 1002, 1005, & 1024 - 1850 ft of 24", 860 ft of 18", & 600 ft of 15"	CONV	2 yr	
8	10145120 Eggleston & Bold Face	Sep-04	\$ 64,109			HW/DW - Tide Gate Replacement	HW		
9	10170820 Gungadin/Paddison Rd.	Sep-04	\$ 3,126,594			Replace existing pipe - Approx. 2800 LF of 12-27"	CONV		
10	10141700 Mill Creek WWTP Aux. Air Supply	Oct-04	\$ 215,096			Fulfillment of Need for Aux. Air Supply to Air Transfer Duct, connecting Incinerator Outlet to Scrubber Inlet to control pos. & neg. pressures in each unit.	WWTP	NOTE 1	
11	10141200 Northbrook SSO 628	Nov-04	\$ 1,423,853		SSO 628	Phase 2 - Relief sewer to replace sewer near SSO 628 - 3500 ft of 12-15"	CONV	2 yr	
12	10145400 Samoht Ridge	Nov-04	\$ 2,144			Solve WIB problems - 924 ft of 12-24"	CONV		
13	10141220 North College Hill	Dec-04	\$ 5,391,761		SSO 530, 531, 567, 577, 634	Phases 2C & 3 - Relief sewer to eliminate SSOs 530, 531, 567, 577, & 634 - 9980 ft of 12-42"	CONV	2 yr	
14	10141740 St. Clair Sewer	Dec-04	\$ 1,454,250			Relief sewer to replace sewer on Elizabeth Ave. - 2638 ft of 8-24"	CONV		
15	10141580 Mill Creek WWTP Replacement Screens Ph1	Jan-05	\$ 2,813,073			Phase 1 - Replace Screens	WWTP	NOTE 1	
16	10145000 Mitchell Ave.	Feb-05	\$ 615,916		CSO 29	New sewer to eliminate CSO 29 and abandon siphon line under Mill Creek	RI		0
17	10141240 Sewer 155 Cooper Creek	Mar-05	\$ 5,104,573		SSO 620	Contract 2B - Relief sewer to eliminate SSO 620 - 7410 ft of 8-36"	CONV	2 yr	
18	10141300 Camberly Acres PS	Mar-05	\$ 321,573			PS Elim w/sewer - 659 ft of 8"	CONV		
19	10170020 SSO 1053 East Fork Ave. Grating	Mar-05	\$ 3,410,084		SSO 1053 CSO 70, 200	Phase 2A, 2B, & 2C - Camargo Rd Sewer Improv. Elim. SSO 1053 and CSOs 70, 200 - 7088 ft of 8 - 36 inch	PS/CONV	2 yr	0
20	10141400 Deer Park	Apr-05	\$ 2,076,612		SSO 1023, 600, & 601	Relief sewer to Elim. SSOs 1023, 600, & 601 - 3600 ft of 30" & 570 ft of 21"	CONV	2 yr	
21	10144940 Sawyer Point	Apr-05	\$ 33,298			sewer, remove diversion dam, and plugging existing dry line conduit	-		
22	10141880 Laboiteaux Ave.	Jun-05	\$ 181,725		SSO 597	Elim. SSO 597 w/sewer - 559 ft of 15"	CONV	2 yr	
23	10110300 Durango Green - Shadely Lane PS	Jul-05	\$ 540,150			Elimination of PS w/Sewer - 2861 ft of 12-in.	CONV		
24	10150000 Polk Run WWTP Ph 2 STO	Sep-05	\$ 11,186,361			WWTP Optim. - Phase 2	Optimization	NOTE 1	
25	10150240 Maple Ave.	Sep-05	\$ 233,361			Loveland Supplemental Agreement	-		
26	10144920 Harrison & State Ave. West 4	Oct-05	\$ 171,990		CSO 4	HW/DW Protection	HW		
27	10145020 Montana Ave.	Oct-05	\$ 138,382		CSO 89	New sewer and building connections to eliminate CSO 89	SEP		0.05
28	10141680 406 Elliot Ave.	Nov-05	\$ 130,892		SSO 572	Relief sewer to Elim. SSO 572 - 203 ft of 16"	CONV	2 yr	
29	10145080 Eastern Ave. (Collins to Bayou)	Nov-05	\$ 451,318			Phase 2 - Express Sewer to allow for development and conveyance of wet weather flows	CONV		
30	10170940 Stewart Rd. East Regulator	Nov-05	\$ 412,420		CSO 557	Completed; CIP 2002-05 Full Separation - Elimination Exhibit 1	FS		0.0
31	10141360 Garden Hills PS	Dec-05	\$ 1,065,355			PS Elim w/sewer - 4068 ft of 15 & 16"	CONV		
32	10141620 Mill Creek WWTP Solids Mgmt Centrifuge Procurement	Dec-05	\$ 2,616,020			Solids Management Program Centrifuge Procurement - Cost in WWTP Optimization	WWTP	NOTE 1	
33	10144960 Harrison & State Ave. West 3	Dec-05	\$ 325,357		CSO 3	HW/DW Protection	HW		
34	<b>PROJECTS IN CLOSEOUT</b>		<b>\$ 93,631,813</b>	<b>\$ 16,983,454</b>					
35	10141760 Mill Creek WWTP Raw Sewage Pumps	Dec-05	\$ 3,153,931	\$ 864,295		Replace depleted wastewater Pumping System	WWTP	NOTE 1	
36	10120400 Arrow St. WWTP Elimination & North Bend Crossing	Jan-06	\$ 1,371,433	\$ 26,412		PS Elim & WWTP Elim. w/sewer - 6108 ft of 8-12"	CONV		
37	10141640 Mill Creek WWTP Solids Mgmt. Centrifuge Install.	Feb-06	\$ 10,208,487	\$ -		Solids Management Program Centrifuge Installation	WWTP	NOTE 1	
38	10144900 Ludlow Run	Mar-06	\$ 2,615,592	\$ 490,658	CSO 151	Collector Upgrade CIP 83-10 Exhibit 1	CONV		16.8
39	10145240 Este Ave.	Jul-06	\$ 90,636	\$ 76,915		Flood Remediation Sewer Este Ave. Overflow	-		
40	10145140 Givaudan Sewer	Sep-06	\$ 67,933	\$ -		Removal of process flow from combined sewer to interceptor	-		
41	10170060 Mariemont SSO Elimination 679A, 679B & 680	Sep-06	\$ 8,271,513	\$ 809,602	SSO 679A, 679B & 680	Elim. of SSOs 679, 679A, & 680 w/sewer. 5800 ft of 36 inch & 2000 ft of 8-21 inch	CONV	2 yr	
42	10171420 Archer St. Div Dam, HDW	Sep-06	\$ 244,636	\$ -	CSO 86	HW/DW Protection	HW		
43	10171820 Beechmont Sluice Gate Rehabilitation	Oct-06	\$ 1,753,157	\$ 226,600		E-504 Beechmont Sluice Gate WWTP Rehabilitation	WWTP		
44	10141500 Pleasant Run PS	Nov-06	\$ 6,332,251	\$ 485,377		Phase 2 - Replace existing FM - 3000 ft of 16" FM	FM		
45	10170800 Berkley Woods PS	Nov-06	\$ 198,244	\$ 123,747	PSO 851	Elim. PSO 851 w/Sewer - 1745 ft of 12"	CONV	2 yr	
46	10120340 Streamwood Pump Station	Dec-06	\$ 270,665	\$ 96,942		PS Elim w/sewer - 1072 ft of 12"	CONV		
47	10141380 N. Bend Rd./Connecticut Sewer	Dec-06	\$ 908,577	\$ 280,075	SSO 222	Relief sewer to Elim. SSO 222 - 1821 ft of 12-21"	CONV	2 yr	
48	10141820 SSO 700 CEHRS Treatment Facility	Dec-06	\$ 12,730,053	\$ 1,500,406	SSO 700	CEHRS Treatment Facility (Performance in 41180)	CEHRS		
49	10170840 Johnson Rd. PS	Mar-07	\$ 605,979	\$ 253,036		Phase 2 Elim. of P.S. w/Sewer - 834 ft of 30"	CONV		

For Settlement Communication Purposes Only

REVISED WWIP ATTACHMENT 1B				Project Completion	Sunk Cost	Remaining Costs (Note 8)	CSO SSO Identifier	Description/Design (NOTE 4)	Technology	Plan CAPP	Plan Remaining CSO (MG/year)
INDEX				Actual	2006 Dollars	2006 Dollars					
50	10142000	W. Branch Mill Creek SSO 574		May-07	\$ 444,930	\$ 349,792	SSO 574	Elim. SSO 574 w/sewer - 950 ft of 15"	CONV	2 yr	
51	10141420	Centurion Estates PS		Jun-07	\$ 385,144	\$ 307,478	PSO	PS Elim w/sewer - 1570 ft of 12"	CONV	2 yr	
52	10141600	Mill Creek WWTP Replacement Screens Ph2		Jun-07	\$ 2,919,250	\$ 701,430		Phase II - Replace Screens	WWTP	NOTE 1	
53	10141340	Greenridge PS		Sep-07	\$ 580,614	\$ 87,582		PS and 1000 ft of 6" FM	PSU/FM		
54	10150011	Polk Run WWTP PS Elimination Sewer Ph3A		Sep-07	\$ 522,457	\$ 145,486		Polk Run WWTP PS Elimination Sewer Ph3A	Optimization	NOTE 1	
55	10145200	Butler St.		Oct-07	\$ 94,432	\$ -	Old CSO 450 was eliminated in Phase 1. Old CSO 450 has been CSO reassigned number 450. This was part of the CSO renumbering referenced in Note 9.	Separation sewer to aid in elimination of CSO 450	PS		0.0
56	10172200	Broadview Dr./Country Club, SEP		Nov-07	\$ 1,096,035	\$ 425,547		Partial Separation	PS		
57	10141780	Arrowhead Ct. PS & Marview Terrace PS		Dec-07	\$ 657,361	\$ 131,280	PSO 790, 798	Relief sewer to Elim. Marview PS (900 ft of 8") & New PS/FM to Replace Arrowhead PS (245 ft of 4")	PSU/CONV	2 yr	
58	10145040	West 3rd St., Ph3 CSO 437		Dec-07	\$ 301,714	\$ 54,969	CSO 437	Partial Separation Phase 3 CIP 98-91 – 2006 Construction (CD Exhibit 1)	PS		0.2
59	10130420	Wulff Run Rd.		Jan-08	\$ 94,677	\$ 57,510		Parallel section of Wulff Run Interceptor - 200 ft of 24"	CONV		
60	10145220	Ross Run CSO 487 Twin Outfall		Jan-08	\$ 3,658,803	\$ 832,675	CSO 487	Real Time Control Project to retain water in CSO with inflatable dam (CSO annual reduction of approximately 250 MG/year)	RTC		in 43040 NOTE 5
61	10145100	Ross Run		Apr-08	\$ 1,614,452	\$ 343,174	CSO 487	Aid in separation of existing combined sewer	SEP		in 45220
62	10160000	Sycamore WWTP Ph 1&2		Apr-08	\$ 26,566,214	\$ 3,035,574	SSO 1052	Sycamore WWTP Upgrade - 50 MGD, Phase 1 and 2	Optimization	NOTE 1	
63	10131200	Mt. St. Joseph Sewer Replacement		Jul-08	\$ 511,347	\$ 519,479	CSO 408	Mount St. Joseph Sewer Replacement	PS		in 30780
64	10120380	Hengehold 4th & Yates 3rd PSE		Oct-08	\$ 703,189	\$ 397,965	PSO 774, 783	PS Elim w/sewer - 2708 ft of 12"	CONV	2 yr	
65	10141839	McGrew Ave. PSU		Oct-08	\$ 304,233	\$ 5,020		McGrew Ave. PSU	PSU		
66	10120360	Pebble Creek WWTP		Oct-08	\$ 828,541	\$ 647,905	CSO 191	WWTP replaced w/PS & FM	WWTP Elim.		
67	10142440	7601 Production Dr. Grating		Dec-08	\$ 122,447	\$ 104,550		Regulator Improvements -0.20 cfs	RI		0.2
68	10172090	Kenwood Rd. PSE		Dec-08	\$ 757,102	\$ 1,375,273		Elimination of Existing Kenwood PS No. 724	CONV	2 yr	
69	10150012	Polk Run WWTP Expansion Ph3B		Dec-08	\$ 1,188,153	\$ 938,980		Polk Run WWTP Expansion Ph3B	Optimization	NOTE 1	
70	10141440	Millbrook 1 PSU		Dec-08	\$ 402,371	\$ 302,501	PSO 799	PS and 600 ft of 6" FM - PS Upgrade	PSU/FM	2 yr	
71	10170560	Woodruff Rd. @ 8 Mile/Britney Acres PSU		Jan-09	\$ 630,061	\$ 371,610	PSO 852	1.2 MGD, 600 ft of 6" F.M. - P.S. Upgrade	PSU/FM	2 yr	
72	10141520	Arrowood PSE		Jan-09	\$ 425,199	\$ 613,609	PSO 861	Eliminate PSO 861	CONV	2 yr	
73	<b>REMAINING PHASE 1 PROJECTS TO BE CONSTRUCTED</b>				\$ 114,204,002	<del>\$ 807,423,016</del> \$ 790,954,816					
74	10145280	Mitchell Ave. RTC			\$ 1,127,341	\$ 1,516,011	CSO 482	Real Time Control Project to retain water in CSO with inflatable dam (CSO annual reduction of approximately 100 MG/year)	RTC		in 45380 NOTE 5
75	10145300	Badgeley Run RTC			\$ 305,854	\$ 2,617,058	CSO 125	Real Time Control Project to retain water in CSO with inflatable dam (CSO annual reduction of approximately 60 MG/year)	RTC		in 43820 NOTE 5
76	10145180	Mill Creek Interceptor Diversion Chamber			\$ 1,223,735	\$ 365,126	CSO 181	Bloody Run & Spring Grove Ave - Phase 2 - REG	RI		in 42700
77	10145320	Lick Run RTC			\$ 76,572	\$ 1,376,762	CSO 5	Real Time Control Project to retain water in CSO (CSO annual reduction of approximately 200 MG/year)	RTC		in 45660 NOTE 5
78	10130560	Muddy Creek WWTP Secondary Enhancement			\$ 5,734,429	\$ 5,289,057		W-102 WWTP Optimization Secondary Enhancement (98-09),	WWTP	NOTE 1	
79	10130565	Muddy Creek WWTP Effluent Pump Upgrade			\$ 608,071	\$ 2,801,053		W-102 WWTP Optimization Raw Sewage Pump Upgrade, Effluent Pump Upgrade	WWTP	NOTES 1 and 7	
80	10170780	LM WWTP, Activated Sludge Thickening			\$ 2,429,843	\$ 3,346,832		E-503 Activated sludge thickening (CIP 2005-31)	WWTP	NOTE 1	
81	10130680	Harwinton Lane			\$ 117,431	\$ 1,049,285	SSO 1012	Replace sewer - 2000 ft of 12"	CONV	2 yr	
82	10141540	Winton and Sherwood Ph1 PS			\$ 338,400	\$ 2,060,694	PSO 805	Phase I - New PS, gravity sewer from Winton 2 to Winton 1, and New FM in Winton Rd	CONV	2 yr	
83	10141560	Winton and Sherwood Ph2 PS			\$ 297,485	\$ 1,362,778	PSO 805	Phase II - New sewer to Elim. Sherwood PS - 2300 ft of sewer & 4730 ft of FM	CONV	2 yr	
84	10160005	Sycamore WWTP Ph 3			\$ 770,557	\$ 8,114,644	SSO 1052	Sycamore WWTP Upgrade - 50 MGD, Phase 3	Optimization	NOTE 1	
85	10160010	Sycamore WWTP Ph 4			\$ 216,253	\$ 2,550,814	SSO 1052	Sycamore WWTP Upgrade - 50 MGD, Phase 4	Optimization	NOTE 1	
86	10180600	Mill Creek WWTP, TPE Incinerator			\$ 35,021,978	\$ 36,057,036		Mill Creek WWTP, TPE Incinerator	WWTP	NOTE 1	
87	10120420	Diamond Oaks, Windmere 3rd & Regency Ridge PS			\$ 306,882	\$ 1,336,137	PSO	PS Elim w/sewer - 3200 ft of 8"	CONV	2 yr	
88	10170081	Montgomery Rd & Lester Ave			\$ 57,618	\$ 984,962		Montgomery Rd & Lester Ave	CONV		

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REVISED WWIP ATTACHMENT 1B				Project Completion	Sunk Cost	Remaining Costs (Note 8)	CSO SSO Identifier	Description/Design (NOTE 4)	Technology	Plan CAPP	Plan Remaining CSO (MG/year)
INDEX				Actual	2006 Dollars	2006 Dollars					
89	10144441	1852 Columbia Pkwy Sewer		\$ 242,189	\$ 1,744,316		CSO 450 (NOTE 9)	2145 feet of 27 to 36" combined sewer and 2050 feet of 36" storm sewer. Catch basins along the storm sewer will be diverted to the storm sewer, allowing the combined sewer to be downsized.	PS		in 44440
90	10144880	Mill Creek WWTP Grit Removal		\$ 667,744	\$ 36,263,529			C-402 Mill Creek Grit Removal Improvements (CIP 2006-30)	WWTP	NOTE 1	
91	10120460	Towers East Pump Station		\$ 20,305	\$ 2,183,245		PSO 887, 891	Eliminate Towers East PS & Upgrade Ponderosa PS	PSE/PSU	2 yr	
92	10144884	Mill Creek WWTP Secondary Treatment Enhance. -		\$ 985,315	\$ 40,260,301			C-402 Secondary Treatment Enhancements	WWTP	NOTE 1	
93	10171980 (A)	Eastern Delta Ave. Ph1		\$ 4,552,591	\$ 39,127,126			E-501 Construct Real Time Control Chamber at Little Miami WWTP, construct 72" intersecting sewer to Eastern Avenue	CONV		
94	10171920 (A)	Eastern Delta Ave. Ph2		\$ 1,139,074	\$ 18,594,985		CSO 469	Extend interceptors from the 72" interceptor installed by project 10171980 (Index 93) to 2 new interception points, on existing combined sewers tributary to CSO 469, higher in the watershed.	CONV		75.9
95	10171900 (A)	Eastern Delta Ave. Ph3		\$ 1,009,542	\$ 14,249,639		467, 468, CSO 469, 657 (NOTE 9)	Separation of area tributary to CSO 467 and 657; construction of new flow regulator and flap gate (HW/DW) structures at CSO 467, 468, and 469; demolition of Delta Ave Pump Station.	CONV		47.5
96	10131220	Glenview PS at Wesselman		\$ -	\$ 760,302		PSO 773	Upgrade PS	PSU	2 yr	
97	10142240	Blue Rock Rd. Sewer Separation		\$ 2,931	\$ 1,897,181		CSO 180	Construct approx. 2,700 ft of 18" sanitary sewer and regulator overflow; convert existing combined sewer to storm only sewer; new overflow structure at CSO 180; Community Priority	CONV		0.1
98	10171840 (B)	CSO 471 Grandin Rd. Reg. Improvements		\$ 585	\$ 286,093		CSO 471	Regulator Improvements - 9.3 cfs Premised on operational changes at Four Mile P.S.	RI		0.0
99	10171860 (B)	CSO 470 Eastern Ave. Sewer Separation		\$ 309	\$ 1,607,283		CSO 470	Partial Separation & Regulator Improvements Construct storm sewer from Eastern Ave to Wilmer Rd	PS		0.0
100	10131180 (C)	Muddy Creek WWTP Dewatering Improvements			\$ 1,248,000			Add new dewatering centrifuge	WWTP	NOTE 1	
101	10131240 (C)	Muddy Creek WWTP Grit Improvements			\$ 4,470,000			Muddy Creek WWTP Grit Improvements	WWTP	NOTE 1	
102	10142020	Daly Rd. to Compton Rd.		\$ 505,196	\$ 13,742,834			Replace sewer #161 - 6500 ft of 21-30"	CONV		
103	<del>10145500</del> (D)	<del>Mill Creek WWTP Outfall Improvements</del> <del>Left Blank; See Note 10</del>			<del>\$ 15,163,200</del>			<del>Additional Optimization - Auxiliary Outfall Improvements</del>	<del>WWTP</del>	<del>NOTE 1</del>	
104	10145560 (D)	Mill Creek WWTP Secondary Bypass Weir			\$ 137,000			Secondary Bypass Weir	WWTP	NOTE 1	
105	<del>10145580</del> (D)	<del>Mill Creek WWTP Added Sludge Pumping</del> <del>Left Blank; See Note 10</del>			<del>\$ 1,315,000</del>			<del>Additional Primary Sludge Pumping</del>	<del>WWTP</del>	<del>NOTE 1</del>	
106	10143920 (E)	CSO 194 High Point Sewer Separation		\$ 13,317	\$ 4,105,549		CSO 194	Partial Separation Community Priority	PS		3.0
107	10143940 (E)	CSO 195 Westwood Northern Sewer Separation		\$ 13,170	\$ 2,808,123		CSO 195	Partial Separation Community Priority	PS		3.7
108	10143960 (E)	CSO 525 Mt. Airy Grating Sewer Separation		\$ 6,619	\$ 2,407,688		CSO 525	Partial Separation Community Priority	PS		2.5
109	10130740	Werk & Westbourne Grating		\$ 374,405	\$ 26,259,984		CSO 522	<del>EHRT - 106 MGD - Community Priority (NOTE 2) EHRT Pilot Demonstration Project</del> <del>Community Priority</del> <del>35 MGD EHRT Pilot Demonstration Project</del>	EHRT		<del>64.7</del> <del>NOTE 11</del>
110	10141080 (F)	Ludlow and Lafayette Parallel Sewer			\$ 865,920		SSO 645, 225-A	New parallel sewer to follow original alignment - 1700 ft of 15"	CONV	2 yr	
111	10143220 (F)	Scarlet Oaks Regulator			\$ 1,306,000		CSO 179	Partial Separation	PS		0.4
112	10145660	Revised Original LMCPR		\$ -	\$ 244,342,000		CSO 5, 125, 127, 128, 181, 217, 482, 483, 487 (NOTE 9)	Strategic separation and watershed approach, plus storage and multiple RTCs, resulting in removal of 1.78BG overflow (using Model v. 3.2), which removal includes both (i) 4 RTC projects (#45220, 45280, 45300, 45320) and (ii) work in the following watersheds: Lick Run: Approx. 65,000 LF of storm, combined and/or sanitary pipe; approx. 8 storm water detention basins; multiple vortech units; and valley conveyance system with daylighting. Kings Run: Approx. 17,000 LF of storm, combined and/or sanitary pipe; approx. 4 storm water detention basins; stream bank restoration; and combined overflow storage tank. West Fork: Approx. 2 storm water detention basins; approx. 7,600 discharge pipe; and approx. 500 LF of storm water pipe. Bloody Run: RTC at CSO 181 Additional descriptions of the Revised Original LMCPR and the Performance Criterion are included as Attachment 1C.	Sep, Conv., RTC, Storage, Watershed		Refer to "Revised Attachment 1C (May 30, 2013) Revised Original LMCPR"
113		Allowances		\$ 56,038,261	\$ 252,000,000						
114	10170080 (G)	SSO 1000 Elimination			\$ 1,815,294		SSO 1000	Replace existing pipe - Approx. 4400 LF of 15-24"	CONV	2 yr	
115	10170100 (G)	SSO 228 Elimination			\$ 1,381,001		SSO 228	Replace existing pipe - Approx. 3100 LF of 15-18"	CONV	2 yr	
116	10171580 (G)	CSO 54 Elimination			\$ 277,344		CSO 54	Regulator Improvements-10.0 cfs CAPP P-LM-LIT-CAPP-C-064	RI		0.1
117	10171620 (G)	CSO 187 Improvements			\$ 277,345		CSO 187	No modification-int 0.50 cfs 0.0 MGD to UD Channel HRT	RI		0.0

For Settlement Communication Purposes Only

INDEX	REVISED WWIP ATTACHMENT 1B			Project Completion	Sunk Cost	Remaining Costs (Note 8)	CSO SSO Identifier	Description/Design (NOTE 4)	Technology	Plan CAPP	Plan Remaining CSO (MG/year)
	Actual	2006 Dollars	2006 Dollars								
118	10171740	(G) CSO 551 Sewer Separation			\$ 3,781,924		CSO 551	Sewer Separation	SEP		13.1
119	10171780	(G) CSO 553 Sewer Separation			\$ 1,926,561		CSO 553	Sewer Separation	SEP		5.4
120	PHASE 1 PROJECTS/BUNDLES - PLANNING and DESIGN ONLY				\$ 3,344,857	\$ 57,119,240					
121	10171540	CSO 135 Elimination			\$ 33,629		CSO 135	Regulator Improvements - 2.4 cfs	RI		
122	10171560	CSO 43 Elimination			\$ 33,185		CSO 43	Regulator Improvements - 2.8 cfs	RI		
123	10171600	CSO 170 Elimination			\$ 34,664		CSO 170	Regulator Improvement - 3.1 cfs	RI		
124	10171640	CSO 214 Storage Facility			\$ 2,348,676		CSO 214	Storage - 2.00 MG	STO		
125	10171660	CSO 500 Improvements			\$ 34,275		CSO 500	Regulator Improvement - 1.5 cfs. See E-500	RI		
126	10171680	CSO 501 Improvements			\$ 33,971		CSO 501	Regulator Improvement - 0.1cfs. See E-500	RI		
127	10171700	CSO 549 Improvements			\$ 33,731		CSO 549	Regulator Improvement - 5.0 cfs. See E-500	RI		
128	10171720	CSO 550 Improvements			\$ 33,525		CSO 550	Regulator Improvement - 0.4 cfs. See E-500	RI		
129	10171760	CSO 552 Improvements			\$ 35,234		CSO 552	Regulator Improvement - 19.4 cfs	RI		
130	10171800	Upper Duck Creek EHRT Facility			\$ 2,347,477			E-500 EHRT - 40-MGD - Serves CSOs 170, 549, 550, 501 & 500 (NOTE 2)	EHRT		
131	10170782	LM Four Mile Pump Station Upgrade			\$ 542,498			E-503 - Four Mile Pump Station Rec Proj - PS-1	WWTP	NOTE 1	
132	10170783	LMWWTP Pump Station Reconfiguration			\$ 467,842			E-503 - Modify LMR Pump Station Rec Proj - PS-5	WWTP	NOTE 1	
133	10170784	LMWWTP Grit Station Upgrade			\$ 1,185,142			E-503 - Grit Collection Proj - SG-1	WWTP	NOTE 1	
134	10170785	LMWWTP Pump Station Hydraulic Improvements			\$ 280,006			E-503 - Four Mile Pump Station to Screen Building Rec Proj - H-1	WWTP	NOTE 1	
135	10170786	LMWWTP Primary to Secondary Hydraul. Improvements			\$ 231,868			E-503 - Primary to Secondary Conveyance Rec Proj - H-2	WWTP	NOTE 1	
136	10170787	LMWWTP Chemically Enhanced Primary			\$ 899,299			E-503 - Chemical Enhance Primary Rec Proj - PT-2	WWTP	NOTE 1	
137	10170788	LMWWTP Secondary Treatment Modifications			\$ 1,372,476			E-503 - Modification to Secondary Treatment Rec Proj - ST-2	WWTP	NOTE 1	
138	10170790	LMWWTP Chemical Feed Upgrades			\$ 541,064			E-503 - Upgrade Chemical Feed Sys Storage - D-2	WWTP	NOTE 1	
139	10170793	LMWWTP Sludge Receiving Improvements			\$ 64,639			E-503 - Improvement to Sludge Receiving Facility Rec Proj - DR-6	WWTP	NOTE 1	
140	10170794	LMWWTP Standby Power			\$ 1,074,223			E-503 - Dual Feed / Standby Power Rec Proj - E-1	WWTP	NOTE 1	
141	10172020	LMWWTP Wet Weather Pump Station			\$ 5,286,355			E-505 - Wet Weather Pump Station with Screening 150 MGD to Auxiliary Outfall	WWTP	NOTE 1	
142	10172260	LMWWTP Dry Weather Pump Station			\$ 125,000			Four Mile PS - Dry Weather Pumps - B&N Rec. Proj. PS-1	WWTP	NOTE 1	
143	10140400	Lockland Sewer Separation			\$ 381,514		SSO 1045, 1010	Replace collector following original alignment - 7968 ft of 12-24"	CONV		
144	10142280	Oxley Grating			\$ 36,201		CSO 226	Regulator Improvement-6 cfs. Combine with implementation of green infrastructure as redevelopment, renovation, and routine maintenance occurs to achieve CSO control to achieve 85%.	RI		
145	10142300	914 Oak St. Grating			\$ 36,066		CSO 559	Regulator Improvements-14.0 cfs. Green potential greater than storage need.	RI		
146	10142320	200' West of Bacon St. Grating			\$ 33,680		CSO 515	Regulator Improvements-0.7 cfs	RI		
147	10142340	Bacon St. Grating			\$ 33,680		CSO 516	Regulator Improvements-0.11 cfs	RI		
148	10142360	No. 96 North Park Grating			\$ 36,066		CSO 538	Regulator Improvements-0.31 cfs	RI		
149	10142380	117 E. Charlotte Grating			\$ 35,995		CSO 539	Regulator Improvements-5.0 cfs	RI		
150	10142400	428 South Cooper Grating			\$ 35,994		CSO 562	Regulator Improvements-3.08 cfs	RI		
151	10130000	Muddy Creek Basin Storage & Conveyance Sewer			\$ 42,512	\$ 14,060,624	701, 702, SSO 692, 697, 675-A, 1061	Storage & Conveyance Tunnel unloads Muddy Creek PS, Eliminating SSOs 692 & 697, provides CSO control for 518, 404, 405, and 406 - 25 ft diameter, 8500 ft long, firm influent pumping capacity, firm effluent pumping capacity, and peak wet weather treatment capacity at the Muddy Creek WWTP to all be 35 MGD. (NOTE 7)	TUNNEL		
152	10130160	Muddy Creek Pump Station Upgrade and Force main			\$ 4,043	\$ 1,511,582	SSO 692, 697, 675-A	Elim. PSO - Increase capacity & convey to Hillside Relief Tunnel - 25 MGD pumps, 12" FM for DWF, 36" FM for WWF (associated with 30000)	PSU/FM		
153	10130400	River Rd. Near Muddy Creek WWTP Conveyance Sewer			\$ 3,725	\$ 53,862	SSO 702	Rapid Run/Bender Rd. Interceptor directly into New Tunnel - 800 ft of 36"	CONV		
154	10131020	CSO 402 Topinabee Dr. Reg. Improvements			\$ 797	\$ 34,470	CSO 402	Regulator Improvement - 13.3 cfs (dependent on 30000, 30160, 31120)	RI		
155	10131040	CSO 403 Elco St. Div. Dam Reg. Improvements			\$ 735	\$ 34,648	CSO 403	Regulator Improvement - 7.10 cfs (dependent on 30000, 30160, 31120)	RI		
156	10131060	CSO 404 Ivanhoe St. Reg. Improvements			\$ 704	\$ 35,848	CSO 404	Regulator Improvement - 26.9 cfs (dependent on 30000, 30160, 31120)	RI		
157	10131080	CSO 405 Revere St. Reg. Improvements			\$ 630	\$ 35,034	CSO 405	Regulator Improvement - 6.20 cfs (dependent on 30000, 30160, 31120)	RI		
158	10131100	CSO 406 Kennebeck St. Reg. Improvements			\$ 5,611	\$ 35,178	CSO 406	Regulator Improvement -15.4 cfs (dependent on 30000, 30160, 31120)	RI		
159	10131120	West Branch Ohio River Interceptor Sewer			\$ 16,349	\$ 564,167	CSO 404, 405, 406	Convey Flow from CSO 404 to WWTP - 4000' - 60", sized for 85% control for CSOs 404, 405, and 406 (dependent on 30000, 30160)	CONV		
160	10140000	SSO 1048 Conveyance Sewer Phase 1			\$ 450,870		SSO 1048	Replace collector following original alignment - 4115 ft of 18-27"; Tunnel 375 ft of 18-24"	CONV		
161	10140020	SSO 1048 Conveyance Sewer Phase 2			\$ 375,348		SSO 1048, 587	Replace collector following original alignment - 4256' of 30-36"	CONV		
162	10140080	SSO 587 Conveyance Sewer			\$ 275,637		SSO 587	Replace collector following original alignment - 4235 ft of 15-24"	CONV		
163	10140120	Sharonville/Evendale Trunk to SSO 700			\$ 4,839,634		SSO 1048, 587	24,929 LF of 30-66"; Tunnel 6250 LF of 30-78"	CONV		
164	10140480	Pleasant Run Interceptor Replacement			\$ 310,718			WIBs - Replace collector following original alignment - 4246 ft of 21-24"	CONV		
165	10141180	I-75 & Shepard Ave. SSO 700			\$ 9,407,964		SSO 700	Increase Storage at existing site - Additional 24 MG (NOTE 3)	STOR		
166	10142120	Mill & Vine St. Grating			\$ 36,064		CSO 512	Regulator Improvements-3.25 cfs	RI		

For Settlement Communication Purposes Only

INDEX	REVISED WWIP ATTACHMENT 1B			Project Completion	Sunk Cost	Remaining Costs (Note 8)	CSO SSO Identifier	Description/Design (NOTE 4)	Technology	Plan CAPP	Plan Remaining CSO (MG/year)
	Actual	2006 Dollars	2006 Dollars								
167	10142200	Bernard & Reisenberg Grating			\$ 360,034		CSO 513	Partial Separation	PS		
168	10142220	Smalley Grating			\$ 193,696		CSO 514	Partial Separation	PS		
169	10130020	Muddy Creek Interceptor Rehabilitation			\$ 722		SSO 1061, CSO 518, MH 16006007	Clean Interceptor - 5000 ft of 36"	CLEAN		
170	10130040	CSO 518 Muddy Creek Conveyance Sewer			\$ 856,426		SSO 1061, CSO 518, MH 16006007	Replace section of Muddy Creek Int. - 9000 ft of 36", Provides CSO interception capacity for CSO 518	CONV		
171	10130280	Addyston PS Elimination			\$ 266,996		PSO 730, 10902003	Elim. Addyston P.S. w/gravity along Rte. 50 - 2650' of 36" and two 100' of 24"	CONV		
172	10130700	Muddy Creek @ Westbourne EHRT			\$ 4,178,406		CSO 198	EHRT - 126 MGD Community Priority (NOTE 2)	EHRT		
173	10130720	CSO 518 Improvements			\$ 33,309		CSO 518	Regulator Improvement - 27.4 cfs Premised on CAPP Activity ID - 30040, 30000 Community Priority	RI		
174	10130780	CSO's 223, 408, 410, 541, 654		\$ 281,421	\$ -		CSO 223, 408, 410, 541, 654	CD Exhibit 1 Partial Separation	PS		
175	10130840	CSO's 411, 412, 413, 414, 415, 416		\$ 208,080	\$ 953		CSO 411, 412, 413, 414, 415, 416	CD Exhibit 1 Regulator Improvement-3.21 cfs and Relocation Complete Partial Separation - Activity ID 31140	RI/PS		
176	10131000	E. Branch Muddy Ph1 Interceptor		\$ 1,239,024	\$ 103,652			W-103 - Exhibit 1 Interceptor Replacement Phase 1	CONV		
177	10131002	E. Branch Muddy Ph2 Interceptor		\$ 432,610	\$ 4,783			W-103 - Exhibit 1 Interceptor Replacement Phase 2	CONV		
178	10131003	E. Branch Muddy Ph3-A Pump Station (Changed to AM)		\$ 861,975	\$ -			W-103 - Exhibit 1 Interceptor Replacement Phase 3	CONV		
179	10131004	East Branch Muddy Ph3-B Pump Station (Changed to AM)		\$ 246,641	\$ -			East Branch Muddy Ph3-B Pump Station	CONV		
180	10131006	East Branch Muddy Interceptor			\$ 362,587			W-105 - Interceptor Extension	CONV		
181	10131140	E. Branch Ohio Interceptor Sewer Separation			\$ 1,028,053		CSO 408, 411, 412, 414, 415, 416	W-104 - Complete Partial Separation in CSOs areas 408, 411, 412, 414, 415, 416	PS		
182	<b>TOTAL PHASE 1</b>				\$ 264,781,000	<del>\$ 881,626,710</del> \$ 865,057,510					

- NOTES:
- PROJECT COMPLETE AND IN SERVICE AT SPECIFIED CAPACITY
  - FOR ALL PROJECTS WITH EHRT TECHNOLOGY VOLUME SHOWING IS REMAINING UNTREATED OVERFLOW - SEE ATTACHMENT 5.
  - INFORMATION RELATED TO THIS PROJECT IS PRELIMINARY AND SUBJECT TO CHANGE BASED ON FURTHER STUDY AS SET FORTH IN PARAGRAPH A.3 OF THE WWIP
  - CAPP DESIGN: ALL CAPP SEWER PROJECTS WILL BE DESIGNED TO MEET THE 10 YEAR DESIGN STORM EVENT . ALL CAPP PUMP STATION AND STORAGE FACILITIES WILL BE DESIGNED TO MEET THE 2 YEAR DESIGN STORM EVENT. THE 2 AND 10 YEAR DESIGN STORMS ARE SCS TYPE II-24 HOUR EVENTS.
  - FOR THESE RTC PROJECTS, THE STATED REDUCTION IN THE TYPICAL YEAR CSO DISCHARGE VOLUME SHALL ALSO BE THE PERFORMANCE CRITERIA FOR THE FACILITY.
  - PERFORMANCE CRITERIA FOR CSO VOLUMES REMAINING AFTER IMPLEMENTATION OF CSO CONTROLS ARE THE VOLUMES NOT TO BE EXCEEDED AT A PARTICULAR OUTFALL DURING MSDGC'S TYPICAL RAINFALL YEAR (1970). COMPLIANCE WITH THESE CRITERIA WILL BE EVALUATED BY IMPLEMENTATION OF THE POST CONSTRUCTION MONITORING PROGRAM (APPROVED MARCH 20, 2020) UTILIZING MSDGC'S HYDROLOGIC AND HYDRAULIC MODEL TO NORMALIZE THE RESULTS OF THE POST CONSTRUCTION MONITORING TO THE TYPICAL YEAR.
  - THIS IS AN INTERIM UPGRADE TO THE MUDDY CREEK WWTP RAW SEWAGE AND EFFLUENT PUMPING CAPACITIES, TO ACHIEVE MINIMUM FIRM INFLUENT AND FIRM EFFLUENT PUMPING CAPACITIES BOTH OF 28 MGD. FINAL FIRM INFLUENT AND FIRM EFFLUENT PUMPING CAPACITIES BOTH OF 35 MGD WILL BE ACHIEVED AS PART OF PHASE 2 PROJECT 10130160 (SEE ATTACHMENT 1B, INDEX 151 & ATTACHMENT 2, INDEX 215).
  - LISTED COSTS FOR PROJECTS REFLECT THE COST IDENTIFIED IN THE 2009 WWIP.
  - IN 2009, OHIO EPA CHANGED THE CSO NUMBERS USED TO IDENTIFY SOME OF DEFENDANTS' CSO OUTFALLS IN DEFENDANTS' NPDES PERMIT (1PX00022\*CD; Application No. OH0105457). AS A RESULT, SOME OF THE CSO IDENTIFIER NUMBERS USED IN THE ORIGINAL WWIP NOW HAVE DIFFERENT NUMBERS IN DEFENDANTS' NPDES PERMIT. THE WWIP HAS BEEN MODIFIED TO CHANGE ALL THOSE CSO IDENTIFIER NUMBERS TO BE CONSISTENT WITH THE CSO IDENTIFIER NUMBERS IN DEFENDANTS' NPDES PERMIT. SPECIFICALLY, CSO IDENTIFIER NUMBERS ASSOCIATED WITH THE FOLLOWING INDEX LINES IN ATTACHMENT 1B HAVE BEEN CHANGED; INDEX LINES 55, 89, 95 AND 112. CSO IDENTIFIER NUMBERS ASSOCIATED WITH THE FOLLOWING INDEX LINES IN ATTACHMENT 2 HAVE BEEN CHANGED; 270, 370, 377-380, 388, 396, 398-401, 403-406, 409, 410, 412, 423, 426-428, 430, 431, 433, 435 AND 453.
  - THE PROJECTS PREVIOUSLY INCLUDED IN ATTACHMENT 1B AS INDEX LINES 103 & 105 HAVE BEEN REMOVED FROM ATTACHMENT 1B AND ADDED INTO ATTACHMENT 2 WITH INDEX LINES 247A & 247B AND SHALL BE EVALUATED AS PART OF PROJECT 10144882 MILL CREEK CHEMICALLY ENHANCED PRIMARY TREATMENT IN ATTACHMENT 2 INDEX LINE 248.
  - THE 35 MGD EHRT FOR CSO 522 WILL BE EXPANDED AS PART OF PHASE 2 SO THAT TOTAL EHRT CAPACITY IS AT LEAST 106 MGD. PERFORMANCE CRITERIA OF 64.7 MILLION GALLONS PER TYPICAL YEAR REMAINING CSO SHALL APPLY FOLLOWING THAT EXPANSION. SEE ATTACHMENT 2, INDEX LINE 454.

Bundle Identifiers:

- (A) The Eastern Delta Bundle on Attachment 1A consists of these projects.
- (B) The Little Lower Miami Bundle on Attachment 1A consists of these projects.
- (C) The Muddy Creek WWTP Bundle on Attachment 1A consists of these projects.
- (D) Left Blank. The Mill Creek WWTP Bundle on Attachment 1A consists of these projects.
- (E) The Westwood Northern Bundle on Attachment 1A consists of these projects.
- (F) The North Side Upper Bundle on Attachment 1A consists of these projects.
- (G) The Upper Duck All Bundle on Attachment 1A consists of these projects.

## For Settlement Communication Purposes Only

REVISED WWIP ATTACHMENT 2			Sunk Costs 2006 Dollars	Remaining Cost (NOTE 10) 2006 Dollars	CSO SSO Identifier (NOTE 14)	Description / Design (NOTE 3)	Technology	Plan CAPP	Plan Remaining CSO (MG/year) (NOTE 5)
INDEX									
185	10171540	CSO 135 Elimination		\$ 243,716	CSO 135	Regulator Improvements - 2.4 cfs (Note 13)	RI		0.0
186	10171560	CSO 43 Elimination		\$ 243,159	CSO 43	Regulator Improvements - 2.8 cfs (Note 13)	RI		0.7
187	10171600	CSO 170 Elimination		\$ 242,681	CSO 170	EHRT - Regulator Improvement - 3.1 cfs	RI		in 71800
188	10171640	CSO 214 Partial Separation		\$ 14,074,375	CSO 214	Partial Separation (Note 13)	PS		57.4
189	10171660	CSO 500 Improvements		\$ 243,069	CSO 500	Regulator Improvement - 1.5 cfs. See E-500	RI		in 71800
190	10171680	CSO 501 Improvements		\$ 243,373	CSO 501	Regulator Improvement - 0.1cfs. See E-500	RI		0.0
191	10171700	CSO 549 Improvements		\$ 243,613	CSO 549	Regulator Improvement - 5.0 cfs. See E-500	RI		in 71800
192	10171720	CSO 550 Improvements		\$ 243,820	CSO 550	Regulator Improvement - 0.4 cfs. See E-500.	RI		in 71800
193	10171760	CSO 552 Improvements		\$ 242,109	CSO 552	Regulator Improvement - 19.4 cfs	RI		18.6
194	10171800	Upper Duck Creek EHRT Facility		\$ 14,541,318		E-500 - EHRT - 40-MGD - Serves CSOs 170, 549, 550, 501 & 500 (NOTE 2)	EHRT		106.0
195	10170782	LM Four Mile Pump Station Upgrade		\$ 3,617,502		E-503 - Four Mile Pump Station Rec Proj - PS-1 (Note 13)	WWTP	NOTE 1	
196	10170783	LMWWTP Pump Station Reconfiguration		\$ 3,172,158		E-503 - Modify LMR Pump Station Rec Proj - PS-5	WWTP	NOTE 1	
197	10170784	LMWWTP Grit Station Upgrade		\$ 8,174,858		E-503 - Grit Collection Proj - SG-1 (Note 13)	WWTP	NOTE 1	
198	10170785	LMWWTP Pump Station Hydraulic Improvements		\$ 1,799,992		E-503 - Four Mile Pump Station to Screen Building Rec Proj - H-1	WWTP	NOTE 1	
199	10170786	LMWWTP Primary to Secondary Hydraul. Improvements		\$ 1,328,132		E-503 - Primary to Secondary Conveyance Rec Proj - H-2	WWTP	NOTE 1	
200	10170787	LMWWTP Chemically Enhanced Primary		\$ 5,860,701		E-503 - Chemical Enhance Primary Rec Proj - PT-2	WWTP	NOTE 1	
201	10170788	LMWWTP Secondary Treatment Modifications		\$ 9,235,525		E-503 - Modification to Secondary Treatment Rec Proj - ST-2	WWTP	NOTE 1	
202	10170790	LMWWTP Chemical Feed Upgrades		\$ 3,618,935		E-503 - Upgrade Chemical Feed Sys Storage - D-2	WWTP	NOTE 1	
203	10170793	LMWWTP Sludge Receiving Improvements		\$ 455,361		E-503 - Improvement to Sludge Receiving Facility Rec Proj - DR-6	WWTP	NOTE 1	
204	10170794	LMWWTP Standby Power		\$ 7,141,778		E-503 - Dual Feed / Standby Power Rec Proj - E-1	WWTP	NOTE 1	
205	10172020	LMWWTP Wet Weather Pump Station		\$ 36,586,845		E-505 - Wet Weather Pump Station with Screening 150 MGD to Auxiliary Outfall	WWTP	NOTE 1	
206	10172260	LMWWTP Dry Weather Pump Station		\$ 375,000		Four Mile PS - Dry Weather Pumps - B&N Rec. Proj. PS-1	WWTP	NOTE 1	
207	10140400	Lockland Sewer Separation		\$ 2,424,977	SSO 1045, 1010	Replace collector following original alignment - 7968 ft of 12-24"	CONV	2 yr	
208	10142280	Oxley Grating		\$ 241,149	CSO 226	Regulator Improvement-6 cfs. Combine with implementation of green infrastructure as redevelopment, renovation, and routine maintenance occurs to achieve CSO control to achieve 85%.	RI		4.6
209	10142300	914 Oak St. Grating		\$ 241,284	CSO 559	Regulator Improvements-14.0 cfs. Green potential greater than storage need.	RI		7.0
210	10142320	200' West of Bacon St. Grating		\$ 243,670	CSO 515	Regulator Improvements-0.7 cfs	RI		0.0
211	10142340	Bacon St. Grating		\$ 243,670	CSO 516	Regulator Improvements-0.11 cfs	RI		0.1
212	10142360	No. 96 North Park Grating		\$ 241,284	CSO 538	Regulator Improvements-0.31 cfs	RI		0.1
213	10142380	117 E. Charlotte Grating		\$ 241,356	CSO 539	Regulator Improvements-5.0 cfs	RI		1.3
214	10142400	428 South Cooper Grating		\$ 241,356	CSO 562	Regulator Improvements-3.08 cfs	RI		0.0
215	10130000	Muddy Creek Basin Storage & Conveyance Sewer		\$ 120,122,277	701, 702, 692, SSO 697,675-A, 1061	Storage & Conveyance Tunnel unloads Muddy Creek PS, Eliminating SSOs 692 & 697, provides CSO control for 518, 404, 405, and 406 - 25 ft diameter, 8500 ft long, firm influent pumping capacity, firm effluent pumping capacity, and peak wet weather treatment capacity at the Muddy Creek WWTP to all be 35 MGD.	TUNNEL	2 yr	NOTE 9
216	10130160	Muddy Creek Pump Station Upgrade and Forcemain		\$ 8,643,782	SSO 692, 697, 675-A	Elim. PSO - Increase capacity & convey to Hillside Relief Tunnel - 25 MGD pumps, 12" FM for DWF, 36" FM for WWF (associated with 30000)	PSU/FM	2 yr	
217	10130400	River Rd. Near Muddy Creek WWTP Conveyance Sewer		\$ 396,774	SSO 702	Rapid Run/Bender Rd. Interceptor directly into New Tunnel - 800 ft of 36"	CONV	2 yr	
218	10131020	CSO 402 Topinabee Dr. Reg. Improvements		\$ 242,680	CSO 402	Regulator Improvement - 13.3 cfs (dependent on 30000, 30160, 31120) (Note 13)	RI		7.2
219	10131040	CSO 403 Elco St. Div. Dam Reg. Improvements		\$ 245,338	CSO 403	Regulator Improvement - 7.10 cfs (dependent on 30000, 30160, 31120) (Note 13)	RI		3.6
220	10131060	CSO 404 Ivanhoe St. Reg. Improvements		\$ 241,095	CSO 404	Regulator Improvement - 26.9 cfs (dependent on 30000, 30160, 31120) (Note 13)	RI		16.2
221	10131080	CSO 405 Revere St. Reg. Improvements		\$ 242,108	CSO 405	Regulator Improvement - 6.20 cfs (dependent on 30000, 30160, 31120) (Note 13)	RI		3.7
222	10131100	CSO 406 Kennebeck St. Reg. Improvements		\$ 242,079	CSO 406	Regulator Improvement -15.4 cfs (dependent on 30000, 30160, 31120) (Note 13)	RI		9.0

For Settlement Communication Purposes Only

REVISED WWIP ATTACHMENT 2			Sunk Costs 2006 Dollars	Remaining Cost (NOTE 10) 2006 Dollars	CSO SSO Identifier (NOTE 14)	Description / Design (NOTE 3)	Technology	Plan CAPP	Plan Remaining CSO (MG/year) (NOTE 5)
INDEX									
223	10131120	West Branch Ohio River Interceptor Sewer		\$ 3,477,204	CSO 404, 405, 406	Convey Flow from CSO 404 to WWTP - 4000' - 60", sized for 85% control for CSOs 404, 405 and 406 (dependent on 30000, 30160)	CONV		-
224	<del>10140000</del>	<del>SSO 1048 Conveyance Sewer Phase 1 Left Blank</del>		<del>\$ 1,710,579</del>	SSO 1048	<del>Replace collector following original alignment - 4115 ft of 18-27"; Tunnel 375 ft of 18-24"</del>	CONV	2-yr	
225	<del>10140020</del>	<del>SSO 1048 Conveyance Sewer Phase 2 Left Blank</del>		<del>\$ 2,467,502</del>	SSO 1048	<del>Replace collector following original alignment - 4256' of 30-36"</del>	CONV	2-yr	
226	<del>10140080</del>	<del>SSO 587 Conveyance Sewer Left Blank</del>		<del>\$ 1,178,958</del>	SSO 587	<del>Replace collector following original alignment - 4235 ft of 15-24"</del>	CONV	2-yr	
227	<del>10140120</del>	<del>Sharonville/Evendale Trunk to SSO 700 Left Blank</del>		<del>\$ 24,000,590</del>	SSO 1048, 587	<del>24,929 LF of 30-66"; Tunnel 6250 LF of 30-78"</del>	CONV	2-yr	
228	10140480	Pleasant Run Interceptor Replacement		\$ 1,203,840		WIBs - Replace collector following original alignment - 4246 ft of 21-24"	CONV		
229	<del>10141180</del>	<del>I-75 &amp; Shepard Ave. SSO 700 Left Blank</del>		<del>\$ 60,020,365</del>	SSO 700	<del>Measures specified in section 7.3 of the SSO 700 Final Remedial Plan approved on 12/19/2022.</del>	STOR	2-yr	
229a	10141180	I-75 & Shepard Ave. <del>SSO 700</del> SSO 700 Reliability Improvements		\$ 8,557,600	SSO 700	Increase Storage at existing site. (NOTE 13)	STOR	2 yr	
230	10142120	Mill & Vine St. Grating		\$ 241,286	CSO 512	Regulator Improvements-3.25 cfs	RI		0.2
231	10142200	Bernard & Reisenberg Grating		\$ 2,242,366	CSO 513	Partial Separation (NOTE 13)	PS		1.7
232	10142220	Smalley Grating		\$ 1,226,004	CSO 514	Partial Separation (NOTE 13)	PS		0.2
233	10130020	Muddy Creek Interceptor Rehabilitation		\$ 4,889	SSO 1061 CSO 518 MH 16006007	Clean Interceptor - 5000 ft of 36"	CLEAN		
234	10130040	CSO 518 Muddy Creek Conveyance Sewer		\$ 5,495,655	SSO 1061 CSO 518 MH 16006007	Replace section of Muddy Creek Int. - 9000 ft of 36" (NOTE 13)	CONV	2 yr	
235	10130280	Addyston PS Elimination		\$ 1,712,696	PSO 730, 10902003	Elim. Addyston P.S. w/gravity along Rte. 50 - 2650' of 36" and two 100' of 24"	CONV	2 yr	
236	10130700	Muddy Creek @ Westbourne EHRT		\$ 24,184,412	CSO 198	EHRT - 126 MGD Community Priority (NOTE 2 and 13)	EHRT		61.2
237	10130720	CSO 518 Improvements		\$ 244,422	CSO 518	Regulator Improvement - 27.4 cfs Premised on CAPP Activity ID - 30040, 30000 Community Priority	RI		8.4
238	10130780	CSO's 223, 408, 410, 541, 654		\$ 1,859,360	223, 408, CSO 410, 541, 654	CD Exhibit 1 Partial Separation (NOTE 13)	PS		0.3
239	10130840	CSO's 411, 412, 413, 414, 415, 416		\$ 4,082,231	411, 412, CSO 413, 414, 415, 416	CD Exhibit 1 Regulator Improvement-3.21 cfs and Relocation Complete Partial Separation - Activity ID 31140 (NOTE 13)	PS		12.9
240	10131000	E. Branch Muddy Ph1 Interceptor - Combined in 31006				W-103 - CD Exhibit 1 Interceptor Replacement Phase 1	CONV		
241	10131002	E. Branch Muddy Ph2 Interceptor - Combined in 31006				W-103 - CD Exhibit 1 Interceptor Replacement Phase 2	CONV		
242	10131003	E. Branch Muddy Ph3-A Pump Station - Combined in 31006				W-103 - CD Exhibit 1 Interceptor Replacement Phase 3	CONV		
243	10131004	East Branch Muddy Ph3-B Pump Station - Combined in 31006				East Branch Muddy Ph3-B Pump Station	CONV		
244	10131006	East Branch Muddy Interceptor		\$ 60,315,458		W-105 - Interceptor Extension	CONV		
245	10131140	E. Branch Ohio Interceptor Sewer Separation		\$ 15,848,746	408, 411, CSO 412, 414, 415, 416	W-104 - Complete the Partial Separation in CSOs areas 408, 411, 412, 414, 415, 416	PS		In 30840 and 30780
246	REMAINING PHASE 2 PROJECTS/BUNDLES		\$ 182,720	<del>\$ 1,548,081,885</del> \$ 1,700,117,714					
247	MIWWTP Mill Creek Wastewater Treatment Plant								
247a	10145500	Mill Creek WWTP Outfall Improvements		\$ 15,163,200		To be evaluated in conjunction with Index Line 248	WWTP		NOTE 15
247b	10145580	Mill Creek WWTP Added Sludge Pumping		\$ 1,315,000		To be evaluated in conjunction with Index Line 248	WWTP		NOTE 15
248	10144882	Mill Creek WWTP Chemical Enhanced Primary Treatment	\$ 164,235	\$ 25,215,765		C-402 - Enhanced Primary Treatment. (NOTE 13)	WWTP	NOTE 1	NOTE 15
249	LDCU Lower Duck Creek Upper								
250	10170920	Nu-Tone Parking Lot Grating		\$ 9,989,847	CSO 68	Storage - 2.53 MG	STOR		36.9
251	10170960	Madison & Redbank Grating		\$ 277,349	CSO 66	Regulator Improvements - 2.7 cfs	RI		0.0
252	10171260	4730 Madison Ave. Grating		\$ 277,349	CSO 61	Regulator Improvements - 8.2 cfs	RI		2.1
253	10171280	End of Harrow St. Div. Dam		\$ 277,350	CSO 64	Regulator Improvements - 9.7 cfs	RI		0.1
254	10171300	Brotherton Rd. Grating		\$ 277,349	CSO 80	Regulator Improvements - 7.0 cfs	RI		0.0
255	10171320	3675 Forest Hills Grating (Dynamic Underflow Control)		\$ 277,349	CSO 83	Regulator Improvements -11 cfs (NOTE 13)	RI	NOTE 11	2.7

For Settlement Communication Purposes Only

REVISED WWIP ATTACHMENT 2		Sunk Costs 2006 Dollars	Remaining Cost (NOTE 10) 2006 Dollars	CSO SSO Identifier (NOTE 14)	Description / Design (NOTE 3)	Technology	Plan CAPP	Plan Remaining CSO (MG/year) (NOTE 5)
INDEX								
256	10171340	3646 Madison Rd. Div. Dam	\$ 277,350	CSO 188	Regulator Improvements - 8.1 cfs	RI		4.4
257	10171360	Ford Gate Grating	\$ 277,350	CSO 199	Regulator Improvements - 27 cfs	RI		0.0
258	10171440	Camberwell Ave. Div. Dam	\$ 2,259,200	CSO 205	Partial Separation	PS		0.5
259	10171460	Old Red Bank Rd. Grating	\$ 5,514,020	CSO 84	Consolidate to STO @ CSO 503 1,500' of 72" sewer	STOR		in 71520
260	10171480	3979 Rosslyn Dr. Grating	\$ 19,158,278	CSO 136	Storage - 4.00 MG	STOR		31.0
261	10171520	Zaeh Rd. Grating	\$ 5,099,999	CSO 503	Pipe Rehab Replacement and Stream Restoration	SEP/GREEN		15.1
262	<b>PLWWTP</b>	<b>Pleasant Run Wastewater Treatment Plant</b>						
263	10145540	WWTP Joint MSD/ Butler County Facility	\$ 100,354,974		Pleasant Run Flow Diversion from Mill Creek - Joint MSD/Butler Co. Facility	WWTP	NOTE 1	
264	<b>RL</b>	<b>Reading Lower</b>						
265	10140340	Ronald Reagan & Reading Rd.	\$ 1,402,999	SSO 1001, 1020	Replacement collector following original alignment - 4336 ft of 12-21"	CONV	2 yr	
266	10142060	214 Clark St. Grating	\$ 277,351	CSO 507	Regulator Improvements-0.9 cfs	RI		0.4
267	10142080	Gebert St. Grating	\$ 277,350	CSO 509	Regulator Improvements-3.0 cfs	RI		0.1
268	10142100	531 Davis Street Grating	\$ 277,350	CSO 511	Regulator Improvements - 4.49 cfs	RI		0.0
269	10142140	Reading Rd @ Galbraith	\$ 3,854,201	CSO 670	Partial Separation	PS		2.2
270	10142160	Southern Ave. Grating	\$ 277,350	CSO 510	Regulator Improvements- 0.6 cfs	RI		0.1
271	10142180	245 Clark St. Overflow	\$ 948,900	CSO 508	Partial Separation	PS		1.3
272	<b>LDR</b>	<b>Little Duck Regulators</b>						
273	10171040	Camargo & East Fork Grating	\$ 277,345	CSO 69	Regulator Improvements - 8.4 cfs Relocated Completed CIP 96-12	RI		0.0
274	10171080	Plainville & Indian Hill	\$ 277,345	CSO 71	Regulator Improvements - 2.0 cfs Relocated Completed CIP 96-12	RI		0.3
275	10171100	4800 Jameson Grating	\$ 277,344	CSO 72	Regulator Improvements -1.7 cfs	RI		0.1
276	10171120	6402 Roe St. Grating	\$ 277,345	CSO 74	Regulator Improvements -3.2 cfs	RI		0.7
277	10171140	6333 Roe St. Grating	\$ 277,344	CSO 75	Regulator Improvements -7.9 cfs	RI		1.3
278	10171160	Bramble & Homer Grating	\$ 277,344	CSO 76	Regulator Improvements - 7.9 cfs	RI		1.3
279	10171180	3980 South Whetsel Grating	\$ 277,344	CSO 78	Regulator Improvements - 5.5 cfs	RI		0.3
280	10171200	Southern Ave. Grating	\$ 277,346	CSO 79	Regulator Improvements - 7.0 cfs	RI		1.5
281	10171220	Wooster @ Red Bank Div. Dam	\$ 277,343	CSO 656	Regulator Improvements Remove downstream flow restriction @ Beechmont Sluice Gate	RI		In-71920 16.9
282	<b>LDCR</b>	<b>Lower Duck Creek</b>						
282a	10270190	Columbia Square Separation	\$ 555,514	CSO 469	CONV (NOTE 12 & NOTE 13)	CONV		
283	10171380	5150 Wooster Pike Grating	\$ 2,180,499	CSO 85	Full Separation	FS		0.0
284	10171400	Archer St. Div. Dam, SEP	\$ 2,327,200	CSO 86	Partial Separation CIP 93-02 HW/DW Relocate	PS		1.9
285	10171500	Turpin St. Div. Dam (Dynamic Underflow Control)	\$ 277,349	CSO 472	Regulator Improvements (NOTE 13)	RI	NOTE 11	26.5
286	<b>ICWWTP</b>	<b>Indian Creek Wastewater Treatment Plant</b>						
287	10110000	Indian Creek WWTP	\$ 299,238		Opt.Existing Facility, 8.2 - 10.8 MGD	Optimization	NOTE 1	
288	10110020	Cleves Pump Station	\$ 11,042,000	PSO 677	1.5 MG Storage w/new 3.6 MGD pumps and FM for wet weather flow	STOR	2 yr	
289	<b>AC</b>	<b>Amberely Creek</b>						
290	10141160	Reading Rd. & Losantiville Rd.	\$ 824,968	SSO 1032	Replace collector following original alignment - 1793 ft of 12-18"	CONV	2 yr	
291	10142460	Beredith & Kincaid Grating	\$ 277,332	CSO 505	Regulator Improvements -8.3 cfs	RI		0.0
292	10142480	Ridge/Lakeview Div. Dam	\$ 277,332	CSO 651	Regulator Improvements -3.75 cfs	RI		0.3
293	10142500	6536 Cliffridge Grating	\$ 1,953,100	CSO 506	Partial Separation	PS		1.3
294	<b>CRU</b>	<b>Congress Run Upper</b>						
295	10142520	146 Ridgeway Grating	\$ 277,350	CSO 535	Regulator Improvements -3.25 cfs	RI		0.0
296	10142540	60 St. Clair Grating	\$ 277,350	CSO 560	Regulator Improvement - 3.25 cfs	RI		0.0
297	10142580	No. 41 Sherry Grating	\$ 928,701	CSO 537	Partial Separation	PS		0.2
298	10141140	Ronald Reagan & Galbraith Rd.	\$ 784,079	SSO 1029	Replace collector following original alignment - 3005 ft of 15-21"	CONV	2 yr	
299	10145600	Anthony Wayne Flooded MHs	\$ 65,126,882	Anthony Wayne	Future Wet Weather Facility to provide system capacity in the Mill Creek Interceptor system			
300	10140880	W. Galbraith Road	\$ 3,181,999	SSO 568, 569	CIP 2008-25 (in planning)	CONV	2 yr	
301	10141100	Ronald Reagan & Galbraith	\$ 7,297,254	SSO 1029	Replace collector following original alignment - 15,583 ft of 21-48"; Tunnel 200 ft of 42"	CONV	2 yr	
302	<b>TWLL</b>	<b>Tributary to Winton Lake Lower</b>						
303	10141020	Colerain & Galbraith Storage Facility	\$ 2,356	SSO 640	Below ground Storage, protects trunk sewer - 5.9 MG	STOR	2 yr	
304	10140820	Colerain - Jessup Replacement Sewer	\$ 2,406		Replace collector following original alignment - 12,950 ft of 15-60"; Tunnel 220 ft of 18-42"	CONV		

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INDEX								
305	<b>MA</b>							
	<b>Montgomery All</b>							
306	10170160		\$ 2,150,290	SSO 1008, 1014, 608	Replace existing pipe - Approx. 2600 LF of 18-27"	CONV	2 yr	
307	10170180		\$ 3,023,001	SSO 1008	Replace existing pipe - Approx. 7300 LF of 15-21"	CONV	2 yr	
308	10170320		\$ 1,369,644		Replace existing pipe - Approx. 1700 LF of 18"	CONV		
309	10170340		\$ 1,795,303		Replace existing pipe - Approx. 3800 LF of 15-18"	CONV		
310	<b>CCA</b>							
	<b>Clough Creek A</b>							
311	10170120		\$ 3,524,420	SSO 588	Replace existing pipe - Approx. 4000 LF of 27-30"	CONV	2 yr	
312	10170140		\$ 1,929,768	SSO 588	Replace existing pipe - Approx. 4100 LF of 15-27"	CONV	2 yr	
313	10170220		\$ 17,284,000		Regional Storage - 4.6 MG	STOR		
314	10170240		\$ 18,560,565		Replace existing pipe - Approx. 9600 LF of 15-48"	CONV		
315	10170260		\$ 2,298,465		Replace existing pipe - Approx. 3000 LF of 48"	CONV		
316	10170280		\$ 2,882,335		WIBs - Replace existing pipe - Approx. 4100 LF of 27-54"	CONV		
317	10170890		\$ 17,781,369	CSO 182	EHRT - 44.3 MGD Community Priority (NOTE 2)	EHRT		18.3
318	10170900		\$ 277,729	CSO 476	Regulator Improvements - 49.2 cfs Premised on operational changes at WWTP Four Mile P.S.	RI		2.4
319	10170860		\$ 819,293	PSO 861	Prospect Woods PS Upgrade (NOTE 13)	PSU	2 yr	
320	<b>W</b>							
	<b>Winton</b>							
321	10140620		\$ 24,900,000		Partially buried Storage - Protects Interceptors; 9.4 MG, gravity in & out	STOR		
322	10141040		\$ 5,799,999		New parallel sewer to follow original alignment - 11,238 ft of 18-42" Sensitive Receiving Stream	CONV		
323	10141320		\$ 609,699	PSO 794	PS Elim, PSO 794, w/sewer	CONV	2 yr	
324	10140800		\$ 5,199,070	SSO 612, 1003	Replace collector following original alignment - 12,396 ft of 12-48"; Tunnel 80 ft of 36"	CONV	2 yr	
325	<b>DAL</b>							
	<b>Delta Ave. Lower</b>							
326	10172000		\$ 277,730	CSO 669	Regulator Improvement	RI		0.0
327	<b>D</b>							
	<b>Deerfield</b>							
328	10170980		\$ 277,349	CSO 554	Regulator Improvements - 4.1 cfs	RI		0.0
329	10171000		\$ 5,200,543	CSO 555	Sewer Separation	PS		8.9
330	10171020		\$ 11,779,329	CSO 556	Storage - 2.90 MG	STOR		17.5
331	<b>RR</b>							
	<b>Rapid Run</b>							
332	10130440		\$ 3,293,342		Replace Interceptor in Wulff Run - 4500 ft of 24"	CONV		
333	10130460		\$ 8,389,474	SSO 623	Storage Tank capturing SSO 623 - 1.25 MG w/3 MGD pump	STOR	2 yr	
334	10130500		\$ 1,524,556		Replace Interceptor along original alignment through Delhi - 5500 ft of 18-24"	CONV		
335	10130760		\$ 26,634,390	CSO 523	EHRT - 106 MGD Community Priority (NOTE 2)	EHRT		55.3
336	<b>TWLU</b>							
	<b>Tributary to Winton Lake Upper</b>							
337	10142260		\$ 63,483,831	CSO 532	EHRT - 204.7 MGD Community Priority (NOTE 2)	EHRT		33.9
338	<b>LDC</b>							
	<b>Lower Duck Conveyance</b>							
339	10170200		\$ 1,844,367		WIBs - Replace existing pipe - Approx. 2800 LF of 12-27"	CONV		
340	10170680		\$ 1,580,886		WIBs - Replace existing pipe - Approx. 2800 LF of 12-27"	CONV		
341	<b>SP</b>							
	<b>Sycamore Plan</b>							
342	10160020		\$ 192,639		Replace pipe - 500 ft of 18"	CONV		
343	<b>CCB</b>							
	<b>Clough Creek B</b>							
344	10170300		\$ 4,716,433		Replace existing pipe - Approx. 8800 LF of 21-27"	CONV		
345	10170360		\$ 5,019,056		Replace existing pipe - Approx. 6600 LF of 15-18"	CONV		
346	10170380		\$ 786,806		Replace existing pipe - Approx. 2100 LF of 15"	CONV		
347	10170480		\$ 4,263,535		Replace existing pipe - Approx. 6100 LF of 21-27"	CONV		
348	10170500		\$ 2,185,711		Replace existing pipe - Approx. 5300 LF of 18-21"	CONV		
349	<b>PRWWTP</b>							
	<b>Polk Run Wastewater Treatment Plant</b>							
350	10150020		\$ 16,936,648		Storage - 6 MG (NOTE 1)	STOR		
351	10150015		\$ 8,156,003		Polk Run WWTP Optimization Ph4	Optimization	NOTE 1	
352	10150080		\$ 5,852,872		Replacement pipe - 800 ft of 30"/1 MG tank	CONV/STOR		
353	10150100		\$ 1,141,145		Replacement pipe - 2700 ft of 15-18"	CONV		
354	10150140		\$ 5,424,227		Replace pipe (200 ft of 18"). New PS & Storage tank	CONV/STOR		

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INDEX									
355	10150160	Polk WWTP CNV Map 010		\$ 12,937,008		Replace pipe - 7000 ft of 36 - 48"	CONV		
356	CA	California Plan							
357	10170400	5 Mile Rd. & Old Kellogg		\$ 7,976,701		Replace existing pipe - Approx. 5000 LF of 36-54"	CONV		
358	10170420	5 Mile Rd. & Birney Ln.		\$ 6,037,842		Replace existing pipe - Approx. 2000 LF of 42"	CONV		
359	10170440	4 Mile Rd. @ I-275		\$ 5,890,945		Replace existing pipe - Approx. 7400 LF of 21-30"	CONV		
360	10170460	Indian Creek Rd.		\$ 3,739		Seal Manhole Lids	Seal Manhole Lids		
361	10170540	Kellogg Ave. @ Coney Island		\$ 7,195,266		Replace existing pipe - Approx. 6200 LF of 54-66"	CONV		
362	WOL	West Ohio Lower							
363	10144660	Delhi Ave. Div. Dam		\$ 583,399	CSO 420	Partial Separation	PS		0.1
364	10144680	River Rd. @ Delhi Div. Dam		\$ 857,500	CSO 421	Partial Separation	PS		0.2
365	10144760	Bold Face Sr. Div. Dam		\$ 96,810,229	CSO 419	EHRT - 275 MGD (NOTE 2)	EHRT		137.2
366	10144780	Mt. Echo Rd. Regulator		\$ 277,350	CSO 422	Regulator Improvements - 22.2 cfs	RI		13.4
367	10144800	Mt. Hope Ave. Regulator		\$ 13,886,537	CSO 423	Storage-3.5 MG	STOR		24.9
368	KRU	Kings Run Upper							
369	10142940	Ross Run Regulator		\$ 277,300	CSO 485	Regulator Improvements -70.4 cfs	RI		29.1
370	10143180	Wooden Shoe Regulator	\$ 13,723	\$ 25,596,976	CSO 217	EHRT - 75 MGD (NOTE 2) Partial Separation with Storage - 1.5 MG (project included in Revised Original LMCPR)	EHRT PS/STOR		23.3
371	10143000	Kings Run and Spring Cove		\$ 2,245,402	CSO 486	Partial Separation	PS		0.4
372	10143040	Ross Run Grating		\$ 186,895,962	CSO 487	EHRT - 584 MGD (NOTE 2)	EHRT		289.2
373	10143140	Kings Run Regulator		\$ 5,487,501	CSO 483	Partial Separation to new interceptor connection	PS		15.3
374	HS	Hopple Street							
375	10142760	Vinton St. Regulator - CSO 8		\$ 277,301	CSO 8	Regulator Improvements - 1.54 cfs	RI		0.9
376	WF	West Fork							
377	10143680	Powers No. 1 Grating		\$ 277,349	CSO 527	Regulator Improvements - 4.6 cfs	RI		0.4
378	10143700	Beekman North Grating		\$ 277,350	CSO 528	Regulator Improvements - 3.0 cfs	RI		0.2
379	10143720	Beekman South Grating		\$ 277,350	CSO 530	Regulator Improvements - 8.5 cfs	RI		0.9
380	10143740	Liewellen Grating		\$ 277,350	CSO 529	Regulator Improvements - 3.9 cfs	RI		0.1
381	10143760	Hoffner Grating		\$ 359,200	CSO 123	Partial Separation	PS		0.0
382	10143780	Hays Grating		\$ 895,800	CSO 127	Partial Separation	PS		0.2
383	10143800	Todd No. 2 Grating		\$ 1,337,900	CSO 128	Partial Separation	PS		0.3
384	10143860	Butte/Todd 1/Twin Grating		\$ 85,000,001	CSO 130	Conveyance to Tunnel at Mill Creek, 12,600' of 84" sewer	CONV		56.3
385	10143820	Badgley Run Grating - incl. with 10143860			CSO 125	Conveyance to Tunnel at Mill Creek, 12,600' of 84" sewer, Cost in CSO 130	CONV		68.9
386	10143840	Todd 1 Grating, CNV - incl. with 10143860			CSO 126	Conveyance to Tunnel at Mill Creek, 12,600' of 84" sewer, Cost in CSO 130	CONV		33.2
387	10143880	Twin Grating, CNV - incl. with 10143860			CSO 203	Conveyance to Tunnel at Mill Creek, 12,600' of 84" sewer, Cost in CSO 130	CONV		5.4
388	10143900	Dreman Grating - incl. with 10143860			CSO 117	Conveyance to Tunnel at Mill Creek, 12,600' of 84" sewer, Cost in CSO 130	CONV		9.4
389	EL	Elmwood Lower							
390	10142640	Vine St. Div. Dam		\$ 1,019,100	CSO 544	Partial Separation	PS		0.1
391	10142660	Murray Rd. Div. Dam		\$ 510,101	CSO 653	Partial Separation	PS		0.4
392	10142700	Bloody Run Regulator		\$ 75,958,176	CSO 181	EHRT - 230 MGD (NOTE 2)	EHRT		215.1
393	EO1U	East Ohio 1 Upper							
394	10144160	Gest St. West-2-A Div. Dam, STO			CSO 430	In-line Storage in existing piping (also 431 & 432)	STOR		27.6
395	10144180	9th & McLean Div. Dam, STO			CSO 432	In-line Storage in existing piping (also 430 & 431)	STOR		5.2
396	10144200	Blackford St. Regulator		\$ 2,702,301	CSO 431	In-line Storage in existing piping (also 430 & 432) Dewater pump station for 2.0 MGD	STOR		102.5
397	EO2	East Ohio 2							
398	10144220	Pike St. Div. Dam		\$ 277,350	CSO 444	Regulator Improvement - 1.0 cfs	RI		0.1
399	10144240	Collard St. Regulator		\$ 277,349	CSO 447	Regulator Improvement - 2.6 cfs	RI		0.3
400	10144260	Riverfront Coliseum Regulator		\$ 1,530,200	CSO 443	Partial Separation	PS		0.1
401	10144320	Parsons St. Div. Dam		\$ 277,350	CSO 446	Regulator Improvement - 8.5 cfs	RI		4.1

## For Settlement Communication Purposes Only

REVISED WWIP ATTACHMENT 2			Sunk Costs 2006 Dollars	Remaining Cost (NOTE 10) 2006 Dollars	CSO SSO Identifier (NOTE 14)	Description / Design (NOTE 3)	Technology	Plan CAPP	Plan Remaining CSO (MG/year) (NOTE 5)
INDEX									
402	10144340	Eggleston & 4th Div. Dam		\$ 27,874,917	CSO 461	EHRT - 120 MGD (NOTE 2)	EHRT		119.2
403	10144360	Eggleston & 3rd F. Div.		\$ 277,350	CSO 462	Regulator Improvement - 6.4 cfs	RI		3.6
404	10144380	Eggleston & 3rd		\$ 277,350	CSO 463	Regulator Improvement - 2.0 cfs	RI		1.0
405	10144400	Eggleston & 3rd E. Div.		\$ 277,349	CSO 464	Regulator Improvements- 5.8 cfs	RI		2.8
406	10144420	Eggleston & Pete Rose Way		\$ 277,350	CSO 465	Regulator Improvement - 2.6 cfs	RI		1.6
407	<b>WOU</b>	<b>West Ohio Upper</b>							
408	10144700	Evans & 6th Street Div.		\$ 381,500	CSO 668	Partial Separation	PS		0.5
409	10144720	Evans & River Rd. No. 1 Div.		\$ 97,801	CSO 426	Full Separation	FS		0.3
410	10144740	Evans & River Rd. No. 2 Div.		\$ 1,682,099	CSO 427	Partial Separation	PS		0.5
411	10144820	River Rd. @ State Div. Dam		\$ 4,237,794	CSO 424	Partial Separation	PS		5.2
412	10144860	State Ave. Div. Dam		\$ 277,351	CSO 425	Regulator Improvement - 1.7 cfs Overcontrol @ CSO 419	RI		8.5
413	<b>EO1LW</b>	<b>East Ohio 1 Lower West</b>							
414	10144020	Baymiller St. Regulator		\$ 277,333	CSO 435	Regulator Improvements-11.2 cfs	RI		6.6
415	10144040	Carr St. Regulator		\$ 2,638,500	CSO 433	Partial Separation	PS		1.0
416	10144060	Carr & Front Div. Dam		\$ 824,599	CSO 434	Partial Separation	PS		0.2
417	10144120	7th & Mclean Div. Dam		\$ 785,300	CSO 489	Partial Separation	PS		0.1
418	10144140	Gest & Front Regulator		\$ 4,587,403	CSO 436	Partial Separation	PS		8.4
419	<b>CRL</b>	<b>Congress Run Lower</b>							
420	10142560	Lockland & Highway Grating		\$ 2,876,601	CSO 490	Partial Separation	PS		0.9
421	10142600	Vine & Decamp Div. Dam		\$ 8,274,751	CSO 171	Storage - 2.00 MG	STOR		23.0
422	<b>KRL</b>	<b>Kings Run Lower</b>							
423	10142960	Station Ave. A. Div Dam		\$ 277,301	CSO 26	Regulator Improvements - 7.1 cfs	RI		0.0
424	10142980	Clifton Ave. West Grating		\$ 1,159,300	CSO 480	Partial Separation	PS		1.3
425	<b>EO3W</b>	<b>East Ohio 3 West</b>							
426	10144440	Walden St. Div. Dam		\$ 6,473,599	CSO 450	Partial Separation	PS		3.3
427	10144460	Hazen St. Div. Dam		\$ 1,459,000	CSO 451	Partial Separation	PS		1.0
428	10144480	Collins St. West Div. Dam		\$ 1,323,000	CSO 452	Partial Separation	PS		0.2
429	10144520	Hazen St. @ Glen Alley Div.		\$ 541,898	CSO 658	Full Separation	FS		0.0
430	10144560	Litherbury St. South Div.		\$ 136,000	CSO 449	Full Separation	FS		0.0
431	10144580	Collins St. West Regulator		\$ 1,272,000	CSO 453	Partial Separation	PS		0.5
432	10144600	Collins St. East Div. Dam		\$ 19,890,435	CSO 458	Storage - 6.0 MG Consolidate with CSO 460	STOR		10.1
433	10144640	Litherbury St. North Div.		\$ 277,350	CSO 448	Regulator Improvement - 5.5 cfs	RI		12.7
434	<b>EO1LE</b>	<b>East Ohio 1 Lower East</b>							
435	10144000	3rd St. @ Central Ave.		\$ 277,331	CSO 439	Regulator Improvements-52.4 cfs	RI		8.9
436	10144100	Central Ave. Grating		\$ 3,683,099	CSO 438	Partial Separation	PS		14.3
437	<b>NSL</b>	<b>North Side Lower</b>							
438	10143200	Geringer St. Grating		\$ 277,300	CSO 19	Regulator Improvement - 7.6	RI		0.9
439	<b>EU</b>	<b>Elmwood Upper</b>							
440	10142620	Maple St. Div. Dam		\$ 277,301	CSO 37	Regulator Improvements - 6.2 cfs	RI		1.3
441	10142720	64th St. Div. Dam		\$ 2,280,418	CSO 39	Partial Separation	PS		2.2
442	10142740	68th St. Div. Dam		\$ 277,301	CSO 488	Over Control at 181 to eliminate conveyance element	RI		35.3
443	<b>SGL</b>	<b>Spring Grove Lower</b>							
444	10143360	4710 Howard Grating		\$ 277,300	CSO 110	Regulator Improvements -2.90 cfs	RI		0.3
445	10143400	Springlawn Grating		\$ 1,406,906	CSO 111	Partial Separation	PS		4.1
446	10143420	1547 Springlawn Grating		\$ 1,218,799	CSO 112	Partial Separation	PS		0.7
447	<b>EO3E</b>	<b>East Ohio 3 East</b>							
448	10144500	Bayou St. 120 West Regulator		\$ 471,800	CSO 459	Partial Separation	PS		0.3
449	10144540	Eastern and Gotham		\$ 2,435,600	CSO 667	Partial Separation	PS		2.6
450	10144620	Bayou St. 100 West Div. Dam		\$ 6,668,046	CSO 460/458	Consolidate with CSO 458	CONV		14.7
451	<b>LMCFR</b>	<b>Lower Mill Creek Final Remedy</b>							

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REVISED WWIP ATTACHMENT 2			Sunk Costs 2006 Dollars	Remaining Cost (NOTE 10) 2006 Dollars	CSO SSO Identifier (NOTE 14)	Description / Design (NOTE 3)	Technology	Plan CAPP	Plan Remaining CSO (MG/year) (NOTE 5)
INDEX									
452	10145380	Mill Creek "Lower 11 CSO" Phase 2 CSO controls			2, 3, 4, 5, 6, 7, 9, 666, 152, 428, and 429 ("Lower 11 CSOs")	Storage, conveyance, strategic separation, green infrastructure, using MSD's Integrated Watershed Planning approaches at the listed CSOs or in the LMC basin	NOTE 6		85% capture or control (aggregate) (NOTE 8)
453		Phase 2 Default (Lower Mill Creek Final Remedy)		\$ 305,658,000	33, 10, 11, 12, 13, 14, 15, 22, 23, CSOs 24, 482, 28, 29, 30, 025, Este, 18, 21, 017	Default tunnel/conveyance	NOTE 7		85% capture or control (aggregate) (NOTE 8)
454	10130745	Werk & Westbourne Grating			CSO 522	EHRT - Sized so that, in conjunction with Attachment 1B Index 109 EHRT, total EHRT capacity is at least 106 MGD.	EHRT		64.7
455	10140000	SSO 1048 Conveyance Sewer Phase 1		\$ 1,710,579	SSO 1048	Replace collector following original alignment - 4115 ft of 18-27"; Tunnel 375 ft of 18-24"	CONV	2 yr	
456	10140020	SSO 1048 Conveyance Sewer Phase 2		\$ 2,467,502	SSO 1048	Replace collector following original alignment - 4256 ft of 30-36"	CONV	2 yr	
457	10140080	SSO 587 Conveyance Sewer		\$ 1,178,958	SSO 587	Replace collector following original alignment - 4235 ft of 15-24"	CONV	2 yr	
458	10140120	Sharonville/Evendale Trunk to SSO 700		\$ 34,000,590	SSO 1048, 587	24,929 LF of 30-66"; Tunnel 6250 LF of 30-78"	CONV	2 yr	
459	10141180	SSO 700 Final Remedial Plan (FRP)		\$ 96,200,000	SSO 700	24.8 MG storage and conveyance, in accordance with the descriptions and designs specified in the SSO 700 Final Remedial Plan approved by the Regulators on December 19, 2022. Project also includes those included in Index Lines 455-458 (moved from Index Lines 224-227) and upsizing of two (2) sewer segments as noted in the SSO 700 FRP.	STOR		
454 460	TOTAL PHASE 2 WITHOUT PHASE 2 ALLOWANCES		\$ 182,720	<del>\$ 2,016,022,242</del> \$ 2,077,237,782					
<p><b>NOTES:</b></p> <p>1 PROJECT COMPLETE AND IN SERVICE AT SPECIFIED CAPACITY</p> <p>2 FOR ALL PROJECTS WITH EHRT TECHNOLOGY VOLUME SHOWING IS REMAINING UNTREATED OVERFLOW - SEE ATTACHMENT 5.</p> <p>3 CAPP DESIGN: ALL CAPP SEWER PROJECTS WILL BE DESIGNED TO MEET THE 10 YEAR DESIGN STORM EVENT. ALL CAPP PUMP STATION AND STORAGE FACILITIES WILL BE DESIGNED TO MEET THE 2 YEAR DESIGN STORM EVENT. THE 2 AND 10 YEAR DESIGN STORMS ARE SCS TYPE II - 24 HOUR EVENTS.</p> <p>4 FOR THESE RTC PROJECTS, THE STATED REDUCTION IN THE TYPICAL YEAR CSO DISCHARGE VOLUME SHALL ALSO BE THE PERFORMANCE CRITERIA FOR THE FACILITY.</p> <p>5 PERFORMANCE CRITERIA FOR CSO VOLUMES REMAINING AFTER IMPLEMENTATION OF CSO CONTROLS ARE THE VOLUMES NOT TO BE EXCEEDED AT A PARTICULAR OUTFALL DURING MSDGC'S TYPICAL RAINFALL YEAR (1970). COMPLIANCE WITH THESE CRITERIA WILL BE EVALUATED BY IMPLEMENTATION OF THE POST CONSTRUCTION MONITORING PROGRAM (APPROVED MARCH 20, 2020) UTILIZING MSDGC'S HYDROLOGIC AND HYDRAULIC MODEL TO NORMALIZE THE RESULTS OF THE POST CONSTRUCTION MONITORING TO THE TYPICAL YEAR.</p> <p>6 DEFENDANTS MAY PROPOSE WORK AT ADDITIONAL CSOs IN THE LMC BASIN IN ACCORDANCE WITH THE PROVISIONS OF THE WWIP.</p> <p>7 THE DEFAULT FINAL REMEDY FOR THE LOWER MILL CREEK FINAL REMEDY ("LMCFR") IS A TUNNEL(S)/CONVEYANCE, TO BE DESIGNED WITH REFERENCE TO THE FINAL LMCFR AND TO MEET THE APPLICABLE PERFORMANCE CRITERIA. THE PERFORMANCE CRITERIA FOR THESE CSOs WERE EXPRESSED AS "PLAN REMAINING CSO" VOLUMES, BASED ON MODELING PERFORMED AT THE TIME OF THE DEVELOPMENT OF THE WWIP. THE UPDATED PERFORMANCE CRITERION IS EXPRESSED AS 85% CAPTURE OR CONTROL, ACKNOWLEDGING UPDATED MODELING INFORMATION. GIVEN THE KNOWLEDGE GAINED BY DEFENDANTS OF THE LOWER MILL CREEK BASIN OVER THE PERIOD 2009-2012, AND THE PROJECTS INCLUDED IN THE REVISED ORIGINAL LMCFR, THE DEFENDANTS PROPOSE AND THE REGULATORS UNDERSTAND THAT CONSTRUCTION OF THE CSO TUNNEL IS LIKELY NOT THE COST-EFFECTIVE ALTERNATIVE FOR THE LMCFR. THE WWIP ENVISIONED THAT AN ALTERNATIVE OTHER THAN THE LMCFR TUNNEL COULD BE APPROPRIATE FOR THE LMCFR AND ALLOWS DEFENDANTS TO PROPOSE A DIFFERENT LMCFR PURSUANT TO THE WWIP. THE DEFENDANTS HAVE EXPRESSED INTENT TO TIMELY SUBMIT AN APPROVABLE PROPOSAL FOR A REVISED LMCFR THAT REFLECTS DEFENDANTS' INTEGRATED WATERSHED PLANNING APPROACH FOR THE AGGREGATED CSO FLOWS IN THE LOWER MILL CREEK BASIN. THE REGULATORS UNDERSTAND THIS INTENT AND IF A PROPOSAL IS SUBMITTED THAT IS CONSISTENT WITH THE PROVISIONS OF THE WWIP, THE REGULATORS ANTICIPATE APPROVING IT.</p>									

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REVISED WWIP ATTACHMENT 2		Sunk Costs 2006 Dollars	Remaining Cost (NOTE 10) 2006 Dollars	CSO SSO Identifier (NOTE 14)	Description / Design (NOTE 3)	Technology	Plan CAPP	Plan Remaining CSO (MG/year) (NOTE 5)
INDEX								
8	"PERCENT CAPTURE OR CONTROL" REFERS TO THE DIFFERENCE OF INFLOW VOLUME MINUS OVERFLOW VOLUME, DIVIDED BY INFLOW VOLUME, MULTIPLIED BY 100 $\left(\frac{\text{INFLOW}-\text{OVERFLOW}}{\text{INFLOW}} \times 100\right)$ , AS PREDICTED IN A TYPICAL YEAR USING THE MOST CURRENT MODEL APPLICABLE TO THE WATERSHED UPON ACHIEVEMENT OF FULL OPERATION. FOR THE PURPOSE OF COMPUTING "PERCENT CAPTURE OR CONTROL," INFLOW VOLUMES ARE THOSE PREDICTED BY MSDGC'S MOST CURRENT MODEL (1) USING MSDGC'S TYPICAL YEAR RAINFALL (1970); AND (2) BASED ON <u>PRE-CONTROL</u> CONDITIONS, DERIVED IN A MANNER CONSISTENT WITH HOW BASELINE CONDITIONS WERE DEFINED IN MSDGC'S JUNE 2006 "WET WEATHER IMPROVEMENT PROGRAM; VOLUME II, CSO LONG TERM CONTROL PLAN UPDATE REPORT," SECTION 4.7 ON PAGE 4-14. FOR THE PURPOSE OF COMPUTING "PERCENT CAPTURE OR CONTROL" OVERFLOW VOLUMES ARE THOSE PREDICTED BY THE MOST CURRENT MSDGC SYSTEM-WIDE MODEL FOR THE TYPICAL YEAR RAINFALL (1970) FOR <u>POST-CONTROL</u> CONDITIONS. COMPLIANCE WITH THESE CRITERIA WILL BE EVALUATED BY IMPLEMENTATION OF THE POST CONSTRUCTION MONITORING PROGRAM (APPROVED MARCH 20, 2020) UTILIZING MSDGC'S HYDROLOGIC AND HYDRAULIC MODEL TO NORMALIZE THE RESULTS OF THE POST CONSTRUCTION MONITORING TO THE TYPICAL YEAR.							
9	PROJECT IN ATTACHMENT 1B INDEX ROW 79 WAS AN INTERIM UPGRADE TO THE MUDDY CREEK WWTP RAW SEWAGE AND EFFLUENT PUMPING CAPACITIES, TO ACHIEVE MINIMUM FIRM INFLUENT AND EFFLUENT PUMPING CAPACITIES BOTH OF 28 MGD. FINAL FIRM INFLUENT PUMPING CAPACITY OF 35 MGD WILL BE ACHIEVED AS PART OF PHASE 2 PROJECT 10130000 (SEE ATTACHMENT 1B, INDEX ROW 151 & ATTACHMENT 2, INDEX ROW 215).							
10	COSTS FOR PROJECTS REFLECT THE COST IDENTIFIED IN THE 2009 WWIP EXCEPT FOR PROJECTS CHANGED OR ADDED THROUGH "ADAPTIVE MANAGEMENT".							
11	INSTALL UP-SIZED UNDERFLOW PIPES EQUIPPED WITH AUTOMATIC FLOW CONTROL GATES ON CSO 083 AND CSO 472, AND CONNECT THOSE AUTOMATIC GATES TO A SCADA SYSTEM TO ALLOW REMOTE AND POSSIBLY AUTOMATIC OPERATION OF THOSE GATES BASED ON FLOW CONDITIONS BOTH IN THE COLLECTION SYSTEM BOTH IN THE PROXIMITY OF THESE CSOS AS WELL AS IN THE INTERCEPTOR DOWNSTREAM OF THE TWO CSOS.							
12	SEPARATE THE COLUMBIA SQUARE DEVELOPMENT SITE BY CONNECTING THE SITE STORM SEWERS TO A CURRENTLY UNUSED SEWER (PREVIOUSLY USED AS THE CSO 469 UNDERFLOW SEWER), AND CONSTRUCTING A NEW SEWER TO DIVERT THAT CURRENTLY UNUSED SEWER TO THE CSO 469 OUTFALL DOWNSTREAM OF THE REGULATOR.							
13	PROJECT IS INCLUDED AS PART OF THE 2018 "BRIDGE" - EITHER IN WHOLE OR IN PART, APPROVED SEPTEMBER 18, 2018.							
14	IN 2009, OHIO EPA CHANGED THE CSO NUMBERS USED TO IDENTIFY SOME OF DEFENDANTS' CSO OUTFALLS IN DEFENDANTS' NPDES PERMIT (1PX00022*CD; Application No. OH0105457). AS A RESULT, SOME OF THE CSO IDENTIFIER NUMBERS USED IN THE ORIGINAL WWIP NOW HAVE DIFFERENT NUMBERS IN DEFENDANTS' NPDES PERMIT. THE WWIP HAS BEEN MODIFIED TO CHANGE ALL THOSE CSO IDENTIFIER NUMBERS TO BE CONSISTENT WITH THE CSO IDENTIFIER NUMBERS IN DEFENDANTS' NPDES PERMIT. SPECIFICALLY, CSO IDENTIFIER NUMBERS ASSOCIATED WITH THE FOLLOWING INDEX LINES IN ATTACHMENT 1B HAVE BEEN CHANGED; INDEX LINES 55, 89, 95 AND 112. CSO IDENTIFIER NUMBERS ASSOCIATED WITH THE FOLLOWING INDEX LINES IN ATTACHMENT 2 HAVE BEEN CHANGED; 270, 370, 377-380, 388, 396, 398-401, 403-406, 409, 410, 412, 423, 426-428, 430, 431, 433, 435 AND 453.							
15	<b>ENHANCED PRIMARY TREATMENT MAY INCLUDE ENHANCED HIGH RATE TREATMENT TECHNOLOGIES. SCOPE OF WORK OF ATTACHMENT 2 INDEX LINE 248 INCLUDES AN EVALUATION TO DETERMINE POTENTIAL INCORPORATION OF PROJECT 10145500 (REMOVED FROM ATTACHMENT 1B INDEX LINE 103 AND ADDED TO ATTACHMENT 2 INDEX LINE 247a) FOR MILL CREEK WWTP OUTFALL IMPROVEMENTS AND PROJECT 10145580 (REMOVED FROM ATTACHMENT 1B INDEX LINE 105 AND ADDED TO ATTACHMENT 2 INDEX LINE 247b) FOR MILL CREEK WWTP ADDED SLUDGE PUMPING. THE PURPOSE OF THE EVALUATIONS WILL BE TO DETERMINE (1) WHETHER ADDITIONAL SLUDGE PUMPING IS NECESSARY TO PROCESS THE ADDITIONAL SLUDGE GENERATED BY CHEMICALLY ENHANCED PRIMARY TREATMENT OR OTHER ENHANCED HIGH RATE TREATMENT TECHNOLOGY, (2) WHETHER ADDITIONAL AUXILIARY OUTFALL CAPACITY WILL BE NECESSARY TO ACCOMMODATE THE EXPANDED MILL CREEK WWTP PEAK TREATMENT CAPACITY, AND (3) IF SUCH INCREASES ARE NEEDED, THE SIZE AND DESIGN CRITERIA OF ADDITIONAL SLUDGE PUMPING ALONG WITH THE DESIGN AND SIZING OF OUTFALL IMPROVEMENTS TO HANDLE ANY ADDITIONAL FLOWS THROUGH THE TREATMENT PLANT.</b>							

## Revised Attachment 5

### **EHRT Design and Performance Criteria**

Defendants agree to construct, according to the Design and Performance Criteria stated below, ~~two one~~ Enhanced High Rate Treatment (as defined in Paragraph A.2 of the Final WWIP, "EHRT") ~~Projects-Project~~ in Phase 1 of the WWIP: ~~The two Phase 1 EHRT projects are 1) the EHRT Pilot Project at Werk and Westbourne, Project Number 10130740, and 2) the EHRT facility proposed as part of the LMCPR, which is subject to continuing study under the LMC Action Plan (collectively, the projects are "the Phase 1 EHRT Projects").~~ The Phase 1 EHRT ~~Projects-Project~~ will confirm the treatment performance of the EHRT technology of high rate sedimentation treatment, with disinfection treatment and dechlorination during the recreational season.

After construction, the Phase 1 EHRT ~~Projects-Project~~ will be operated and studied. The results of the ~~studies-study~~ shall be submitted to the Regulators. The design for EHRT facilities to be constructed in Phase 2 will be based on the Design Criteria below, the results of the performance ~~studies-study~~ of the Phase 1 EHRT ~~Projects-Project~~ and applicable requirements of federal and state law.

#### Design Criteria Applicable to All EHRT Facilities:

##### A. Design Numeric Criteria Goals

- (1) High Rate Sedimentation Treatment. The EHRT facility shall be designed with the goal of achieving during the Recreation Season (May 1 to October 30) an average total suspended solids (TSS) removal rate of 70% at its design flow rate or below for all events in which the average influent solids exceed 150 mg/l, and for events in the Recreation Season in which the average influent TSS concentration is less than 150 mg/l an average effluent TSS concentration of no more than 45 mg/l.
- (2) Disinfection Treatment. The EHRT facility shall be designed with goals of:
  - (a) Achieving a mean of 3 to 4 log reduction of E. coli for all events during the Recreation Season at the design flow rate or below.; and
  - (b) Complying with water quality-based E. coli limitations (or other then-applicable bacteriological parameters) and disinfection residuals requirements at its design flow and all flow rates below that design flow rate.

##### B. Design Criteria Specifics for Unit Processes

Each EHRT facility shall include the following unit processes:

- (1) Fine screens

- (2) Coagulant-assisted sedimentation
- (3) Coagulant feed and storage
- (4) Hypochlorite disinfection
- (5) Disinfectant feed and storage
- (6) Disinfectant removal (e.g., dechlorination)

C. Each EHRT facility shall be designed with the following attributes:

- (1) Effective mixing at each point of chemical addition;
- (2) Separate sedimentation and disinfection contact zones;
- (3) A minimum total nominal detention time of 27 minutes;
- (4) A minimum nominal disinfection contact time of 10 minutes; and
- (5) A maximum nominal sedimentation zone surface loading rate of 7,000 gpd/square foot.

Performance Criteria Applicable to All EHRT Facilities: Discharges from each EHRT facility shall comply with all requirements of state and federal law applicable to such discharges, and all requirements of state and federal permits applicable to such discharges.