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DANIEL HARRIGAN, MAYOR

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February 14, 2020

UPS NEXT DAY AIR

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RE: **Consent Decree, City of Akron, Ohio**
Case No. 5:09-cv-00272
Judge John R. Adams (Magistrate Pearson)

SUBMISSION: Akron shall submit a Semi-Annual Report to the U.S. EPA and OEPA on August 15, 2010 and every six (6) months thereafter until termination of this Consent Decree: Report No. 20, February 14, 2020 (July 1, 2019-Dec. 31, 2019)

CONSENT DECREE REFERENCE: Consent Decree XV, Reporting Requirements: Paragraph 75.

CERTIFICATION: I certify under penalty of law that this document and its attachments were prepared under my direction or supervision in a manner designed to ensure that qualified and knowledgeable personnel properly gather and present the information contained herein. I further certify, based on my inquiry of those individuals immediately responsible for obtaining the information, that I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Chris D. Ludle
Service Director

If you have any questions concerning this submittal, please feel free to contact Patrick Gsellman, AVR Program Manager, Akron Engineering Bureau, at 330-375-2355 or pgsellman@akronohio.gov.

CDL:PDG:LCG

Attachment

cc: Mayor D. Horrigan, E. Belfance, C. Ludle, E. Lash, M. Moore, B. Gresser, P. Gsellman, T. Finn (R&A), File 2010-009-00
ec: Gary Prichard (USEPA-Region V), Marta Grabowski (USEPA-Region V)



DANIEL HARRIGAN, MAYOR

City of Akron
Consent Decree
Semi-Annual Report No. 20
July 1, 2019 – December 31, 2019

February 14, 2020



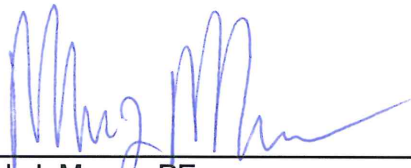
Department of Public Service
Akron Engineering Bureau
Environmental Division

City of Akron
Consent Decree
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July 1, 2019 – December 31, 2019

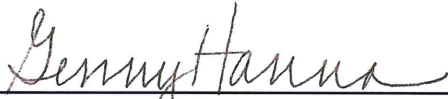
February 14, 2020



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Semi-Annual Report No. 20
July 1, 2019 – December 31, 2019

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List of Abbreviations and Acronyms

AFO	Achievement of Full Operation
AFP	Advanced Facilities Plan
AASEP	All-Akron Student Engineering Program
AWR!	Akron Waterways Renewed!
CAG	Community Action Group
CCTV	Closed-Circuit Television
CD	Consent Decree
CEPT	Chemically Enhanced Primary Treatment
CIPP	Cured in Place Process
CMOM	Capacity, Management, Operations, and Maintenance
CSO	Combined Sewer Overflow
CSS	Combined Sewer Systems
EHRT	Enhanced High Rate Treatment
EPA	Environmental Protection Agency
FOG	Fats, Oils and Grease
FSE	Food Service Establishments
GI	Green Infrastructure
GIS	Geographic Information System
HVAC	Heating, Ventilation, and Air Conditioning
ID	Identification
I/I	Infiltration/Inflow
IP	Integrated Plan
IPF	Integrated Planning Framework
IPS	Integrated Plan Stakeholders
LCI	Little Cuyahoga Interceptor
LF	Linear Feet
LTCP	Long Term Control Plan
Mg/l	Milligrams per Liter
MGD	Million Gallons per Day
MH	Manhole
MLSS	Mixed Liquor Suspended Solids
MOI	Main Outfall Interceptor
NASSCO	National Association of Sewer Service Companies
NFA	No Feasible Alternative
No.	Number
NOI	Notice of Intent
NSI	Northside Interceptor
NTP	Notice To Proceed
OCI	Ohio Canal Interceptor
OCIT	Ohio Canal Interceptor Tunnel
OHPO	Ohio Historic Preservation Office
OSHA	Occupational Safety and Health Administration
PER	Preliminary Engineering Report
PID	Project Identification
PTI	Permit to Install
QAPP	Quality Assurance Project Plan
RAS	Return Activated Sludge
RCA	Root Cause Analysis
RIO	Remote Input/Output
SCPHD	Summit County Public Health Department
SEP	Supplemental Environmental Project
SOP	Standard Operating Procedure
SORNP	Sewer Overflow and Response Notification Plan

List of Abbreviations and Acronyms

SSO	Sanitary Sewer Overflow
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WAS	Waste Activated Sludge
WPCLF	Water Pollution Control Loan Fund
WPCS	Water Pollution Control Station
WRF	Water Reclamation Facility (See: WPCS)

Section 1: Specific Action Projects

1.A Upgrade of the WPCS (Phase 1)

Status of Work Plan Development	The Work Plan for Water Pollution Control Station (WPCS) improvements was submitted to EPA on February 10, 2010 per the Consent Decree.
Status of Design and Construction Activities	Design and construction are complete. Certificate of Achievement of Full Operation was issued and acknowledged on September 20, 2013.
Status of Stress Test Protocol Development	Stress Tests are complete.
Status and Results of Stress Tests	Stress Tests are complete. The Final Demonstration Testing Evaluation Report was submitted to EPA on October 15, 2015, per the Consent Decree.
Capacity Achieved at the WPCS After Upgrade	The Final Demonstration Testing Evaluation Report concluded that the step feed and clarifier upgrades to Unit 6 have achieved 30 MGD of wet weather treatment capacity.
Project Cost Incurred During Reporting Period	No project costs were incurred during the reporting period.

1.B Upgrade of the WPCS (Contingency Projects)

The Final Demonstration Testing Evaluation Report concluded that the step feed and clarifier upgrades to Unit 6 achieved 30 MGD of wet weather treatment capacity, therefore, this Consent Decree item is not applicable.

1.C Status of Sewer Separation Projects

1.C.1 Rack 8 Separation Project

Activities Undertaken During Reporting Period	Project is complete.
Status of Construction	Construction is complete.
Date of Anticipated Completion	Achievement of Full Operation occurred on December 14, 2012.

Project Cost Incurred During Reporting Period No project costs were incurred during the reporting period.

1.C.2 Rack 25 Separation Project

Activities Undertaken During Reporting Period Project is complete.

Status of Construction Construction is complete.

Date of Anticipated Completion Achievement of Full Operation occurred on December 14, 2012.

Project Cost Incurred During Reporting Period No project costs were incurred during the reporting period.

1.C.3. Rack 21 Separation Project

Activities Undertaken During Reporting Period Work on this project is substantially complete. This project is now in the warranty period. Work continues on the sub-final punch list.

Status of Construction Construction is substantially complete.

Date of Anticipated Completion Achievement of Full Operation occurred on November 9, 2017. Construction was substantially complete November 13, 2017.

Project Cost Incurred During Reporting Period Project costs incurred during the reporting period were approximately \$352,413.20

1.C.4 Rack 13 Separation Project

Activities Undertaken During Reporting Period Project is complete.

Status of Construction Construction is complete.

Date of Anticipated Completion Achievement of Full Operation occurred on October 14, 2016.

Project Cost Incurred During Reporting Period	No project costs were incurred during the reporting period.
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1.C.5 Rack 30 Separation Project

Activities Undertaken During Reporting Period	Work on this project is substantially complete. This project is now in the warranty period. Sub-final punch list is complete.
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Status of Construction	Construction is substantially complete.
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Date of Anticipated Completion	Achievement of Full Operation occurred on November 9, 2017. Construction on Rack 30 was substantially complete November 13, 2017.
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Project Cost Incurred During Reporting Period	Project costs incurred during the reporting period were approximately \$50,918.74
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Section 2: CSO and WPCS Control Measures

2.A Status of Document Preparation

Table 2-1 shows the current status of documents as listed in Table 1 in Paragraph 17 of the Consent Decree. Documents listed in **bold** have been completed as of the end date of this reporting period.

Table 2-1 Status of Document Preparation

Document	Consent Decree Due Date	Date Submitted or Date of Anticipated Completion
Updated NFA and supplement	November 30, 2009	November 25, 2009
Preliminary Report on Modeling to Predict Size and Number of Overflows	January 15, 2010	January 13, 2010
Preliminary Report on Cost/Benefit Comparison to Predict Sizes and Number of Overflows	March 15, 2010	March 12, 2010
CSO Control Measure Cost/Benefit Tables at Appendix 2 of Attachment A	May 15, 2010	May 14, 2010
Updated Financial Capability Information	May 15, 2010	May 14, 2010
Post-Construction Monitoring Program	August 15, 2010	August 16, 2010
Proposed Long Term Control Plan Update	August 15, 2010	August 16, 2010
Proposed Long Term Control Plan Update Report	August 15, 2010	August 16, 2010
Final Long Term Control Plan Update	October 15, 2010	October 15, 2010 Revised: February 28, 2011
Final Long Term Control Plan Update Report	October 15, 2010	October 15, 2010 Revised: February 28, 2011 Revised: November 15, 2011 USEPA Approved: November 16, 2011 Ohio EPA Approved: April 11, 2012
Report on Revising WPCS Control Measure(s) if Akron achieves 130 MGD through secondary treatment using step feed	October 15, 2016	October 14, 2016
Report on Revising WPCS Control Measure(s) if Akron constructs the WPCS Contingency Project	October 15, 2017	N/A

2.A.1 Development of an Integrated Plan

The City's LTCP Update was approved by USEPA on November 16, 2011 and Ohio EPA on April 11, 2012. The LTCP Update was incorporated into the court-approved Consent Decree on January 17, 2014.

The City submitted an Integrated Plan on July 31, 2015 in accordance with USEPA's June 5, 2012 Integrated Planning Framework (IPF) Guidance. The parties participated in several conferences and exchanged several documents regarding the City's proposed Integrated Plan. The City continued to comply with the requirements within the Consent Decree, including, but not limited to, the LTCP Update, during the ongoing discussions of the proposed Integrated Plan.

The parties subsequently agreed to suspend further discussions over the proposed Integrated Plan. At the same time, it was understood that the City would submit requests to modify the LTCP Update, independent of the integrated planning process. Those proposed modifications are discussed in the following section.

2.A.2 Consent Decree Modifications

As a result of ongoing Consent Decree negotiations, modifications were made pursuant to Exhibit 2 and Exhibit 3 of the Consent Decree, and the Court has approved the First Amendment to Consent Decree and the Second Amendment to Consent Decree. Those modifications are discussed below.

The City received modification approval letters under Exhibit 3 of the LTCP for the following green infrastructure ("GI") projects:

- Rack 36 – approval letter issued on October 30, 2015;
- Rack 5/7 – approval letter issued on December 7, 2015;
- Rack 22 – approval letter issued on December 7, 2015.

Based upon a subsequent agreement of the parties, the City has constructed the original Rack 22 storage basin in lieu of the approved green infrastructure project.

On January 15, 2016 the City submitted an Alternative Plan to the Sizing of Secondary Treatment Capacity under Exhibit 2 of the LTCP Update. USEPA approved the City's Alternative Plan on February 11, 2016. Based on this approval, the WPCS Phase 2 projects were then subject to the requirements of the LTCP Update Rows 17 and 18.

The Court entered the First Amendment to the Consent Decree on September 20, 2016, which modified the Consent Decree as follows: (1) changed the sequencing of the WPCS Phase 2 projects and (2) replaced the MOI parallel relief sewer project with the MOI capping project. The First Amendment to Consent Decree switched the deadlines for the projects in LTCP Update Rows 17 and 18, and replaced the original LTCP Update Rows 21 and 22 with new Rows 21, 22 and 23.

The Court entered the Second Amendment to the Consent Decree on December 17, 2019 which further modified the Consent Decree as follows: (1) replaced the requirement for the BioACTIFLO facility in LTCP Update Row 18 with a BioCEPT facility and a demonstration study as now required in new LTCP Update Rows 18 and 18.a., respectively; and (2) replaced the Racks 3, 26/28 and 27/29 storage basins required in LTCP Update Rows 1, 8 and 9 with upsized underflow drains and pipes ("optimized conveyance") and two GI projects, including GI operation and maintenance ("O&M") requirements, and increased the size of the Rack 10/11 storage basin required in Row 3 from 2.5 MG to 4.5 MG. LTCP Update Rows 1, 3, 8 and 9 are now replaced with amended Rows 1, 3, 8 and 9 and new Rows 1.a., 8.a., and 9.a.

The City previously proposed to modify the requirement for the EHRT unit in LTCP Update Row 11a, as well as to replace the NSI tunnel in Row 12 with an alternative set of controls. However, the City informed USEPA and Ohio EPA of its decision to defer those requests to a later date. The parties did not discuss those potential modifications during this reporting period.

2.B Progress Towards Completing Milestones in Approved LTCP Update

Progress on completing milestones, including status of progress toward Achievement of Full Operation, for each of the WPCS and CSO Control Measures set forth in the approved LTCP Update is provided in Table 2-2. The Consent Decree was entered January 17, 2014 and amendments were entered on September 20, 2016 and December 17, 2019. In addition, under USEPA's Integrated Plan Framework, during this reporting period the City continued with Long Term Control Plan Optimization to evaluate and identify alternative solutions for the controls listed in the LTCP Update that have yet to be constructed.

**Table 2-2 Status of Progress and Cost Incurred During Reporting Period
For Control Measures Set Forth in Approved LTCP Update**

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
1	Rack 3	Green infrastructure plus optimized conveyance	<p>Bidding of Control Measure – June 30, 2018.</p> <p>Achievement of Full Operation – November 30, 2020.</p>	<p>The Court entered the Second Amendment to the Consent Decree December 17, 2019 which replaced the storage basin with Green infrastructure plus optimized conveyance.</p> <p>Kelly Conveyance (CSO Rack 3), the upsized underflow, was awarded to a contractor. Contractor projected to start January 2020.</p> <p>Chittenden Green Project (CSO Rack 3), final landscaping and pavement remains to be completed on this project.</p> <p>Duane Green Project (CSO Rack 3) was awarded to a contractor, and is projected to start in January 2020.</p>	<p>Project costs incurred during the reporting period for all Kelly (CSO Rack 3) projects were approximately \$963,403.02</p>
1.a.	Rack 3	Develop and implement GI O&M Plans	Submit O&M Plan in accordance with Exhibit 7, no later than August 30, 2020		
2	Rack 5 and 7	Green Infrastructure and Sewer Separation (Per Exhibit 3)	<p>Bidding of Control Measure – October 31, 2015.</p> <p>Achievement of Full Operation – October 31, 2017.</p>	<p>Construction Notice to Proceed was issued on June 21, 2016.</p> <p>Achievement of Full Operation occurred on October 26, 2017.</p> <p>Sub-final punch list is complete.</p>	<p>Project costs incurred during the reporting period were approximately \$1,692,374.26</p>

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
3	Racks 10 and 11	Storage Basin(s)	<p>Bidding of Control Measure – June 30, 2018.</p> <p>Achievement of Full Operation – December 31, 2020.</p>	<p>The Court entered the Second Amendment to the Consent Decree December 17, 2019 which increased the size of the storage basin from 2.5 to 4.5 MG.</p> <p>Construction Notice to Proceed was issued on September 24, 2018.</p> <p>Construction is ongoing</p>	<p>Project costs incurred during the reporting period were approximately \$8,729,280.71</p>
4	Rack 12	Storage Basin(s)	<p>Bidding of Control Measure – November 30, 2014.</p> <p>Achievement of Full Operation – October 31, 2017.</p>	<p>Construction Notice to Proceed was issued on May 29, 2015.</p> <p>Achievement of Full Operation occurred on October 30, 2017.</p> <p>Construction continues on remaining punch list items.</p>	<p>Project costs incurred during the reporting period were approximately \$1,797,341.65</p>
5	Rack 14	Storage Basin(s)	<p>Bidding of Control Measure – October 31, 2014.</p> <p>Achievement of Full Operation – April 30, 2017.</p>	<p>Project complete. All warranty work is complete.</p> <p>Achievement of Full Operation occurred on January 3, 2017.</p>	<p>Project costs incurred during the reporting period were approximately \$627.16</p>
6	Rack 15	Storage Basin(s)	<p>Bidding of Control Measure – November 30, 2013.</p> <p>Achievement of Full Operation – October 31, 2015.</p>	<p>Project complete. Final pay application was processed, and loan was closed.</p> <p>Project placed in service on October 30, 2015.</p> <p>Achievement of Full Operation occurred on February 17, 2016.</p>	<p>No costs were incurred during the reporting period.</p>

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
7	Rack 22	Storage Basin(s)	Bidding of Control Measure – October 31, 2015. Achievement of Full Operation – December 31, 2017.	Project complete. Achievement of Full Operation occurred on November 29, 2017. Construction is complete.	No costs were incurred during the reporting period.
8	Rack 26 and 28	Green infrastructure plus optimized conveyance	Bidding of Control Measure – October 31, 2021. Achievement of Full Operation – December 31, 2022.	The Court entered the Second Amendment to the Consent Decree December 17, 2019 which replaced the storage basin with Green infrastructure plus optimized conveyance. Construction was completed for one aspect of the IP alternative, called Aqueduct Green Street Improvements.	Project costs incurred during the reporting period were approximately \$137,833.75.
8.a.	Rack 26 and 28	Develop and implement GI O&M Plans	Submit O&M Plan in accordance with Exhibit 7, no later than March 1, 2019	U.S. EPA issued an approval of the City's O&M Plan on October 23, 2019. GI performance reporting is provided in Appendix H.	Costs are reported in Section 2C as part of the overall Program costs.
9	Rack 27	Optimized conveyance	Bidding of Control Measure – January 31, 2018. Achievement of Full Operation – December 31, 2019.	The Court entered the Second Amendment to the Consent Decree December 17, 2019 which replaced the storage basin with optimized conveyance. The notice to proceed was issued on November 5, 2018. Construction is ongoing.	Project costs incurred during the reporting period, for both Racks 27 and 29, were approximately \$2,476,901.67

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
9.a.	Rack 29	Optimized conveyance	<p>Bidding of Control Measure – January 31, 2018.</p> <p>Achievement of Full Operation – December 31, 2019.</p>	<p>The Court entered the Second Amendment to the Consent Decree December 17, 2019 which replaced the storage basin with optimized conveyance.</p> <p>The notice to proceed was issued on November 5, 2018.</p> <p>Construction is ongoing.</p>	See Row 9 above for project costs.
10	Rack 36	Green Infrastructure and Sewer Separation (Per Exhibit 3)	<p>Bidding of Control Measure – October 31, 2015.</p> <p>Achievement of Full Operation – October 31, 2017.</p>	<p>Project is in the warranty period.</p> <p>Achievement of Full Operation occurred on October 30, 2017.</p> <p>Construction was substantially complete as of September 15, 2017.</p> <p>Final punch list work is completed.</p>	Project costs incurred during the reporting period were approximately \$28,277.19

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
11	Racks 4, 16, 17, 18, 19, 20, 23, 24, 37	Ohio Canal Tunnel – Construct a 28-foot internal diameter tunnel, 5,500 feet in length, or any other combination of diameter and length that achieves the design criteria.	Bidding of Control Measure – April 30, 2014. Achievement of Full Operation – December 31, 2018.	Notice to Proceed was issued on November 6, 2015. Construction is ongoing. On September 21, 2017, the City submitted a notification that the City has reason to believe that the Ohio Canal Interceptor Tunnel project will not meet the Achievement of Full Operation deadline. The City submitted an amendment to this notification on October 17, 2017. The parties then participated in a conference call on November 29, 2017 and further discussed the status of the schedule of the project. The parties agreed that the City would submit periodic updates on the status of the schedule of the project. The most recent contractor's schedule update dated January 3, 2020 forecasts the substantial completion milestone to be achieved June 30, 2020.	Project costs incurred during the reporting period were approximately \$10,908,469.11.
11a	Racks 16, 17, 18, 19, 20, 23, 24	Ohio Canal Tunnel – ACTIFLO™ Ballasted Flocculation Unit or equivalent technology that meets the Design and Performance Criteria and Disinfection.	Bidding of Control Measure – April 30, 2024. Achievement of Full Operation – October 31, 2027.	LTCP optimization was performed as part of the Integrated Plan in 2015. No advanced facilities planning or design activities were undertaken during the reporting period.	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
12	Racks 32, 33, 34, 35	Northside Interceptor Tunnel – Construct a 20-foot internal diameter tunnel, 10,000 feet in length or any other combination of diameter and length that achieves the design criteria.	Bidding of Control Measure – April 30, 2023. Achievement of Full Operation – December 31, 2026.	The City is advancing the work on the Integrated Plan project to a preliminary design stage in the first half of 2020	Project costs incurred during the reporting period were approximately \$30,999.49
13a	WPCS Phase 1	Upgrade conventional secondary treatment capacity to 130MGD by implementing step feed operation in Train 6, as described in Paragraph 10.A of the Consent Decree.	Bidding of Control Measure – October 31, 2011. Achievement of Full Operation – October 15, 2013.	Project complete (see Section 1.A of this Semi-Annual Report).	No costs were incurred during the reporting period.
13b	WPCS Phase 1	Upgrade conventional secondary treatment capacity to 130MGD by performing the upgrades identified in the Consent Decree in Section V.10.C.	Bidding of Control Measure – January 15, 2016. Achievement of Full Operation – October 15, 2017.	Since the Final Demonstration Testing Evaluation Report concluded that the step feed and clarifier upgrades to Unit 6 have achieved 30 MGD of wet weather treatment capacity, this Consent Decree item is not required.	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
14	WPCS Phase 1 BioACTIFLO™ Wet Weather Treatment Pilot Study (the "Pilot Study")	Conduct the Pilot Study in accordance with Exhibit 1 to this Long Term Control Plan Update.	<p>Pilot Study Start Date – May 1, 2012.</p> <p>Pilot Study Completion Date – November 30, 2013.</p> <p>Pilot Study Report submitted to EPA by December 31, 2013.</p>	Study is complete. USEPA issued a concurrence letter on April 8, 2015.	No costs were incurred during the reporting period.
15	WPCS Phase 2 – Part 1*	Upgrade conventional secondary treatment capacity to 170 MGD.	<p>Bidding of Control Measure – February 28, 2019.</p> <p>Achievement of Full Operation – December 31, 2021.</p>	This project was replaced by WPCS Alternative Plan A Phase 2 – Part 1 per US EPA approval of Alternate Plan A on February 11, 2016.	No costs were incurred during the reporting period.
16	WPCS Phase 2 – Part 2*	Install BioACTIFLO™ ballasted flocculation to treat all flow that does not receive conventional secondary treatment. In addition, all flows receiving BioACTIFLO™ shall receive disinfection.	<p>Bidding of Control Measure – April 30, 2017.</p> <p>Achievement of Full Operation – April 30, 2019.</p>	This project was replaced by WPCS Alternative Plan A Phase 2 – Part 2 per US EPA approval of Alternate Plan A on February 11, 2016.	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
17	WPCS Alternative Plan A – Phase 2 – Part 1*	Upgrade conventional secondary treatment capacity to achieve the minimum sustained capacity specified in Alternative Plan A approved by USEPA.	Bidding of Control Measure – April 30, 2017. Achievement of Full Operation – April 30, 2019.	USEPA issued an approval of Alternative Plan A on February 11, 2016 to upgrade conventional secondary treatment capacity to 220 MGD. The construction Notice to Proceed was issued on August 24, 2016. Construction is complete. Achievement of Full Operation occurred on April 30, 2019. The sequence of the WPCS Alternative A Phase 2, Part 1(Row 17) and Phase 2 Part 2 projects was changed under the First Amendment to the Consent Decree, entered on September 20, 2016. The revised dates are shown in this report.	Project costs incurred during the reporting period were approximately \$503,531.05.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
18	WPCS Alternative Plan A – Phase 2 – Part 2*	Install – BioCEPT to achieve a minimum capacity of 60 MGD. In addition, all flows receiving BioCEPT shall receive disinfection during the recreation season.	Bidding of Control Measure – February 28, 2019. Achievement of Full Operation – December 31, 2021.	BioCEPT to achieve a minimum sustained capacity of 60 MGD. The Notice to Proceed was issued to the Contractor on May 31, 2019. Construction is ongoing. The sequence of the WPCS Alternative A Phase 2, Part 1 (Row 17) and Phase 2 Part 2 projects was changed under the First Amendment to the Consent Decree, entered on September 20, 2016. Response to Row 17. The revised dates are shown in this report. The Court entered the Second Amendment to the Consent Decree December 17, 2019 which replaced the BioACTIFLO facility with a BioCEPT facility and an additional demonstration study. The replacement project was approved by USEPA and Ohio EPA, see Section 2.A.2.	Project costs incurred during the reporting period were approximately \$9,112,490.50.
19	WPCS Alternative Plan B – Phase 2 – Part 1*	Upgrade conventional secondary treatment capacity to achieve the minimum sustained capacity specified in Alternative Plan B approved by USEPA.	Bidding of Control Measure – December 31, 2019. Achievement of Full Operation – December 31, 2021.	Not Applicable	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
20	WPCS Alternative Plan B – Phase 2 – Part 2*	Install BioACTIFLO™ ballasted flocculation to achieve the minimum capacity specified in Alternative Plan B approved by USEPA. In addition, all flows receiving BioACTIFLO™ shall receive disinfection.	Bidding of Control Measure – April 30, 2017. Achievement of Full Operation – April 30, 2019.	Not Applicable	No costs were incurred during the reporting period.

*Alternative Plan to Upgrading Conventional Secondary Treatment to 170 MGD:

- 1) If US EPA approves in writing an Alternative Plan A, in accordance with Exhibit 2 to the LTCP update, then Akron shall implement the control measures specified in the First Amendment in Rows 17 and 18, instead of the control measures specified in Rows 15 and 16
- 2) If US EPA approves in writing an Alternative Plan B, in accordance with attachment to the LTCP update, then Akron shall implement the control measures specified in the First Amendment in Rows 19 and 20, instead of the control measures specified in Rows 15 and 16

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
(2) Collection System Measures					
21	Main Outfall Sewer Upgrades – Phase I	Installation of pneumatically placed, steel reinforced mortar cap over the entire length of the brick-arch section of the Main Outfall Interceptor (“MOI”) that runs between Survey Station 83+00 and the rectangular bridge section that is located upstream of the WPCS (“the Bridge Section”). The Bridge Section is not of brick-arch construction, and the approximately 400-foot portion of the MOI between the Bridge Section and the WPCS is covered with soil. As part of Phase I, a limited amount of additional soil will be added to the brick-arch portion of the MOI between the Bridge Section and the WPCS headworks.	Bidding of Control Measures: May 4, 2016 Achievement of Full Operation: November 30, 2017.	Project complete. Achievement of Full Operation occurred on November 22, 2016.	No costs were incurred during the reporting period

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
22	Main Outfall Sewer Upgrades – Phase II	Additional soil will be added to the soil cap on the brick-arch portion of the MOI between the Bridge Section and the WPCS headworks, after the completion of, and subject to the results of, a geotechnical and engineering evaluation will be to determine the amount of additional soil cover, up to 2 feet, that can be placed on the remaining brick-arch portion of the MOI between the Bridge Section and the existing WPCS headworks without causing excessive settlement of that portion of the MOI. The parties understand that the City may eliminate and/or improve some of the brick-arch portion of the MOI between the Bridge Section and the existing WPCS headworks project. Any improvements to the brick-arch portion of the MOI between the Bridge Section and the existing WPCS headworks through construction of a proposed WPCS headworks project. Any improvements to the brick-arch portion of the MOI between the Bridge Section and the existing WPCS headworks project shall ensure structural integrity such that the improved portion of the enclosed conduit of the MOI withstands at least 5 feet of surcharge.	<p>Completion of engineering evaluation: May 30, 2017</p> <p>Completion of placement of additional soil: November 30, 2017</p>	<p>Engineering evaluation completed and submitted to EPA on May 22, 2017.</p> <p>Achievement of Full Operation for the Soil Cap occurred on November 15, 2017.</p>	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
23	Main Outfall Sewer Inspection	Perform inspection and rehabilitation consistent with the Main Outfall Sewer Supplement to the Approved CMOM Program as outlined in Section VII of the Consent Decree	Full Operation shall be maintained consistent with Main Outfall Sewer Supplement to the Approved CMOM Program	Project complete.	No costs were incurred during the reporting period.

2.C Project Cost Incurred

Project costs incurred by the City during the reporting period for each of the WPCS and CSO Control Measures set forth in the approved LTCP Update are provided in Table 2-2. The City incurred additional costs for regulatory support, design management, program controls, technical and right of way support, GI operation and maintenance and program management \$2,094,213.16 during the reporting period.

2.D Status of Implementation of the Post-Construction Monitoring Program

The Post-Construction Monitoring Program was submitted on August 15, 2010, and in the revised Long Term Control Plan on February 29, 2011. In response to comments from U.S. EPA, the City submitted a revised Program on December 14, 2012.

2.E Listing of All CSO Discharges

CSO discharges from each CSO Outfall for the period July 1, 2019 through December 31, 2019 are listed in Appendix B. The listing also provides data on the depth and duration of rainfall at each of the City's thirteen (13) rain gauges. Racks 8, 9, 25, 30, 31, 38 and 39 are not included in the table. Racks 13, 8, 25, 9 and 39 were separated on June 14, 2016, May 21, 2012, April 26, 2012, July 27, 2004 and August 18, 2000, respectively. Racks 5, 7, 21 and 36 were separated on October 13, 2017, October 3, 2017, July 18, 2017 and August 16, 2017, respectively. Rack 30 was separated on November 9, 2017. Rack 31 discharges are included with Rack 40 (Cuyahoga Street Storage Facility). Rack 38 is a diversion chamber that routes flow within the combined sewer system.

2.F Status of Development of the Supplemental Compliance Plan

As of this reporting period, the Supplemental Compliance Plan is not required.

2.G Status of Public Participation Plan Implementation

The City of Akron continued its public participation program with regular updates to the AWR! Stakeholders Group, formally known as the Integrated Plan Stakeholder Group and as the CSO Community Action Group (CAG), prior to that. During the reporting period, the following IP Stakeholder group meeting was held:

- AWR! Stakeholders Meeting/ Presentations October 24, 2019

The City's public participation efforts also included presentations made at the following events and public meetings during the reporting period:

- Hosted two public trolley tours (July 2019)
- Hosted a groundbreaking ceremony for a new spray park (July 2019)
- Rib White and Blue Fest – ECO (July 2019)
- Children's Day at Lock 3 – ECO (July 2019)
- United Way Day – ECO (July 2019)
- Hosted public trolley tour (August 2019)
- Helped coordinate and host AASEP Closing Luncheon (August 2019)
- Had a booth at Metro's 50th Anniversary Celebration

- RubberDucks Birthday bash – ECO (August 2019)
- Public Meeting for Hickory Residents regarding the Ohio Canal Interceptor Tunnel (August 2019)
- Hosted one public trolley tour (September 2019)
- Hosted private trolley tour for Ohio EPA (September 2019)
- Presentation to Environmental Class at Kent State University (September 2019)
- Had a booth at the Northeast Ohio Regional Sewer District Open House (September 2019)
- Contracting Opportunities and Resources – Local Contractor Support Event in Conjunction with the Akron Urban League (September 2019)
- Public speaker for the Girl Scouts on Recycling the Right Way (September 2019)
- Akron Marathon Kids Fun Run – ECO (September 2019)
- Hosted private trolley tour for Mayor's Citizen's Academy (October 2019)
- Hosted private trolley tour for Jr. Leadership Akron (October 2019)
- University of Akron Field Day – ECO (October 2019)
- Panel representative for the Value of Water Sustainability Conference (October 2019)
- Water, Women, and Wellness (October 2019)
- Hosted one private trolley tour for Buchtel CLC (November 2019)
- Hosted a private trolley tour for Akron Public Schools Career Day (November 2019)
- City of Akron Christmas Parade – ECO (November 2019)
- Kent State Interview for publication (December 2019)
- All Akron Student Engineering Program Winter STEMfest (December 2019)
- Public Service and AWR! Presentation to new council members (December 2019)
- Interview with WKYC (December 2019)
- Transfer of AWR! Website to a new host (December 2019)
- Released numerous press releases and news stories (July – December 2019)

Copies of presentations and distributed materials are included in Appendix C.

The City of Akron has posted updated program information to the Akron Waterways Renewed (AWR!) website (www.akronwaterwaysrenewed.com). Figure 2-1 is a picture of the home page of the AWR! website.

The City of Akron has also established a Facebook page for the Akron Waterways Renewed! Program. The link for this page is www.facebook.com/akronwaterwaysrenewed. Figure 2-2 represents the Facebook page for the program.

A Twitter account has been established to communicate program updates and general interest topics. The account is @AkronWaterways. Instagram @AkronWaterwaysRenewed has allowed the program to share and showcase the many improvements that are a result of the projects and stakeholder collaborations.

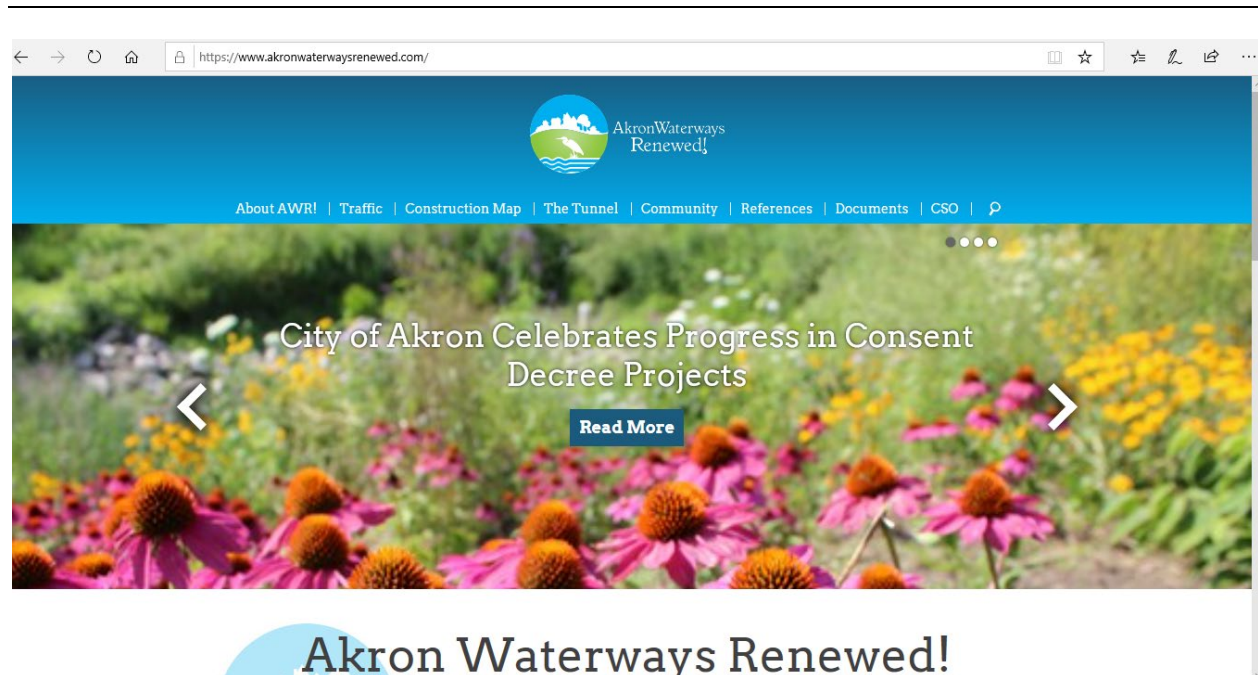


Figure 2-1 Akron Waterways Renewed Home Webpage

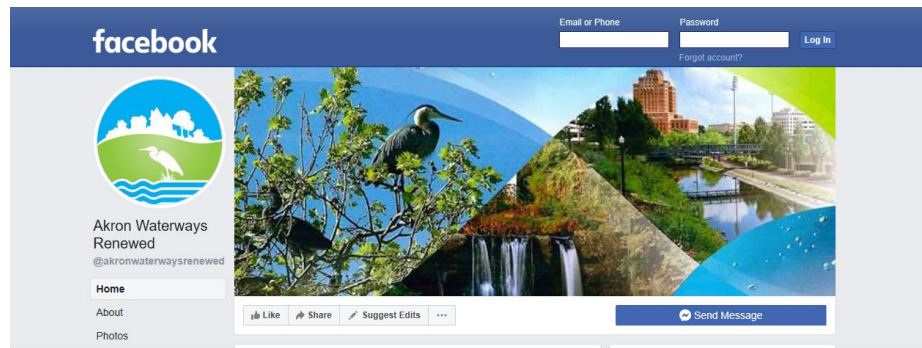


Figure 2-2 Akron Waterways Renewed Facebook Page

Section 3: CMOM, Grease Control, and Emergency Response Programs

3.A *List of all SSO and CSS Releases During Reporting Period*

Appendix D provides a list of SSOs and CSS Releases, including Building/Property Backups, during the reporting period.

3.B *System Inspection*

Table 3-1 provides the number of miles and percent of system inspected during the reporting period.

3.C *Manhole Inspection*

Table 3-2 provides the number and percent of manholes inspected during the reporting period.

3.D *System Cleaning*

The number of miles and percent of system cleaned during the reporting period is provided in Table 3-3.

3.E *List of Defects*

The comprehensive list of defects identified in Akron's system, identifying acute defects, and a schedule to repair the defects (including date repaired if the defect has already been repaired) are included in Appendices E and F.

Table 3-1 System Inspection

	Current Reporting Period		Previous Year		Previous Five Years		Accumulative Totals	
Period	Miles Inspected	Percentage Inspected	Miles Inspected	Percentage Inspected	Miles Inspected	Percentage Inspected	Miles Inspected	Percentage Inspected
July 1, 2019 – December 31, 2019	85.87	10.21*	170.76	20.31*	754.93	89.79*	840.80	100.00*

*Based on 840.8 miles in system

Table 3-2 Manhole Inspection

	Current Reporting Period		Previous Year		Previous Five Years		Accumulative Totals	
Period	Manholes Inspected	Percentage Inspected	Manholes Inspected	Percentage Inspected	Manholes Inspected	Percentage Inspected	Manholes Inspected	Percentage Inspected
July 1, 2019 – December 31, 2019	1652	8.68*	4049	21.28*	17375	91.32*	19027	100.00*

*Based on 19027 manholes in system

Table 3-3 System Cleaning

	Current Reporting Period		Previous Year		Previous Five Years		Accumulative Totals	
Period	Miles Cleaned	Percentage Cleaned	Miles Cleaned	Percentage Cleaned	Miles Cleaned	Percentage Cleaned	Miles Cleaned	Percentage Cleaned
July 1, 2019 – December 31, 2019	85.87	10.21*	170.76	20.31*	754.93	89.79*	840.80	100.00*

*Based on 840.8 miles in system

3.F Maintenance and Training Activities

- A. Pump station and force main preventive maintenance activities were conducted in accordance with Item 2.E of the approved CMOM program.
- B. 1,652 manholes were inspected during the period beginning July 1, 2019 through December 31, 2019, and fifteen were documented to have signs of heavy infiltration. Those that are confirmed to be in need of repairs will be included in a future capital improvement plan.

Table 3-4 Manholes Documented with Heavy Infiltration

Manhole Asset ID	Location
287258	PPN 6730866
289042	SW 7 th St & S Kenmore Alley
289791	PPN 6855743
302715	PPN 6804539
303152	PPN 6832313
307605	PPN 1910452
309667	PPN 6702000
309889	PPN 6843062
309890	PPN 6843062
309942	PPN 6702003
310359	PPN 6714038
311132	PPN 6828528
311258	PPN 6860654
312691	PPN 6763111
768671	PPN 6761681

- C. The following sewer construction and rehabilitation projects were completed or are ongoing within the City of Akron during the reporting period:
- a) Sanitary Sewer Reconstruction 2017 (File 2016-018-00)
To rehabilitate the City's sanitary and combined sewer system, part of the City's annual sewer reconstruction program.
 - b) Hampton Ridge Sanitary Sewer (File 2015-046-01)
Removal of existing Hampton Ridge Pump Station and replacing approximately 1000 l. f. of gravity sanitary sewer.
 - c) Villages at Sycamore Ph. 1 (File 2019-027-00)
This is a new residential development off Akron Peninsula Road. New sanitary and storm sewers along with curb, asphalt and grading.
 - d) Firestone Business Park (File 2017-013-01)
New roadway to serve as extension of Cole Avenue to the west. Improvements will include asphalt pavement, concrete curb, concrete sidewalk, storm and sanitary sewers, water mains, streetlights and other private underground utilities.

- D. Root control program activities were conducted in accordance with Item 2.K of the approved CMOM program. As a component of the Accelerated Cleaning and Inspection Program, the Root List requires more frequent attention than the system wide maintenance activities. The City's approach is to inspect each of these root list locations on a modified schedule, and provide cleaning only when it is determined those pipes are in need of maintenance.
- E. Training activities were conducted on the following topics. Date of training and number of employees receiving training are indicated in Table 3-5.

Table 3-5 Training Activities

Date	Course Title/Description	Number of Employees
7/23/2019	Heat Stress Safety	22
7/25/2019	Green Infrastructure Life Cycle: Performance, Costs and Maintenance	1
8/6/2019	New Employee Training	1
8/8/2019	The Fundamentals of Predictive Maintenance - Finding Problems Before You See Smoke	1
8/26/2019	Confined Space Safety	31
9/10/2019	Fire Extinguisher Safety	32
10/10/2019	Predictive Maintenance Part Two - The Application of Condition Monitoring	1
10/29/2019	Hazard Communication	37
11/19/2019	Cold Weather Safety	31
11/20 & 12/4/2019	ALICE Training	26
11/22/2019	Snow & Ice	18
12/10/2019	IDDE (Illicit Discharge Response)	33

3.G Grease Control Program

In accordance with Grease Control provisions in the approved CMOM program, this program includes inspection and/or cleaning of the known FOG trouble locations, part of the Accelerated Cleaning and Inspection Program, on what was previously called the “Speed Rodder List.”

3.G.1 List of SSO and CSS Releases Caused by Fats, Oils, and Grease (FOG)

There were no SSO/CSO releases caused by FOG during this reporting period.

3.G.2 List of FOG Locations

A complete list of FOG Locations inspected and/or cleaned during the reporting period is included in Appendix G.

As stated in previous Semi-Annual Reports, to optimize the current schedule for the cleaning of locations suspected to have recurring grease accumulation, in 2013, the City began the CCTV inspection of each grease location on or around the next scheduled cleaning cycle to determine if significant grease accumulation has occurred. Based on the findings of the CCTV inspection, the frequency of cleaning at each grease location is adjusted accordingly. With the improvements initiated to control FOG at the source, it is anticipated that scheduled cleaning will be less efficient than periodic inspection, and cleaning only when needed.

3.G.3 FOG Education Efforts Undertaken During Reporting Period

The following educational efforts were undertaken and completed during the reporting period:

- A. The City of Akron developed a website (<https://www.akronohio.gov/>) which includes a FOG page (<https://www.akronohio.gov/cms/site/FOG/index.html>) identifying the effects of fats, oils, and grease discharged into the sewer system and things property owners can do to prevent aforementioned discharges.
- B. Akron Waterways Renewed Team developed a Program website (<http://akronwaterwaysrenewed.com>) which includes a link to the City’s educational FOG brochure, among the topics covered was that of the proper handling of fats, oils, and grease.

3.H Green Infrastructure Performance Reporting

Green Infrastructure Performance Reporting can be found in Appendix H.

Section 4: Mud Run Pump Station

4.A Status of Mud Run Study and Report of Findings

Status of Study and Report of Findings	No activity during this reporting period. The Report of Findings was submitted to USEPA on January 15, 2012.
Date of Report Completion	No activity during this reporting period. Report of Findings submitted on January 15, 2012, per the Consent Decree.
Project Cost Incurred During Reporting Period	Report complete. No costs incurred during the reporting period.

4.B Status of Mud Run Pump Station Remedial Report

Status of Remedial Report	The Remedial Report is complete.
Date of Report Completion	The Remedial Report was completed on October 15, 2012. Additional comments were received after completion and were included in the revised Remedial Report submitted on August 13, 2013. Final written approval dated February 26, 2014 was received via email on March 3, 2014.
Project Cost Incurred During Reporting Period	Report complete. No costs incurred during the reporting period.

4.C Status of Mud Run Pump Station Design and Construction of Projects

Projects Status	Table 4-1 shows the current status of the Mud Run Pump Station design projects. Table 4-2 shows the current status of the Mud Run Pump Station construction projects.
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**Table 4-1 Status of Mud Run Pump Station
Design Projects**

Project	Status
Mud Run Trunk Sewer Lining	Design complete
Sevilla Trunk Sewer Reconstruction	Design complete
Mud Run Pump Station Improvements	Design complete
Mud Run Storage Basin Improvements	Design complete
Mud Run District Capacity Improvements	Design complete
Mud Run District Infiltration/Inflow Improvements	Design complete

**Table 4-2 Status of Mud Run Pump Station
Construction Projects**

Project	Status
Mud Run Trunk Sewer Lining	Construction is 100% complete
Sevilla Trunk Sewer Reconstruction	Construction began April 16, 2019
Mud Run Pump Station and Storage Basin Improvements***	Construction is 100% complete
Mud Run District Capacity Improvements***	Construction is 100% complete
Mud Run District I/I Repairs	Construction is 100% complete
Mud Run District I/I Rehabilitation	Construction is 100% complete
NOTE: *** projects indicate those required for CD compliance.	

Construction of the Mud Run Pump Station and Storage Basin is complete.

Mud Run District I/I Repairs is complete.

Mud Run District I/I Rehabilitation is complete.

The Mud Run District Capacity Improvements project is complete.

**Anticipated Date
of Report
Completion**

The Report of Findings was completed on January 15, 2012. The Remedial Report was submitted on August 13, 2013. Approval of the Remedial Report was issued on February 26, 2014. On October 31, 2014, a letter was issued by USEPA that agrees to extend the October 15, 2015 construction deadline set forth in paragraph 25 of the Consent Decree to January 8, 2016 in order to construct and achieve full operation of the projects approved under the Mud Run Pump Station Remedial Report. The projects marked with *** will require an Achievement of Full Operation date of January 8, 2016 to be in compliance with the Consent Decree. The other projects are not required to be completed by January 8, 2016 since the anticipated I/I reductions were not used in determining the required storage basin capacity to meet the Consent Decree requirements.

**Project Cost
Incurred During
Reporting Period**

Mud Run District Capacity Improvements - \$0.00
Mud Run Pump Station & Storage Basin - \$1,788.13
Mud Run District I/I Repairs - \$0.00
Mud Run District I/I Rehabilitation - \$0.00
Sevilla Trunk Sewer Reconstruction - \$85,133.31

Section 5: Supplemental Environmental Project

The City's third and final payment to the Supplemental Environmental Project (SEP) escrow account was made during the January – July 2011 reporting period. At the request of the State of Ohio, the City transferred the funds in the SEP escrow account (\$905,972.49) to the Friends of the Crooked River, via wire transfer. The wire transfer occurred on October 13, 2017, and the State of Ohio was provided with confirmation of the wire transfer. The City is not required to do anything further regarding the SEP.

Section 6: Other Necessary Information

On October 31, 2014, U.S. EPA and Ohio EPA approved the City's request to remove certain manholes and sewer segments from the City's CMOM inspection and cleaning program. The list included three sewer segments that are tributary to the Ohio Canal Interceptor, and were scheduled to be abandoned at the time that the OCIT becomes operational. (Subsequent to receiving the October 31, 2014, letter, the City renumbered segment ID 367480 to 755830.) Page 3 of the letter includes the following provision related to the three specific sewer segments that are tributary to the Ohio Canal Interceptor:

If the City chooses not to abandon or eliminate these sewers by December 31, 2018, you must notify EPA and OEPA of this decision in writing, and you will have to inspect, clean, provide a conditional assessment and correct deficiencies in compliance with Attachment C, Section 2 of the CD no later than April 30, 2019.

The City is unable to abandon these segments until the OCIT project has been completed and the tunnel is operational. The City submitted its original request to remove these segments from the CMOM inspection and cleaning cycle because these segments carry high velocity flows that prevent the City from inspecting and cleaning the segments. Due to the high velocity flows, it is believed that these sewer segments are self-cleaning.

The City fully intends to abandon at least two of these segments at the time the OCIT tunnel comes operational. It is possible that the City may determine not to abandon Segment 368243. If the City decides not to abandon this segment, it will notify both U.S. EPA and Ohio EPA of this decision, and the City will also inspect and, to the extent necessary, clean this segment within four months of the date that the OCIT becomes operational. Notably, after the OCIT becomes operational, this segment will no longer be transporting high velocity flows and, therefore, the City will no longer be prevented from inspecting and cleaning this segment.