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DANIEL HARRIGAN, MAYOR

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February 15, 2019

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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. 18, February 15, 2019 (July 1, 2018-Dec. 31, 2018)

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.


John O. Moore
Service Director

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

JOM:PDG:pt

Attachment


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

City of Akron
Consent Decree
Semi-Annual Report No. 18
July 1, 2018 – December 31, 2018

February 15, 2019



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DANIEL HARRIGAN, MAYOR

City of Akron
Consent Decree
Semi-Annual Report No. 18
July 1, 2018 – December 31, 2018

February 15, 2019



Department of Public Service
Akron Engineering Bureau
Environmental Division

Semi-Annual Report No. 18
July 1, 2018 – December 31, 2018

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APPENDICIES

- A. EPA Correspondence
- B. Listing of all CSO Discharges
- C. Public Participation
- D. SSOs, CSS Releases, Building/Property Backups
- E. List of Defects
- F. List of Defects – Acute Only
- G. FOG Trouble Spots Cleaned/Inspected
- H. Green Infrastructure Performance Reporting

List of Abbreviations and Acronyms

AFP	Advanced Facilities Plan
CAG	Community Action Group
CCTV	Closed-Circuit Television
CD	Consent Decree
CIPP	Cured in Place Process
CMOM	Capacity, Management, Operations, and Maintenance
CSO	Combined Sewer Overflow
CSS	Combined Sewer Systems
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
IP	Integrated Plan
IPF	Integrated Planning Framework
IPS	Integrated Plan Stakeholders
LCI	Little Cuyahoga Interceptor
LF	Lineal 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
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
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
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 is 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.

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 \$617,160.51 (City of Akron \$48,415.26, H.R. Gray \$107,101.23, Kenmore Construction \$461,644.02),

1.C.4 Rack 13 Separation Project

Activities Undertaken During Reporting Period Work on this project is substantially complete. This project is now in the warranty period.

Status of Construction Construction is complete.

Date of Anticipated Completion Achievement of Full Operation occurred on October 14, 2016. Construction completed November 13, 2016.

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

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.

Status of Construction Construction is substantially complete.

Date of Anticipated Completion Achievement of Full Operation occurred on November 9, 2017. Construction on Rack 30 was substantially complete November 13, 2017.

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

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 a First Amendment to Consent Decree. Those modifications, along with pending proposed modifications, are discussed below.

The City received modification approval letters under Exhibit 3 of the LTCP for the following green infrastructure 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.

On June 5, 2018, the United States lodged the Second Amendment to the Consent Decree with the Court. After the conclusion of the public notice and comment period, the United States filed an Unopposed Motion to Enter the Second Amendment to Consent Decree on October 10, 2018. The City filed a Memorandum in Support on October 12, 2018. The motion is pending before the Court. The Second Amendment to the Consent Decree provides for two additional modifications of the LTCP Update that were proposed by the City. The first proposed modification will replace the requirement for the BioACTIFLO facility in LTCP Update Row 18 with a BioCEPT facility and a demonstration study. The second proposed modification: (i) replaces the storage basins required in LTCP Update Rows 1, 8 and 9 with upsized underflow

drains and pipes and two green infrastructure projects: and (ii) increases the size of the storage basin required in Row 3.

The City also 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.

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 an amendment was filed September 20, 2016. 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 each of the controls listed in the LTCP Update.

**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	<i>Storage Basin(s) (Green infrastructure plus upsized underflow received case team approval)</i>	<i>Bidding of Control Measure – June 30, 2018. Achievement of Full Operation – November 30, 2020.</i>	<i>Kelly Conveyance (CSO Rack 3), the upsized underflow, was awarded to a contractor. Chittenden Green Project (CSO Rack 3), one of the green infrastructure sites, was awarded to a contractor.</i>	<i>Project costs incurred during the reporting period were approximately \$155,888.37.</i>
2	Rack 5 and 7	Green Infrastructure and Sewer Separation (Per Exhibit 3)	Bidding of Control Measure – October 31, 2015. Achievement of Full Operation – October 31, 2017.	Construction Notice to Proceed was issued on June 21, 2016. The plan for Green Maintenance is being finalized. Achievement of Full Operation occurred on October 26, 2017. Sub-final punch list is complete.	Project costs incurred during the reporting period were approximately \$2,020,000.00.
3	Racks 10 and 11	<i>Storage Basin(s)</i>	<i>Bidding of Control Measure – June 30, 2018. Achievement of Full Operation – December 31, 2020.</i>	<i>A construction manager at risk contract was awarded. Plans were finalized. Building demolition and site preparation began.</i>	<i>Project costs incurred during the reporting period were approximately \$530,758.16.</i>
4	Rack 12	Storage Basin(s)	Bidding of Control Measure – November 30, 2014. Achievement of Full Operation – October 31, 2017.	Construction Notice to Proceed was issued on May 29, 2015. Achievement of Full Operation occurred on October 30, 2017. Construction continues on remaining punch list items.	No costs were incurred during the reporting period.
5	Rack 14	Storage Basin(s)	Bidding of Control Measure – October 31, 2014.	Project complete. All warranty work is complete. Final Pay Application is being	No costs were incurred during the reporting

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
			Achievement of Full Operation – April 30, 2017.	compiled. Final Change Order was submitted and approved for \$64,489.56 for a final construction cost of \$15,622,895.05. Final Project Manager disbursement is needed for loan close out.	period.
6	Rack 15	Storage Basin(s)	Bidding of Control Measure – November 30, 2013. Achievement of Full Operation – October 31, 2015.	Project complete. Final pay application was processed and loan was closed.	No costs were incurred during the reporting period.
7	Rack 22	Storage Basin(s)	Bidding of Control Measure – October 31, 2015. Achievement of Full Operation – December 31, 2017.	Project is complete. Achievement of Full Operation occurred on November 29, 2017. Construction was substantially complete as of November 13, 2017.	Project costs incurred during the reporting period were approximately \$11,225.93.
8	Rack 26 and 28	Storage Basin(s) (received general agreement for IP alternative)	Bidding of Control Measure – October 31, 2021. Achievement of Full Operation – December 31, 2022.	Construction was completed for one aspect of the IP alternative, called Aqueduct Green Street Improvements.	Project costs incurred during the reporting period were approximately \$633,898.39.
9	Rack 27 and 29	Storage Basin(s) (received case team approval for IP alternative)	Bidding of Control Measure – January 31, 2018. Achievement of Full Operation – December 31, 2019.	Final design for the project has progressed to 100%. The GMP has been finalized and accepted. The project started construction on November 5, 2018.	Project costs incurred during the reporting period were approximately \$420,622.17.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
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 – August 16, 2017.</p>	<p>Project is in the warranty period. The plan for Green Maintenance is being finalized.</p> <p>Achievement of Full Operation occurred on August 16, 2017.</p> <p>Construction was substantially complete as of September 15, 2017.</p> <p>Final punch list work is completed.</p>	No costs were incurred during the 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.	<p>Bidding of Control Measure – April 30, 2014.</p> <p>Achievement of Full Operation – December 31, 2018.</p>	<p>Notice to Proceed was issued on November 6, 2015.</p> <p>Construction is ongoing.</p> <p>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.</p>	Project costs incurred during the reporting period were approximately \$38,769,279.18.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
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.
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 advanced facilities planning for the Integrated Plan projects is ongoing. The two IP projects are known as Gorge Sewer Separation (CSO Rack 34 and 35) and Northside Interceptor Conveyance.	Project costs incurred during the reporting period were approximately – Gorge Sewer Separation: \$8,525.13. Northside Interceptor Conveyance: \$233,555.50.
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 completed (see Section 1.A of this Semi-Annual Report).	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During 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.
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.	Pilot Study Start Date – May 1, 2012. Pilot Study Completion Date – November 30, 2013. Pilot Study Report submitted to EPA by December 31, 2013.	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.	Bidding of Control Measure – February 28, 2019. Achievement of Full Operation – December 31, 2021.	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.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During 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.	Bidding of Control Measure – April 30, 2017. Achievement of Full Operation – April 30, 2019.	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.
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 ongoing. The 30-day Operational Demonstration is underway. 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 \$8,233,519.09.

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 BioACTIFLO™ ballasted flocculation to achieve the minimum capacity specified in Alternative Plan A approved by USEPA. In addition, all flows receiving BioACTIFLO™ shall receive disinfection.	Bidding of Control Measure – February 28, 2019. Achievement of Full Operation – December 31, 2021.	<p>BioACTIFLO™ ballasted flocculation to achieve a minimum sustained capacity of 60 MGD.</p> <p>Final design has advanced to 100%. Project will advertise for bids in the next reporting period.</p> <p>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.</p> <p>The Second Amendment to the Consent Decree, which has been lodged with the Court, proposes to replace the BioACTIFLO facility with a BioCEPT facility and an additional demonstration study.</p>	Project costs incurred during the reporting period were approximately \$2,974,463.04.
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.	Achievement of Full Operation occurred on November 22, 2016. Construction is complete.	Project costs incurred during the reporting period were approximately \$2,215.00 (in-house).
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	Completion of engineering evaluation: May 30, 2017 Completion of placement of additional soil: November 30, 2017	Engineering evaluation completed and submitted to EPA on May 22, 2017. Achievement of Full Operation for the Soil Cap occurred on November 15, 2017.	No costs were incurred during the reporting period.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
		ensure structural integrity such that the improved portion of the enclosed conduit of the MOI withstands at least 5 feet of surcharge.			
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.

Text that appears in italics is for the projects that are subject to the Second Modification to Consent Decree, which is pending before the Court.

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 and program management of \$2,054,412.84 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 January 1, 2018 through December 31, 2018 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, respectfully. Racks 30 and 31 have been consolidated with Rack 40 into the Cuyahoga Street Storage Facility. Rack 38 is a diversion chamber that routes flow within the combined sewer system. Rack 30 was separated on November 9, 2017.

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:

- There was no Stakeholders group meeting during this reporting period, but Stakeholders were kept abreast of information via newsletter and email.

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

- Hosted rain barrel class for Ward 1 (July 2018)
- Hosted three public trolley tours (July 2018)
- Hosted a private trolley tour for NEFCO (July 2018)
- Interview with WKSU (July 2018)
- Rain barrel training for Summit Metro Parks (July 2018)
- Public rain barrel training (July 2018)
- Rain barrel training for Ward 8 (July 2018)
- Rib White and Blue Fest – ECO (July 2018)

- Children's Day at Lock 3 – ECO (July 2018)
- Soap Box Derby Parade/Day – ECO (July 2018)
- United Way Day – ECO (July 2018)
- Hosted two public trolley tours (August 2018)
- Hosted private trolley tour for OHM Advisors (August 2018)
- Hosted private trolley tour for University of Akron Honors College (August 2018)
- Rain barrel training for Ward 6 (August 2018)
- Break through event for Rosie the TBM at Lock 3 (1,000 attendees) (August 2018)
- All Akron Student Engineering Program Awards Luncheon (August 2018)
- RubberDucks birthday bash – ECO (August 2018)
- Ohio Water Environmental Association Award awarded to Public Image team (August 2018)
- Private tour of the Ohio Canal Interceptor Tunnel (August 2018)
- Hosted two public trolley tours (September 2018)
- Hosted private trolley tours for Leadership Akron (September 2018)
- Hosted private trolley tour for Mayor's Citizen's Academy (September 2018)
- Pictures in the Ohio Canal Interceptor Tunnel site 3 shaft (September 2018)
- Northeast Ohio Regional Sewer District Open House (September 2018)
- Public speaker for the NEXT Parks and Environment Day (September 2018)
- Akron Marathon Kids Fun Run – ECO (September 2018)
- Rain barrel class for Ward 7 (September 2018)
- Hosted one public trolley tour (October 2018)
- Hosted private trolley tour for Junior Leadership Akron (October 2018)
- Hosted private trolley tour for Air Force Base personnel (October 2018)
- University of Akron Field Day – ECO (October 2018)
- Launched public Combined Sewer Overflow Site (October 2018)
- Hosted one public trolley tour (November 2018)
- Hosted a private trolley tour for STEM High School (November 2018)
- City of Akron Christmas Parade – ECO (November 2018)
- Council Award Ceremony recognition for OWEA Public Image Award (November 2018)
- Hosted one public trolley tour (December 2018)
- Hosted the All Akron Student Engineering Program Winter STEM Fest (December 2018)
- Attended the DAP Quarterly Northside District Meeting (December 2018)
- Released numerous press releases and news stories (July – December)

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.

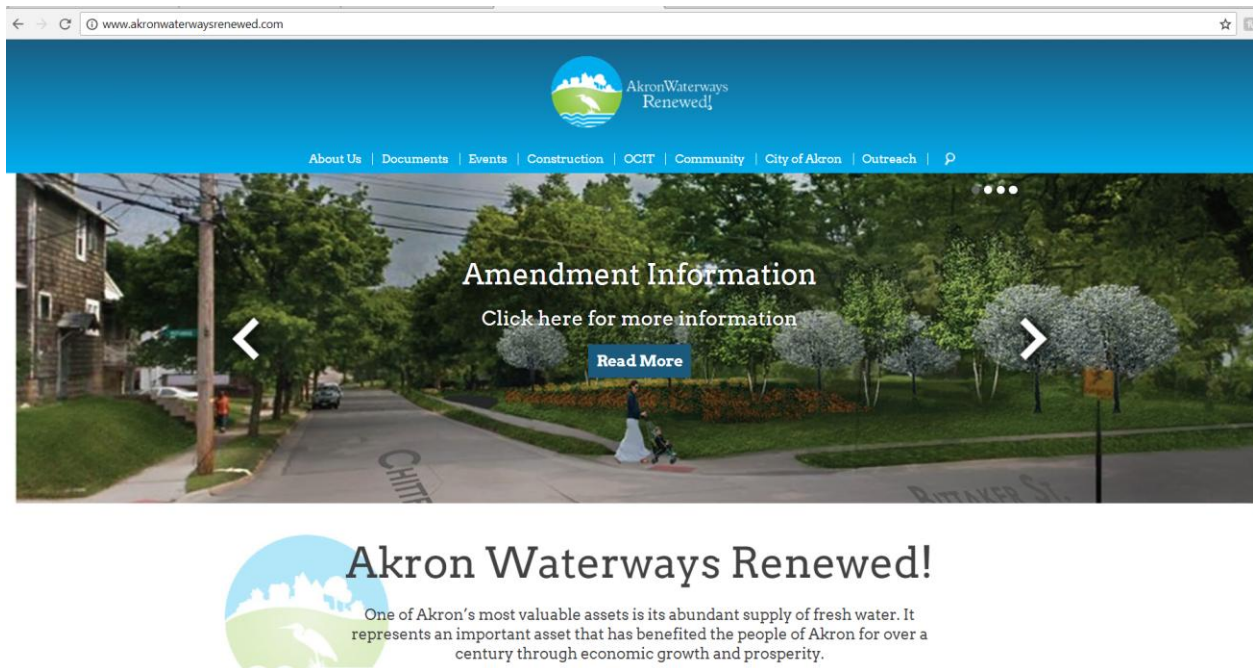


Figure 2-1 Akron Waterways Renewed Home Webpage



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 – December 31, 2018	118.4	14.1*	175.6	20.9*	584.2	69.5*	702.6	83.6*

*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 – December 31, 2018	1110	5.8 [‡]	3646	19.2 [‡]	13326	70.0 [‡]	14436	75.9 [‡]

[‡]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 – December 31, 2018	118.4	14.1*	175.6	20.9*	584.2	69.5*	702.6	83.6*

*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. 1,110 manholes were inspected during the period beginning July 1, 2018 through December 31, 2018, and one was 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
303599	PPN 6861228

- 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 2016 (File 2015-048-00)
To rehabilitate the City's sanitary and combined sewer system, part of the City's annual sewer reconstruction program.
 - b) 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.
 - c) Forest Edge Et Al Paving (File 2008-031-00)
Roadway improvements including full depth pavement reconstruction and miscellaneous storm and sanitary sewer reconstruction.
 - d) Hazel Storage Basin (CSO Racks 10 & 11) (File 2015-032-00)
This project consists of constructing a 4.5 million gallon storage basin with associated instrumentation, controls and ops building. Three new diversion structures will convey design flows to the basin. Lining nearly 4,000 feet of existing combined sewers.
- D. Root control program activities were conducted in accordance with Item 2.K of the approved CMOM program. The Root List, part of the overall Trouble Spot 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
8/23/2018	Using Wastewater Treatment Simulators for Improving Operations	1
8/28-31, 9/2/2018	Bloodborne Pathogens	31
9/11/2018	Uncovering a Systematic Approach to Sewer	2
9/19-20/2018	SORNP Training	44
9/25-29/2018	Fire Extinguisher	40
9/26/2018	Common Occupational Health & Safety Pitfalls in the Utilities Sector	1
10/15-17/2018	Silica Safety	31
11/8/2018	Cost-Effective Nutrient Removal Options for Small Systems	1
11/15/2018	Resource Recovery from Biosolids – Phosphorus and Energy	1
11/17/2018	Cold Weather Safety	34
11/21/2018	Snow Plow/Bobcat Training	8
11/27/2018	Trenching and Excavation	11
11/27/2018	PFAS, Wastewater, and Biosolids Management	1
12/4-5/2018	IDDE (Illicit Discharge Response)	40

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 trouble spots 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)

Table 3-6 Releases Caused by Fats, Oils and Grease

Date	Location	Type of Release (SSO, Rack, Property Backup)	Add to FOG Trouble Spot List
11/8/2018	252 Pioneer	Property backup	Yes
11/10/2018	562 Elko	Property backup	Yes

3.G.2 List of FOG Trouble Spots

A complete list of FOG Trouble Spots 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 begins March 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 - \$0.00
Mud Run District I/I Repairs - \$0.00
Mud Run District I/I Rehabilitation - \$0.00

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.