JOHN O. MOORE Service Director



CHRIS D. LUDLE Deputy Director

DANIEL HORRIGAN, MAYOR

DEPARTMENT OF PUBLIC SERVICE

166 S. High St., Room 201 Akron, OH 44308-1657 www.akronohio.gov

August 15, 2018

Chief, Environmental Enforcement Section US Department of Justice DOJ No. 90-5-1-1-3144/2 950 Pennsylvania Avenue, NW PO Box 7611 Washington, DC 20530-0001

Chief, Water Enforcement and Compliance Assurance Branch (WC-15J) US Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, IL 60604

Director, Water Division (WD-15J) US Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, IL 60604

Regional Counsel (C-14J) US Environmental Protection Agency, Region 5 77 West Jackson Boulevard Chicago, IL 60604

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

Chief, Environmental Enforcement Section . Ohio Attorney General 30 East Broad Street, 25th Floor Columbus, OH 43215-3400

Erin Sherer Manager, Permits Ohio EPA – DSW 50 West Town Street, Suite 700 PO Box 1049 Columbus, OH 43216-1049

Dean Stoll, P.E. Unit Supervisor, Compliance & Enforcement Division of Surface Water Ohio EPA Northeast District Office 2110 East Aurora Road Twinsburg, OH 44087

SUBMISSION: Akron shall submit a <u>Semi-Annual Report</u> to the U.S. EPA and OEPA on August 15, 2010 and every six (6) months thereafter until termination of this Consent Decree: <u>Report No. 17, August 15, 2018</u> (January 1, 2018-June 30, 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. 17 January 1, 2018 – June 30, 2018

August 15, 2018

Patrick D. Gsellman, PE AWR Program Manager

James Andrew Hewitt, PE Akron City Engineer

Genny Hanna, PE Acting Environmental Division Manager

an Michesser

Brian M. Gresser, PE Water Reclamation Manager

Document prepared by: G. Stephens, Inc. 133 N. Summit St. Akron, OH 44304



City of Akron

Consent Decree Semi-Annual Report No. 17 January 1, 2018 – June 30, 2018

August 15, 2018





Department of Public Service Akron Engineering Bureau Environmental Division

Semi-Annual Report No. 17 January 1, 2018 – June 30, 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

List of Abbreviations and Acronyms

Advanced Facilities Plan Community Action Group Closed-Circuit Television Consent Decree Cured in Place Process	
Closed-Circuit Television Consent Decree	
Consent Decree	
Capacity, Management, Operations, and Maintenance	
Capacity, Management, Operations, and Maintenance	
Combined Sewer Systems	
Environmental Protection Agency	
Fats, Oils and Grease	
Food Service Establishments	
Green Infrastructure	
Geographic Information System	
Heating, Ventilation, and Air Conditioning	
Identification	
Integrated Plan	
Integrated Planning Framework	
Integrated Plan Stakeholders	
Little Cuyahoga Interceptor	
Lineal Feet	
Long Term Control Plan	
Milligrams per Liter	
Million Gallons per Day	
Manhole	
Mixed Liquor Suspended Solids	
Main Outfall Interceptor	
National Association of Sewer Service Companies	
No Feasible Alternative	
Number	
Notice of Intent	
Notice To Proceed	
Ohio Canal Interceptor	
Ohio Canal Interceptor Tunnel	
Ohio Historic Preservation Office	
Occupational Safety and Health Administration	
Preliminary Engineering Report	
Permit to Install	
Quality Assurance Project Plan	
Return Activated Sludge	
Root Cause Analysis	
Remote Input/Output	
Summit County Public Health Department	
Supplemental Environmental Project	
Standard Operating Procedure	
Sewer Overflow and Response Notification Plan	

List of Abbreviations and Acronyms

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	Project costs incurred during the reporting period were approximately \$394.00.		

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	No project costs were incurred during the reporting period.
Incurred During	
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 substantially complete.
Date of Anticipated Completion	Achievement of Full Operation occurred on October 14, 2016. Construction completed November 13, 2016.

Project Cost	No project costs were incurred during the reporting period.
Incurred During	
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.		
Status ofConstruction is substantially complete.Construction			
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	Project costs incurred during the reporting period were approximately \$583,342.41.		

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.

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

Table 2-1 Status of Document Preparation

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 parties then filed motions with the Court requesting an amendment to the Consent Decree to (1) change the sequencing of the WPCS Phase 2 projects and (2) replace the MOI parallel relief sewer project with the MOI capping project. The Court approved the parties' request, and entered the First Amendment to the Consent Decree on September 20, 2016. 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 United States recently lodged the Second Amendment to the Consent Decree with 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 has also proposed to modify the requirement for the EHRT unit in LTCP Update Row 11.a., as well as to replace the NSI tunnel in Row 12 with an alternative set of controls. However, the City has 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 PeriodFor 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	Storage Basin(s) (Green infrastructure plus upsized underflow received case team approval)	Bidding of Control Measure – June 30, 2018. Achievement of Full Operation – November 30, 2020.	Plans for Kelly Conveyance (CSO Rack 3), the upsized underflow, were finalized and advertised to bidders on June 23, 2018. Bids were received July 18, 2018. Plans for Chittenden Green Project (CSO Rack 3), one of the green infrastructure sites, were finalized and advertised to bidders on June 23, 2018. Bids were received on July 19, 2108.	Project costs incurred during the reporting period were approximately \$614,237.12.
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. Construction continues on remaining punch list items.	Project costs incurred during the reporting period were approximately \$635,006.61.
3	Racks 10 and 11	Storage Basin(s)	Bidding of Control Measure – June 30, 2018. Achievement of Full Operation – December 31, 2020.	Final design advanced to 90%. A Request for Proposals and Qualifications was advertised on June 28, 2018.	Project costs incurred during the reporting period were approximately \$1,077,459.49.
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.	Project costs incurred during the reporting period were approximately \$98,981.36.

Row #	Control Measure Location	Description	Critical Milestones	Progress During Reporting Period	Costs Incurred During Reporting Period
5	Rack 14 Storage Basin(s) Bidding of Control Measure – October 31, 2014. Achievement of Full Operation – April 30, 2017. Achievement of Full Operation – April 30, 2017.		Project complete. All warranty work is complete. Final Pay Application is being compiled. Final Change Order was submitted and approved for \$64,489.56 for a final construction cost of \$15,622,895.05.	Project costs incurred during the reporting period were approximately \$64,489.56.	
6	Rack 15	Storage Basin(s)	Bidding of Control Measure – November 30, 2013. Achievement of Full Operation – October 31, 2015.	dding of Control Measure – Project complete. Final pay application was processed and loan was closed. No chievement of Full Operation October 31, 2015. Project complete. Final pay application was processed and loan was closed. No	
7	Rack 22	Bidding of Control Measure – October 31, 2015.		Project is in the warranty period. 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 \$917,079.88.
8	Rack 26 and 28	Storage Basin(s) (received general agreement for IP alternative)	October 31, 2021.Construction continues for one aspect of the IP alternative, called Aqueduct Green Street Improvements.		Project costs incurred during the reporting period were approximately \$2,693,466.86.
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 advanced to 60%. Thomarios has been selected as the CMAR for the project.	Project costs incurred during the reporting period were approximately \$620,056.13.

Row #	Control Measure Location	Description	Critical Milestones	Critical Milestones Progress During Reporting Period	
10	Rack 36	Green Infrastructure and Sewer Separation (Per Exhibit 3)	Bidding of Control Measure – October 31, 2015. Achievement of Full Operation – August 16, 2017.	Project is in the warranty period. The plan for Green Maintenance is being finalized. Achievement of Full Operation occurred on August 16, 2017. Construction was substantially complete as of September 15, 2017.	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.	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 monthly updates on the status of the schedule of the project.	Project costs incurred during the reporting period were approximately \$26,682,451.43.

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 during this period 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: \$122,590.84. Northside Interceptor Conveyance: \$304,070.01.
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).	Project costs incurred during the reporting period were approximately \$394.00.

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 TM 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 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 \$5,726,744.00.

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.	 BioACTIFLO[™] ballasted flocculation to achieve a minimum sustained capacity of 60 MGD. Final design has advanced to 60%. 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 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. 	Project costs incurred during the reporting period were approximately \$320,482.58.
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) Co	llection Syste	em 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 substantially complete.	Project costs incurred during the reporting period were approximately \$91,531.00.
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 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 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.

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 \$1,198,603.76 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 June 30, 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:

• AWR! Stakeholders Group (June 20, 2018)

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

- Hosted a private trolley tour for the Ohio EPA (January 2018)
- Hosted a Professional Services Policy and Procedure Update (January 2018)
- Hosted a B2GNow training for administrators (January 2018)
- Participated in GAMES Conference (February 2018)
- Hosted B2GNow training for City employees and consultants (February 2018)
- Held a trolley tour for the University of Akron (February 2018)
- ECO and staff participated in the Metro Parks great blue heron viewing day (February 2018)
- Live Streamed Mayor's State of the City Address (February 2018)

- Attended the Goodyear STEM Fest (February 2018)
- Attended and participated in Ward 5 meeting (March 2018)
- Hosted public trolley tours (March 2018)
- o Held an outreach event for subcontractors (March 2018)
- Hosted a trolley tour for Kent State University (April 2018)
- Attended the Bridgestone Earth Day event (April 2018)
- Staff and ECO attended the Akron Zoo's Party for the Planet (April 2018)
- Executed a radio interview with WAKR (April 2018)
- Attended Keep Akron Beautiful's Birthday Bash (April 2018)
- Participated in a kayak race on the Cuyahoga River (April 2018)
- Hosted the AASEP Spring STEM Fest (April 2018)
- Public trolley tours (April 2018)
- Attended the RubberDucks game with ECO to promote Blue Heron Homecoming (May 2018)
- Held 4th Annual Blue Heron Homecoming (May 2018)
- Held special trolley tour for NEOMED School (May 2018)
- Held special trolley tour for GAMES (May 2018)
- Held special trolley tour for Rosie "Super Fan" (May 2018)
- Hosted two public rain barrel classes/giveaways (May 2018)
- Hosted Vocational Services Program graduation (May 2018)
- Coordinated a tour at Robbins Company for Rosie "Super Fan" (May 2018)
- Held trolley tours for the public (May 2018)
- Hosted trolley tours for the public (June 2018)
- Hosted private trolley tours for CSI (June 2018)
- Hosted a private trolley tour for the Akron Area Physics Club (June 2018)
- Hosted a trolley tour for CVNP Summer Camp (June 2018)
- Hosted a trolley tour for the Women in Engineering Summer Camp (June 2018)
- Attended a Great Streets event with ECO (June 2018)
- o WKSU Interview (June 2018)
- Spoke to the Medina Kids Summer Camp (June 2018)
- Hosted three rain barrel classes and giveaways (June 2018)
- Released numerous press releases and news stories (January June)

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 (<u>www.akronwaterwaysrenewed.com</u>). 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 <u>www.facebook.com/akronwaterwaysrenewed</u>. 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.



Akron Waterways Renewed! One of Akron's most valuable assets is its abundant supply of fresh water. It represents an important asset that has benefited the people of Akron for over a century through economic growth and prosperity.

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	
January 1 – June 30, 2018 (1 st half of Year 4 of 5)	75.2	8.9*	137.6	16.3*	508.9	60.4*	584.2	69.3*	

Table 3-1 System Inspection

*Based on 842.7 miles in system

Table 3-2 Manhole Inspection

	Current Rep	orting 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
January 1 – June 30, 2018 (1 st half of Year 4 of 5)	2844	14.9 [‡]	2135	11.2 [‡]	10482	55.1 [‡]	13326	70.0 [‡]

^{*}Based on 19033 manholes in system

Table 3-3 System Cleaning

	Current Rep	orting Period	Previo	ous Year	Previous	Five Years	Accumula	ative Totals
Period	Miles Cleaned	Percentage Cleaned	Miles Cleaned	Percentage Cleaned	Miles Cleaned	Percentage Cleaned	Miles Cleaned	Percentage Cleaned
January 1 – June 30, 2018 (1 st half of Year 4 of 5)	75.2	8.9*	137.6	16.3*	508.9	60.4*	584.2	69.3*

*Based on 842.7 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. 2844 manholes were inspected during the period beginning January 1 through June 30, 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	
302420	PPN 6703936	

- 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.

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- b) White Pond Pump Station (File 2014-013-01) Pump station rehabilitation as a result of existing equipment reaching the end of its useful life.
- c) White Pond Parkway Sewer Extension (File 2015-049-00) Extend and reconstruct the existing sanitary sewer system to serve the proposed development on White Pond Parkway.
- Aqueduct Street Green Improvements (File 2015 -003-00) Included in this street improvement project is the rehabilitation, both spot repairs and lining via cured-in-place pipe (CIPP) of existing 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.

Date	Course Title/Description	Number of Employees
1/23-27/2018	Rigging	42
2/27-28/2018	Emergency Planning	31
4/24-28, 5/1/2018	Hazard Communication	38
5/29/2018	National Stand Down for Falls	28
6/7/2018	CPR & AED Awareness Training	26

Table 3-5 Training Activities

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 Gre	ease (FOG)
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Date	Location	Type of Release (SSO, Rack, Property Backup)	Add to FOG Trouble Spot List
1/21/18	70 E Ralston	Property backup	Yes
4/26/18	1417 Copley Meadows	Property backup	Yes

Table 3-6 Releases Caused	by Fats, Oils and Grease
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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 effort was undertaken and completed during the reporting period:

- A. Akron Waterways Renewed Team developed a Program Website (<u>http://akronwaterwaysrenewed.com</u>) 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.
- B. An educational brochure was included in the April utility bill describing ways to prevent blockages and overflows caused by fats, oils, and grease.
- C. On May 5, 2018, the City of Akron distributed educational information on the proper disposal of fats, oils, and grease (FOG) to visitors of the Blue Heron Homecoming, an environmental festival and open house. The event allowed visitors to tour the Akron Water Reclamation Facility and learn about the local eco system. The event celebrated the accomplishments of Akron's wastewater treatment plant and the flock of blue herons that for more than a decade has turned the City property into a rookery a breeding place for heron families. In addition, the City of Akron displayed equipment used to clean the City's sewer system.

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.

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

Project	Status		
Mud Run Trunk Sewer Lining	Construction is 100%		
	complete		
Sevilla Trunk Sewer Reconstruction	Construction begins		
	Summer 2018		
Mud Run Pump Station and Storage Basin	Construction is 100%		
Improvements***	complete		
Mud Run District Capacity	Construction is 100%		
Improvements***	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.			

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

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 The Report of Findings was completed on January 15, 2012. The of Report Remedial Report was submitted on August 13, 2013. Approval of the Completion 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	Mud Run District Capacity Improvements - \$0.00
Incurred During	Mud Run Pump Station & Storage Basin - \$636,953.51
Reporting Period	Mud Run District I/I Repairs - \$1,293,071.42
	Mud Run District I/I Rehabilitation - \$288,327.26

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

Not applicable