



PUBLIC WORKS DEPARTMENT

CITY OF PORTSMOUTH

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Portsmouth N.H. 03801

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August 29, 2017

Mark Pollins
Director of Water Enforcement
USEPA
OECA
1200 Pennsylvania Ave NW
MAIL CODE 2246A
Washington, DC 20460

Re: Consent Decree 09-cv-283-PB
Monthly Report on Compliance for July 2017
City of Portsmouth, New Hampshire

Dear Mr. Pollins:

In accordance with Consent Decree 09-cv-283-PB, Section V, item paragraph 20, dated August 12, 2009 and as amended by Consent Decree Modification filed July 2, 2012 and approved by the Court on February 15, 2013 and as amended by Consent Decree Second Modification, Section III, item paragraph 6, filed on April 1, 2016 and approved by the Court on September 28, 2016, the City of Portsmouth is submitting this monthly report on compliance.

The Consent Decree Second Modification requires the filing of monthly reports as follows:

Within 30 days after the end of each month, the City shall submit a written report to EPA, the State, and CLF for the preceding month that shall include a description or reporting of the following: i) status of required construction, including major work items completed in the preceding month; ii) projected work items to be undertaken in the next month; iii) project percent complete based on payments to Contractor for work completed; iv) project percent complete based on time elapsed; v) status of all required permit applications; vi) status of Consent Decree milestones including identifying any problems encountered or anticipated, together with the proposed or implemented solutions; and vii) the monthly average discharge concentrations of total nitrogen for the preceding month, as required in Paragraph 8.b.ii of the Second Modification.

The Consent Decree, First Modification and Second Modification along with such Monthly Reports on Compliance shall be posted on the City's internet site, and maintained accessible to the public online until termination of the Consent Decree. In addition to the submission of Reports on Compliance, the Parties will participate in quarterly meetings or conference calls, if scheduled by EPA, to review the City's compliance with the terms of the Consent Decree.

i. Status of required construction including major work items completed in the preceding month

Work completed by the Contractor in the month of July 2017 is as follows:

- Complete installation of Sanitary Pump Station No. 2 and place it into service
- Installation of temporary connection of Sanitary Pump Station No. 2 discharge to the aerated grit chambers
- Complete roofing on the Headworks Building
- Demolish existing 30 inch raw wastewater piping
- Installation of Gravity Thickener No. 1 Scum Pump Station structure

ii. Projected work items to be undertaken in the next month

Ongoing work by the Contractor through the month of August 2017 includes the following:

- Continue ledge removal for the Biological Aerated Filter (BAF) Building
- Placing formwork, reinforcing steel, and concrete for the BAF structure base slab and lower walls and columns
- Continue installation of interior mechanical, electrical and plumbing work at the Headworks Building
- Construct exterior stairs at the Headworks Building
- Continue interior painting in the Headworks Building
- Installation of doors and windows in the Headworks Building
- Continue to export excavated materials and demolition materials off site
- Installation of storm water quality structure & drainage bypass structure
- Placing formwork, reinforcing, and concrete for Electrical Building foundation and standby generator foundation
- Deliver standby generator
- Installation of screens and washpresses in the Headworks Building
- Installation of stop logs and slide gates in the Headworks Building
- Installation of odor control ductwork at the Headworks Building
- Installation of 42 inch raw wastewater piping near the Headworks Building
- Installation of underground ductbanks
- Installation of miscellaneous site piping (drains, plant drains, city water)
- Deliver temporary trailers for City personnel for Laboratory, Office, etc.
- Installation of utilities for temporary trailers for City personnel
- Continue construction of the temporary primary sludge pumping structure inside Gravity Thickener No. 2

Projected work to be completed by the Contractor in the month of August 2017 includes the following:

- Complete painting of the interior walls and ceilings in the Headworks Building
- Complete installation of the 42" raw wastewater piping to the Headworks Building
- Complete installation of temporary odor control systems
- Complete installation of slide gates and stop log frames in the Headworks Building
- Complete delivery of WWTF staff temporary locker/shower, laboratory, and office trailers

- iii. **Project percent complete based on payments to Contractor for work completed**
The following table provides a summary of the Contractor's requests for payment and the resulting percent complete:

Original Contract Value	\$ 72,785,545.00
Change Order 1 – January 2017	\$ 367,290.42
Change Order 2 – May 2017	\$ 546,722.46
Contract Value	\$ 73,699,557.88

Payment Application No.	Work Conducted Through	Amount	Cumulative Amount	Percent Complete
1	09/30/2016	\$1,393,500.00	\$ 1,393,500.00	1.89%
2	10/31/2016	\$2,855,100.00	\$ 4,248,600.00	5.76%
3	11/30/2016	\$1,717,330.09	\$ 5,965,930.09	8.09%
4	12/31/2016	\$1,374,011.19	\$ 7,339,941.28	9.96%*
5	01/31/2017	\$1,434,502.03	\$ 8,864,437.63	12.03%
6	02/28/2017	\$1,136,436.97	\$10,191,515.67	13.83%
7	03/31/2017	\$2,697,828.60	\$12,958,668.29	17.58%
8	04/30/2017	\$2,431,878.69	\$15,407,877.99	20.91%
9	05/31/2017	\$1,876,920.03	\$17,284,798.02	23.45%**
10	06/30/2017	\$2,345,659.10	\$19,630,457.12	26.64%
11	07/31/2017	\$2,242,655.50	\$21,873,112.62	29.68%

*Percentage Complete changed from 10.08% (from December 2016 Report) to 10.03% due to Change Order #1 in January 2017.

**Percentage Complete for all months changed due to Change Order #2 in May 2017. Percent Complete Column updated based on new Contract Value \$73,699,557.88.

- iv. **Project percent complete based on time elapsed**

The contract time to the EPA required milestone for the BAF treatment system completion is 1186 calendar days. The total value of the contract (item iii) is based on the City's contractual milestone for project substantial completion is 1368 calendar days.

The project is 28.2% complete based on the BAF treatment system completion as of July 31, 2017 and 24.4% complete based on project substantial completion.

- v. **Status of all required permit applications**

An application for the Installation of an Aboveground Storage Tank was submitted to NHDES on April 14, 2017. The tank is associated with a new standby generator at 200 Peirce Island Road, Portsmouth, NH. The application is still under review by NHDES as of July 31, 2017.

vi. Status of Consent Decree milestones including identifying any problems encountered or anticipated, together with the proposed or implemented solutions

The construction contract with Methuen Construction Company, Inc. was executed on August 25, 2016. A summary of all milestones required by the Consent Decree Second Modification is provided below.

Milestone	Date	Status
Execute Contract to Construct Upgrades	July 1, 2016 September 1, 2016*	Complete
Submit Two Additional Milestones for EPA Review and Approval	December 1, 2016	Complete
Additional Milestone 1: Transfer of the existing SCADA system to the new Headworks Building	November 21, 2017	On Schedule
Additional Milestone 2: Startup and testing of the Secondary Influent Pump Station in the new Solids Building	May 9, 2019	On Schedule
BAF Substantial Completion	December 1, 2019	On Schedule
Achieve Compliance with NPDES Permit Limits	April 1, 2020	On Schedule

*At the request of the City of Portsmouth, all parties agreed that the Contract Execution Date could be revised to September 1, 2016 to allow more time for bidding and to accommodate the Portsmouth City Council's review of barging alternatives prior to contract execution. The Contractor's schedule for completion was reduced to accommodate the modified contract execution delay.

vii. The monthly average discharge concentrations of total nitrogen for the preceding month, as required in Paragraph 8.b.ii of the Second Modification.

The average concentration of effluent total nitrogen in the month of July 2017 was 36.0 mg/L TN. See attached report, which was submitted with the City's July 2017 Discharge Monitoring Report (DMR) for NPDES Permit NH0100234.

As requested by the EPA, Consent Decree Mitigations, as required in Section IV, Paragraph 8, of the Consent Decree Second Modification will be outlined in this monthly report.

ATTACHMENT A: A summary of the City's Mitigation Initiatives is provided detailing the status of each initiative.

ATTACHMENT A1: A summary of the City's commitments to date as required in Paragraph 8.e., Water Quality and Ecosystem Health Project, of the Consent Decree Second Modification.

ATTACHMENT A2: Supplemental Compliance Plan Sewer Separation Projects per Consent Decree, Section IV, Paragraph 12.c. and letter from EPA dated July 10, 2017. Construction project status on all seven separation projects will be provided as part of the monthly report on compliance pursuant to Paragraph III.6.a. of the Consent Decree Second Modification.

These monthly construction reports are posted on the City's wastewater website at <http://www.portsmouthwastewater.com/resources.html>.

As required by the Consent Decree:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact me at (603) 766-1416 if you have any questions or require additional information.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Peter H. Rice', with a long horizontal line extending to the right.

Peter H. Rice, P.E.
Director of Public Works

Enclosures

ec: Joy Hilton, USEPA Region 1
Tracy L. Wood, NHDES Wastewater Engineering Bureau Administrator
Allen Brooks, Esq., Department of Justice, Environmental Protection Bureau Chief
Tonia Bandrowicz, Senior Enforcement Counsel, USEPA Region 1
David Gordon, Esq., U.S. Department of Justice
Tom Irwin, Esq., Conservation Law Foundation
John P. Bohenko, City Manager, City of Portsmouth
Suzanne Woodland, Deputy City Attorney
Nancy Colbert-Puff, Deputy City Manager
Brian Goetz, Deputy Director of Public Works
Terry Desmarais, City Engineer

Peirce Island Effluent Nitrogen

July 2017

	1003 Inf Flow	99959 Effluent Ammonia as N	99960 Effluent Nitrite/Nitrate-N	99961 Effluent TKN	99962 Total Nitrogen
	MGD	mg/l	mg/l	mg/l	mg/l
Date					
7/1/2017	4.104				
7/2/2017	3.277				
7/3/2017	3.108				
7/4/2017	2.867	24	<1.0	36	37
7/5/2017	2.913	22	<1.0	17	18
7/6/2017	2.860				
7/7/2017	3.109				
7/8/2017	3.844				
7/9/2017	3.254				
7/10/2017	3.017				
7/11/2017	3.103	21	<1.0	24	25
7/12/2017	3.078	21	<1.0	32	33
7/13/2017	3.257				
7/14/2017	2.953				
7/15/2017	2.878				
7/16/2017	2.779				
7/17/2017	2.841				
7/18/2017	2.832	19	<1.0	42	43
7/19/2017	2.880	27	<1.0	44	45
7/20/2017	2.845				
7/21/2017	2.833				
7/22/2017	2.806				
7/23/2017	2.790				
7/24/2017	4.048				
7/25/2017	3.204	20	<1.0	37	38
7/26/2017	2.990	19	<1.0	49	50
7/27/2017	2.836				
7/28/2017	2.808				
7/29/2017	2.615				
7/30/2017	2.505				
7/31/2017	2.465				
Minimum	2.465	19	<1.0	17	18
Maximum	4.104	27	<1.0	49	50
Average	3.023	22	<1.0	35	36

ATTACHMENT A: MITIGATION ITEMS
City of Portsmouth, NH
Consent Decree 09-cv-283-PB

This document summarizes the City's Mitigation Items as required in Section IV, Paragraph 8, of the Consent Decree Second Modification.

- a) Interim Enhanced Primary Treatment: Perform full scale piloting of alternative coagulant chemicals to see if settling performance can be improved.

<i>Current Status:</i>	<i>Anticipated Completion Date:</i>
ON-GOING	OCTOBER 2017
<i>Comments:</i>	
The Chemically Enhanced Primary Treatment (CEPT) Optimization Study Work Plan was submitted to EPA on March 13, 2017, and approved on March 30, 2017. The City has forwarded meeting notes regarding progress to the EPA via Joy Hilton. The field data collection work will continue into the middle of September with the Aeries 252 product.	

- b) Nitrogen Removal: For a five year period commencing June 1, 2020, achieve specific seasonal average total nitrogen effluent concentrations and monthly average total nitrogen effluent concentrations for the Peirce Island WWTF with the upgrade.

<i>Current Status:</i>	<i>Anticipated Completion Date:</i>
TREATMENT FACILITY UNDER CONSTRUCTION	NOTED ABOVE
<i>Comments:</i>	
A summary for this item is not necessary until the new Biological Aerated Filter (BAF) system construction is completed and operational.	

- c) Stormwater Project: The City will implement a green infrastructure project(s) using innovative low-impact development approaches to significantly reduce stormwater pollution from one or more existing sites. Cost of project will be \$500,000.

<i>Current Status:</i>	<i>Anticipated Completion Date:</i>
ON-GOING	TBD
<i>Comments:</i>	
The City is proposing improvements at the recently purchased property behind the Department of Public Works. The specific improvements are still in development and will be detailed in later reports. Work in this area will help to improve runoff water quality and will benefit Sagamore Creek.	

- d) Sagamore Avenue Sewer Extension Project: Implement a sewer extension project to provide public sewer service to approximately 83 existing parcels adjacent to or near Sagamore Avenue.

<i>Current Status:</i>	<i>Anticipated Completion Date:</i>
ENGINEERING PRELIMINARY DESIGN PHASE 1	SUBSTANTIAL COMPLETION BY JUNE 30, 2022
<i>Comments:</i>	
The City is working with a consultant to do the preliminary pipe sizing for the low pressure sewer system for this project. The preliminary design work will begin in the fall of 2017.	

- e) Water Quality and Ecosystem Health Project

<i>Current Status:</i>	<i>Anticipated Completion Date:</i>
ON-GOING	N/A
<i>Comments:</i>	
See Attachment A1	

ATTACHMENT A1: WATER QUALITY AND ECOSYSTEM HEALTH PROJECTS

City of Portsmouth, NH Consent Decree 09-cv-283-PB

This document summarizes payments made for the City's obligations under the Consent Decree Second Modified (No. 09-cv-283-PB), Paragraph 8.e. This item requires a contribution of \$500,000 over a period of five years to support water quality and ecosystem health efforts related to the Great Bay Estuary.

Projects	Vendor/Agent	Status	Payment Date	Payment Value
Great Bay Monitoring Collaborative		Paid	08/2016	5,000.00
Sagamore Creek water quality monitoring project	FB Environmental Associates	Contract Executed 08/21/2017	Monthly Invoicing	47,798.00
Teachers on the Estuary	Great Bay Stewards		Pending	7,000.00
Public outreach/education work	The Nature Conservancy		Pending	14,000.00
Oyster Shell Recycling	CCA NH		Pending	4,000.00
Great Bay Estuary Monitoring Support	UNH Sponsored Programs Administration		Pending	6,000.00
TOTAL				\$83,798.00
REMAINING COMMITMENT				\$416,202.00

ATTACHMENT A2: SEWER SEPARATION PROJECTS

City of Portsmouth, NH Consent Decree 09-cv-283-PB

This document summarizes the project construction status on the seven sewer separation projects in the CSO Supplemental Compliance Plan dated June 18, 2017 and noted in the EPA letter to the City dated July 10, 2017.

1. FLEET STREET: COURT ST TO HANOVER ST & PORTIONS OF ADJACENT STREETS

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
FLEET ST	ENGINEERING RFP IN DRAFT	TBD
<i>Comments:</i>		

2. PLEASANT STREET: AT THE INTERSECTION WITH COURT ST

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
PLEASANT ST	IN DESIGN	SPRING 2019
<i>Comments:</i>		
Project design phase is 75% complete.		

3. MCDONOUGH PHASE 3B: MCDONOUGH STREET FROM CORNWALL ST TO BREWSTER ST & LANGDON ST

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
MCDONOUGH PH 3B	CONSTRUCTION	MAY 2018
<i>Comments:</i>		
Construction of drainage and sewer are as follows:		
<ul style="list-style-type: none">• McDonough St west from Cornwall St to Langdon St is 100% complete.• McDonough St east from Langdon St to Brewster St is 0% complete.• Brewster St is 0% complete.• Langdon St is 100% complete.		

4. ISLINGTON STREET PHASE 1: COLUMBIA ST TO ROUTE 1 BYPASS OVERPASS

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
ISLINGTON ST PH 1	PRELIMINARY DESIGN	TBD
<i>Comments:</i>		
In August 2017, City will finalize the preliminary design.		

5. MAPLEWOOD AVENUE: AT FAIRVIEW DR

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
MAPLEWOOD AVE	IN DESIGN	SPRING 2019
<i>Comments:</i>		
In fall 2017, final design will be completed.		

6. UNION STREET: MIDDLE ST TO STATE ST & SECTIONS OF COFFINS CT & AUSTIN ST

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
UNION ST	ENGINEERING RFP IN DRAFT	TBD
<i>Comments:</i>		

7. SEWER REHABILITATION PROJECT

<i>Project Name:</i>	<i>Current Status: (phase of work)</i>	<i>Anticipated Construction Completion Date:</i>
TBD	TBD	TBD
<i>Comments:</i>		
In fall 2017, the City will receive the completed Infiltration/Inflow Study with recommendations for sewer rehabilitation. A copy of the document will be submitted to the EPA by October 31, 2017. This information will be used to define the limits of the sewer rehabilitation project.		