



# PUBLIC WORKS DEPARTMENT

CITY OF PORTSMOUTH

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July 28, 2016

Mark Pollins  
Director of Water Enforcement  
U.S. Environmental Protection Agency  
Room # 3142  
USEPA Ariel Rios Building (AR)  
1200 Pennsylvania Avenue N.W.  
Washington, D.C. 20004

Re: Consent Decree 09-cv-283-PB  
Quarterly Report No. 27  
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, the City of Portsmouth is submitting this quarterly status report..

The modified Consent Decree requires the filing of quarterly reports as follows:

Within 30 days after the end of each calendar quarter (i.e., by April 30, July 30, October 30, and January 30) after the Effective Date of this Consent Decree, until termination of this Decree pursuant to Section XVI, the City shall submit a written report for the preceding calendar quarter that shall include a description of the following: i) the status of any construction or compliance measures, including whether any such construction or compliance measure could be completed prior to relevant milestones contained herein consistent with sound engineering practice and normal construction practices; ii) the status of all Consent Decree milestones, including whether any have been achieved prior to the date for doing so; iii) any problems encountered or anticipated, together with the proposed or implemented solutions; iv) the status of permit applications; v) operation and maintenance operations; and vi) reports to State agencies.

The following is the list of compliance requirements listed in Section IV of the Consent Decree including additional requirements listed in the Consent Decree Modification. For clarity the requirements are listed in plain text and the status of the item is shown in ***Bold Italics***.

## Preface

The City of Portsmouth seeks to modify certain construction and compliance deadlines in its Consent Decree. To that end, the City of Portsmouth submitted to the EPA and other parties a Statement of Position on December 10, 2015, outlining the grounds for its request. This statement was submitted as part of the formal dispute resolution process. The City and all parties engaged in negotiations relative to the City's request and negotiated terms of an agreement to a second modification of the Consent Decree. The Department of Justice lodged a proposed Consent Decree Second Modification on April 1, 2016 with the Court. The proposed Consent Decree Second Modification was published for public comment and is pending before the United State District Court for the District of New Hampshire.

Bid documents for the Peirce Island WWTF upgrade were distributed to contractors on March 17, 2016 and bids were intended to be received on May 26, 2016. The City Council requested the City Manager include barging alternates in the bid documents to reduce the overall traffic impact due to construction. This was done by Addendum No. 1. The bidding period was extended by Addendum No. 3 in order to allow contractors adequate time to develop bids for this complicated project and for the more complicated portions of the work like the barging alternates. Bids were received on June 23, 2016. The City Council will decide on whether or not to include a barging alternative as part of the Contract Award at its meeting on August 1, 2016. The City's current schedule anticipates issuing a Notice to Proceed no later than September 1, 2016. The City anticipates a 45 month construction schedule for project substantial completion and compliance with permit being achieved by April 1, 2020.

## Specific Consent Decree Items

**8. Nine Minimum Controls Compliance Plan.** Attached (*in the referenced CD*) as Appendix A is the Nine Minimum Controls Compliance Plan. The City shall implement the Nine Minimum Controls Compliance Plan in accordance with the schedule specified in Appendix A.

- i) There are no construction related activities with this item. The compliance measures associated with this item are on-going.*
- ii) There is no Consent Decree milestone associated with this item.*
- iii) There have been no problems encountered or anticipated with this item.*
- iv) There are no permit applications associated with this item.*
- v) Operation and maintenance is on-going. The Infiltration and Inflow study and Post Construction Monitoring Program study are ongoing.*
- vi) There are no reports to State Agencies associated with this item.*

**9. Wastewater Master Plan.** Attached as Appendix B is the WMP SOW dated May 17, 2007. The City shall implement the WMP in Appendix B, and comply with all milestones and schedules in Appendix B.1.

***The Schedule listed in Appendix B.1 has been modified by the Consent Decree Modification to include additional tasks and a revised schedule. The Consent Decree Modification includes a schedule for completion of secondary treatment upgrades at the Peirce Island Treatment Plant, as***

*well as, adjustments to the Long Term Control Plan project schedule. Final completion for the wastewater treatment plant upgrades, including compliance with permit requirements, is required by May 2017. The City has requested an extension of the Peirce Island WWTF Upgrade deadline and that request is awaiting review by the Court in the form of the proposed Consent Decree Second Modification as described in the preface to this report.*

*The additional requirements of the amended Consent Decree are listed below as items g through n:*

g. By June 30, 2012, the City shall complete pilot testing of potential treatment technologies for achieving secondary treatment, including, but not necessarily limited to: Biologically Aerated Filters (BAF), BioMag, Moving Bed Biofilm Reactors (MBBR) w/ Dissolved Air Flotation (DAF), and Conventional Activated Sludge with BioMag. By July 30, 2012, the City shall complete a data summary relative to the pilot testing.

*This milestone has been met. No further action is required of the City.*

h. By October 1, 2012, the City shall submit a Piloting Technical Memorandum that includes data from piloting and a recommendation on the design and capacity of secondary treatment facilities.

*This milestone has been met. No further action is required of the City.*

i. By July 1, 2013, the City shall commence final design of secondary treatment facilities.

*This milestone has been met. No further action is required of the City.*

j. By August 31, 2014, the City shall complete design of secondary treatment facilities.

*i) Design of the wastewater treatment facilities is complete and the 100% design drawings and specifications were transmitted to EPA on December 28, 2015. The date of design completion is different than the stipulated deadline and is a part of the proposed Consent Decree Second Modification outlined in the preface to this report. The design documents included a 6.1 MGD Biological Aerated Filter (BAF) capable of meeting a total nitrogen effluent limit of 8 mg/L on a seasonal and monthly average basis as indicated in the proposed Consent Decree Second Modification.*

*The City asked AECOM to expedite the design of the existing primary clarifier and gravity thickener mechanism replacement. The design and construction of this work is complete. See Item k. for additional details.*

*There are no construction activities with this item.*

*ii) The City's consultant designed a WWTF upgrade capable of nitrogen removal. As noted in previous quarterly reports and separate correspondence, designing for nutrient removal*

*required substantial additional effort above that for the plant required under the Consent Decree which achieves only secondary treatment and so this Consent Decree milestone was not met. The City requested an extension of this deadline and that request is awaiting review by the Court as a Consent Decree Second Modification as described in the preface to this report.*

- iii) *This item is complete. See response to ii above.*
- iv) *The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. A draft NPDES permit has not yet been received. Design related permitting is nearly complete. An archaeological assessment related to a review of the National Register of Historic Places as required per Section 106 of the National Historic Preservation Act was already completed. This work was updated with a supplemental Request for Project Review submitted to the Department of Historical Resources on April 27, 2016. The update included a review of the current design layout, updated age of buildings, recommendation to perform additional Phase 1A and 1B investigation in areas of work for traffic control measures and parking improvements, and reviewed secondary impacts of truck traffic from the construction. The Department of Historical Resources determined that the project will have an "Adverse Effect" on historical resources. The City is working with the Department of Historical Resources, EPA and DES on a Memorandum of Agreement for historical resource impact mitigation. The City's applications for the natural resources, standard dredge and fill and shoreland protection permits are complete. These permits will be amended to reflect the final construction documents. These items may need to be amended for barging operations, if included in the project (currently bid alternates). The Portsmouth City Council will decide whether or not to include barges at their meeting on August 1, 2016. The Alteration of Terrain permit application was submitted to the New Hampshire Department of Environmental Services. A Remedial Action Plan (RAP) for the existing Solids Processing Building was submitted to the PCB Coordinator at EPA and a PCB Alternative Decontamination and Risk Based Disposal Approval was granted on March 15, 2016. The City is working with the EPA for approval of the PCB Indoor Air Standards for the Solids Processing Building. Construction permits will be required and will be the responsibility of the selected Contractor.*
- v) *There are no operation and maintenance activities with this item.*
- vi) *There is no specific report associated with this milestone to be submitted to State Agencies..*
  - k. *By March 1, 2015, the City shall commence construction of secondary treatment facilities.*
- i) *The City awarded the Primary Clarifier and Gravity Thickener Replacement project to Methuen Construction, Inc. in the amount of \$1,375,114. A notice to proceed was issued on September 12, 2014, and the project is complete.*

*The City's consultant designed a WWTF upgrade capable of nitrogen removal. As noted in previous quarterly reports and separate correspondence, designing for nutrient removal required substantial additional effort above that for the plant required under the Consent Decree which achieves only secondary treatment and so this Consent Decree milestone was*

*not met. The City requested an extension of this deadline and that request is awaiting review by the Court as a Consent Decree Second Modification as described in the preface to this report. The project was advertised for bids on March 17, 2016 to the prequalified contractors and bids were received on June 23, 2016. The City Council will be deciding whether or not to include additional costs for barging at its August 1, 2016 meeting. A contract award and notice to proceed is anticipated to be executed by September 1, 2016.*

- ii) See response to i above. The Primary Clarifier and Gravity Thickener Replacement project has been completed. Bids were received for the treatment facility upgrade project on June 23, 2016 and a notice of award is anticipated by September 1, 2016. The base costs without barging is \$72.79 million. Additional efforts will be made to expedite the schedule if possible and consistent with sound engineering and construction practices.*
- iii) The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. A draft permit has not yet been received. Applications have been submitted for natural resource type permits and will be amended to reflect the final construction layout. A Supplemental Request for Project Review was submitted to the Department of Historical Resources on April 27, 2016 and a finding of adverse effect on historical resources was issued. The City is working with the Department of Historical Resources, EPA and DES on a Memorandum of Agreement for historical resource impact mitigation. Construction related permits will be the responsibility of the selected Contractor.*
- iv) There are no operation and maintenance activities with this item.*
- v) There is no report associated with this milestone to be submitted to State Agencies.*

1. By March 1, 2017, the City shall complete construction of secondary treatment facilities.

- i) The Primary Clarifier and Gravity Thickener Replacement Project is complete. The City requested an extension of this deadline and that request is awaiting review by the Court as a Consent Decree Second Modification as described in the preface to this report. The construction schedule will be finalized as part of Consent Decree Second Modification.*
- ii) This milestone will not be met for the larger WWTF upgrade. The completion of construction was impacted by the issues discussed in negotiations as part of the City's Statement of Position.*
- iii) See response to ii above. The Primary Clarifier and Gravity Thickener Replacement project was completed in advance of the larger facility upgrade and additional efforts will be made to expedite the schedule if possible and consistent with sound engineering and construction practices.*
- iv) The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. A draft permit has not yet been received. Applications have been submitted for natural resource type permits and will be amended to reflect the final construction layout. A Supplemental Request for Project Review was submitted to the Department of Historical Resources on April 27, 2016 and a finding of adverse effect on historical resources was issued. The City is working with the Department of Historical Resources, EPA and DES on a Memorandum of Agreement for historical resource impact mitigation. Construction related permits will be the responsibility of the selected Contractor.*

- v) *There are no operation and maintenance activities with this item.*
- vi) *There is no report associated with this milestone to be submitted to State Agencies.*

m. By May 1, 2017, the City shall achieve compliance with secondary treatment limits in the Permit.

- i) *There are no construction activities with this item yet. The construction schedule will be finalized as part of Consent Decree requirement j above.*
- ii) *This milestone will not be met. The City requested an extension of this deadline and that request is awaiting review by the Court as a Consent Decree Second Modification as described in the preface to this report.*
- iii) *The Peirce Island WWTF NPDES permit reapplication was submitted in December 2011. Applications have been submitted for natural resource type permits and will be amended to reflect the final construction layout. A Supplemental Request for Project Review was submitted to the Department of Historical Resources on April 27, 2016 and a finding of adverse effect on historical resources was issued. The City is working with the Department of Historical Resources, EPA and DES on a Memorandum of Agreement for historical resource impact mitigation. Construction related permits will be the responsibility of the selected Contractor.*
- iv) *There are no operation and maintenance activities with this item.*
- v) *There is no report associated with this milestone to be submitted to State Agencies.*

n. Whenever feasible, the City shall commence work in advance of milestones and complete such work as expeditiously as practicable, consistent with sound engineering practice and normal construction practices.

*The City understands this measure and when consistent with sound engineering practice and normal construction practices will strive to meet its intent.*

10. Combined Sewer Overflow Facility Upgrades. The City shall implement its April 2005 Final CSO Long Term Control Plan in accordance with the following schedule and shall complete all construction for implementation of the 2005 LTCP by October 2012:

*A revised schedule was included with the Consent Decree Modification which was filed on July 2, 2012.*

**Original LTCP Schedule \***

Planning Area I.D.	Contract I.D.	Project Completion Date
Lincoln 3	Phase I	10/1/2011
Lincoln 3	Phase II	10/1/2012
Lincoln 3	Phase III	10/1/2013
Court/State	Court #3	1/1/2012
Islington	Islington #1	10/1/2010
Islington	Islington #2	1/1/2012

**Revised LTCP Schedule \*\***

<i>Planning Area I.D.</i>	<i>Contract I.D.</i>	<i>Project Status</i>	<i>Project Completion Date</i>
<i>Lincoln 3</i>	<i>Phase I</i>	<i>Complete</i>	<i>6/1/2012</i>
<i>Lincoln 3</i>	<i>Phase II</i>	<i>Complete</i>	<i>10/29/14 <del>10/1/2014</del></i>
<i>Lincoln 3</i>	<i>Phase III</i>	<i>Complete</i>	<i>10/1/2013</i>
<i>Islington</i>	<i>Islington #2</i>	<i>Complete</i>	<i>7/30/13 <del>6/1/2013</del></i>

\* Original Schedule

\*\* As filed July 2, 2012 Consent Decree Modification.

- i) The construction related activities with this item are shown in the table above. The compliance measures associated with this item are complete. Additional sewer separation work is proposed as part of Capital Improvement Projects under design as follows: McDonough Street Phase 3B, Maplewood Avenue Complete Street, and the Islington Street Roadway Reconstruction.*
- ii) Consent Decree milestones associated with this item have been met.*
- iii) Work associated with this item is complete and no problems are anticipated.*
- iv) Work associated with this item is complete and there is no permit application pending associated with this item.*
- v) There are no operation and maintenance activities with this item.*
- vi) There are no reports to State Agencies associated with this item.*

11. Interim Emissions/Effluent Limits. Until the City completes construction of, and achieves full operation of secondary treatment facilities in accordance with the schedule contained in this Consent Decree, the City shall comply with the interim limits and measures set forth in Appendix C. (See Current AO effluent limits). Thereafter, the City shall comply with the applicable NPDES permit limits then in effect.

- i) The Peirce Island WWTF has met the interim permit limits for the Quarter covered by this report. The compliance measures associated with this item are on-going. There are no construction related activities with this item.*

*If approved by the Court, the City will be required as part of the Consent Decree Second Modification to perform a chemically enhanced primary treatment (CEPT) optimization study to determine if process changes can further enhance settling performance. The City is in the process of finalizing a scope and budget for this work, in the event the second modification includes this requirement. There are no Consent Decree milestones associated with this item.*

- ii) There were no violations of the interim limits during this quarter.*
- iii) There is no permit application pending associated with this item.*
- iv) There have been no exceptional operations and maintenance activities outside of routine wastewater treatment facility operations associated with this item.*
- v) There are no reports to State Agencies associated with this item that have not also been submitted to the EPA as part of the milestone deadlines.*

12. Post Construction Monitoring Plan.

*This item was submitted as part of the June 4, 2010, Wastewater Master Plan Draft submission. Following the WMP submission, the Consent Decree deadlines for the sewer separation projects were modified (see Item 10). The implementation schedule for the post construction monitoring plan (PCMP) therefore had to be adjusted. The adjusted PCMP implementation schedule is shown below.*

- i) The PCMP project includes implementation of the post construction monitoring plan as required in the City's Consent Decree and will update the implementation schedule as identified in the introductory paragraph to this item. The project was awarded to Hazen & Sawyer and a contract was executed September 15, 2014. Wastewater flow meters were deployed and were removed in July 2015 for in-field measurements. The consultant made modifications to the model and used the wastewater flow information to recalibrate the hydraulic/hydrologic model for the collection system. Hazen & Sawyer developed draft results indicating that the 2010 LTCP targets were met. This information was provided to EPA and in pleadings associated with the Consent Decree Second Modification. The revised model is undergoing review and once complete, a report will be submitted on the City's behalf. See updated implementation schedule in item ii) below.*

*The infiltration and inflow (I/I) project includes a sewer system evaluation survey of all portions of the collection system (except the reconstructed Lincoln basin) and a sump pump removal program for the City. The first phase of work identified sources of extraneous flow in the collection system. The City's consultant completed a report for the first phase of this work and has developed a contract for the next phase of work anticipated to begin in the fall of 2016.*

- ii) In Volume 2 of the 2010 Draft Wastewater Master Plan (WMP), there was a PCMP implementation schedule. The City is providing an updated implementation schedule to be consistent with Hazen & Sawyer's anticipated schedule and with Item 10 as follows:*



**Revised PCMP Schedule**

<b>PCMP Elements and Schedule</b>			
<b>Element</b>	<b>WMP Date</b>	<b>Rev Date</b>	<b>Status</b>
Implementation of the sewer separation projects identified in the 2010 LTCP Update	Through 2012	10/29/14*	Complete
Re-establish monitoring program based on 2008 meter and rain gauge sites	2013	Spring 2015	Complete
Update and re-calibration of the collection system model using the 2008 monitoring data	2014	2016	Ongoing
Assessment of progress made towards meeting the goals of the 2010 LTCP Update	2015	2017	
Report to EPA and the New Hampshire DES	2015	2017	

\* Lincoln 3 Phase II Sewer Separation Completion Date

***The Consent Decree milestones as revised above associated with this item will be met.***

***iii) The Consent Decree milestones as revised above associated with this item will be met.***

***iv) There is no permit application pending associated with this item.***

***v) There are no operation and maintenance activities associated with this item.***

***vi) There are no reports to State Agencies associated with this item that have not also been submitted to the EPA as part of the milestone deadlines.***

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Mr. Mark Pollins  
July 28, 2016

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.

Very truly yours,



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

cc: Chief, Environmental Enforcement Section  
Joy Hilton, USEPA Region 1  
Tracy L. Wood, P.E., NHDES Wastewater Engineering Bureau  
Allen Brooks, Esq., Department of Justice, Environmental Protection Bureau  
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