

# City of Portsmouth Wastewater Division

## Wastewater Facilities and Programs

City Council Update

February 19, 2013



## Topics for Discussion

- Introduction
- Regulatory Framework and Issues
- Collection System
- Wastewater Treatment Facilities
- Questions and Comments



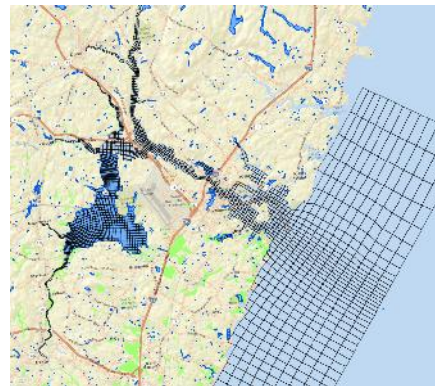
## Regulatory Framework and Issues

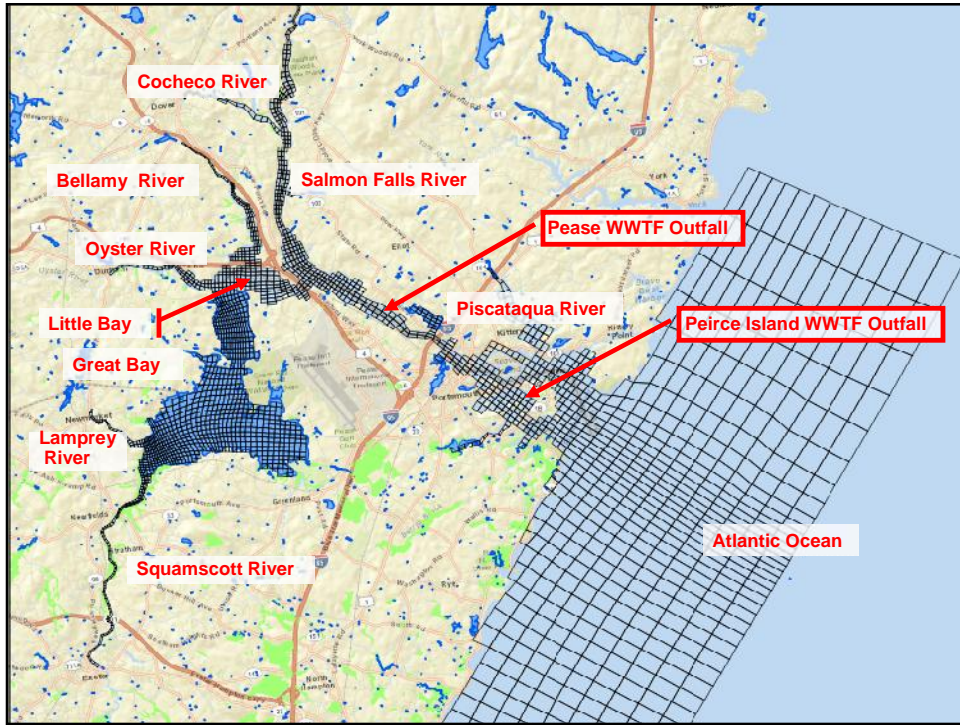
- **Peirce Island WWTF NPDES Permit Status**
  - Submitted renewal application December 31, 2011
  - EPA letter July 2012 indicating TN 8 mg/L monthly average
  - December 18, 2012 Pilot Results Meeting with EPA and NHDES
  - EPA Pilot comment letter January 30, 2013 indicating TN 8 mg/L monthly average for all flow
  - No draft permit received
- **Pease WWTF NPDES Permit Status**
  - Permit expired 2005
  - No draft permit received



## Additional Items to Support Permit

- FDA/NHDES Dye Study
- Piscataqua River Sampling
- Piscataqua River Hydrodynamic Model





## Collection System

- **CSO-LTCP Project Status**
  - Sewer Separation
  - Post Construction Monitoring Plan
- **Mechanic Street Pumping Station Esthetic Improvements Project**

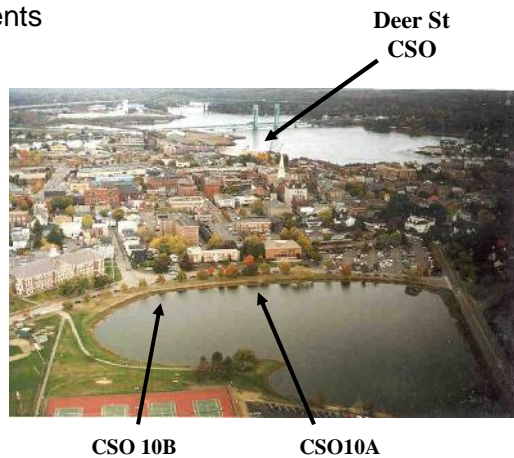


## CSO Long Term Control Plan – Sewer Separation

<i>Planning Area I.D.</i>	<i>Streets</i>	<i>Project Completion Date</i>	<i>Project Status</i>
<i>Lincoln 3A</i>	<i>Lincoln, Spring, Broad, Miller, Bersum, Willow</i>	<i>6/1/2012</i>	<i>Substantially Complete</i>
<i>Lincoln Cass Area</i>	<i>Cass, Brewery, Chevrolet, Albany</i>	<i>6/1/2013</i>	<i>Under Construction</i>
<i>Lincoln 3B</i>	<i>Richards, Rockland, Highland, Miller, Merrimac</i>	<i>10/1/2013</i>	<i>Under Construction</i>
<i>Lincoln 3C</i>	<i>Lincoln, Union, Wibird, Park</i>	<i>10/1/2014</i>	<i>In Design</i>

## CSO Long Term Control Plan – PCMP

- Post Construction Monitoring Plan (PCMP)
  - Determine if the Completed LTCP measures meet performance requirements
- Build and Measure
  - Flow measurement
  - Water quality analysis
- Additional Project(s)



## Wastewater Treatment Facilities

- Peirce Island WWTF
  - Preliminary and Final Design
- Pease WWTF
  - WWTF Evaluation



## Design Basis – Peirce Island WWTF

- Final Treatment Technology Recommendation Pending
  - Secondary System Annual Average Flow of 6.13 MGD and Maximum Day Flow of 9.06 MGD
  - Seasonal Rolling Average (April – October) Effluent Nitrogen Limit of 8 mg/L
  - Total Nitrogen Limit Only Applies to Secondary Treatment System Effluent
  - Proposed Facility Includes Wet Weather Secondary Bypass (Primary Effluent Limit)

## Items Impacting Design Decisions

- Continued Regulatory Uncertainty
- Recent Comments From EPA
  - Secondary Treatment Facility Sizing (flow) Inadequate
  - Permit Limit will be 8 mg/L Monthly Average
  - Need to Meet Effluent Permit Limit of Blended Flow
- All items Impact Capital and O&M Costs

## PI WWTF Consent Decree Deadlines

<i>Item</i>	<i>Consent Decree Deadline</i>	<i>Project Status</i>
<i>Complete Pilot Testing</i>	<i>6/30/12</i>	<i>Complete</i>
<i>Submit Pilot Memo</i>	<i>10/1/12</i>	<i>Complete</i>
<i>Begin Final Design</i>	<i>7/1/13</i>	<i>In Progress</i>
<i>Complete Final Design</i>	<i>8/31/14</i>	<i>Pending</i>
<i>Begin Construction</i>	<i>3/1/15</i>	<i>Pending</i>
<i>Complete Construction</i>	<i>3/1/17</i>	<i>Pending</i>
<i>Achieve Compliance</i>	<i>5/1/17</i>	<i>Pending</i>

## Wastewater Website

- Launched
  - January 30, 2013
- On the Web:
  - [www.portsmouthwwmp.com](http://www.portsmouthwwmp.com)
- Follow on Twitter:
  - @PortsmouthWWMP

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Wastewater Master Plan

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**The City of Portsmouth Works to Address EPA Wastewater Mandates**

The City of Portsmouth owns and operates two wastewater treatment facilities (WWTF) that must comply with separate National Pollutant Discharge Elimination System (NPDES) permits. These permits, issued by the US Environmental Protection Agency (EPA) will require the City to meet the wastewater before it can be discharged to the Piscataquis River. The WWTFs are located at Portsmouth International Transport and Police Island.

**What's New**

February 11, 2013 - The City will be interviewing engineers this week for the Police Island WWTF upgrade design.

Sign up to receive email updates and releases

**Portsmouth WWMP**

Portsmouth WWMP will provide the means of the permit and ensure compliance with the permit at 4:00 p.m. at City Hall.

Join the conversation

**Portsmouth International Treatment WWTF**

**Police Island WWTF**

The City and its Department of Public Works (DPW) Sewer Division are working to improve the City's wastewater system to protect the environment and meet EPA's wastewater mandates. The City is currently under a legal order (Consent Decree) from the EPA to upgrade the Police Island WWTF to secondary treatment. The upgrade project will be the single largest capital expense for the sewer system to date. The City was recently notified by EPA that the Police Island secondary treatment permit would be made more stringent by requiring nitrogen removal to 2 milligrams per liter (mg/L). Unrelated to the order, the City anticipates the draft permit for the Police WWTF will also be more stringent and will result in another significant WWTF upgrade.

The pie chart below illustrates the capital costs of the DPW that are driven by mandated regulatory requirements (\$12.4M).

## Questions & Answers

