



Peirce Island WWTF Upgrade Construction
Public Information Meeting
September 16, 2020

Topics of Discussion

- Introductions
- Work Completed Since Last Meeting
- Work to be Completed in Coming Month
- Work Anticipated in Next 6 Months
- Project Construction Costs
- Consent Decree Schedule
- Events & Recreation
- Public Input/Comments/Concerns
- Next Meeting



Introductions

- City Staff:

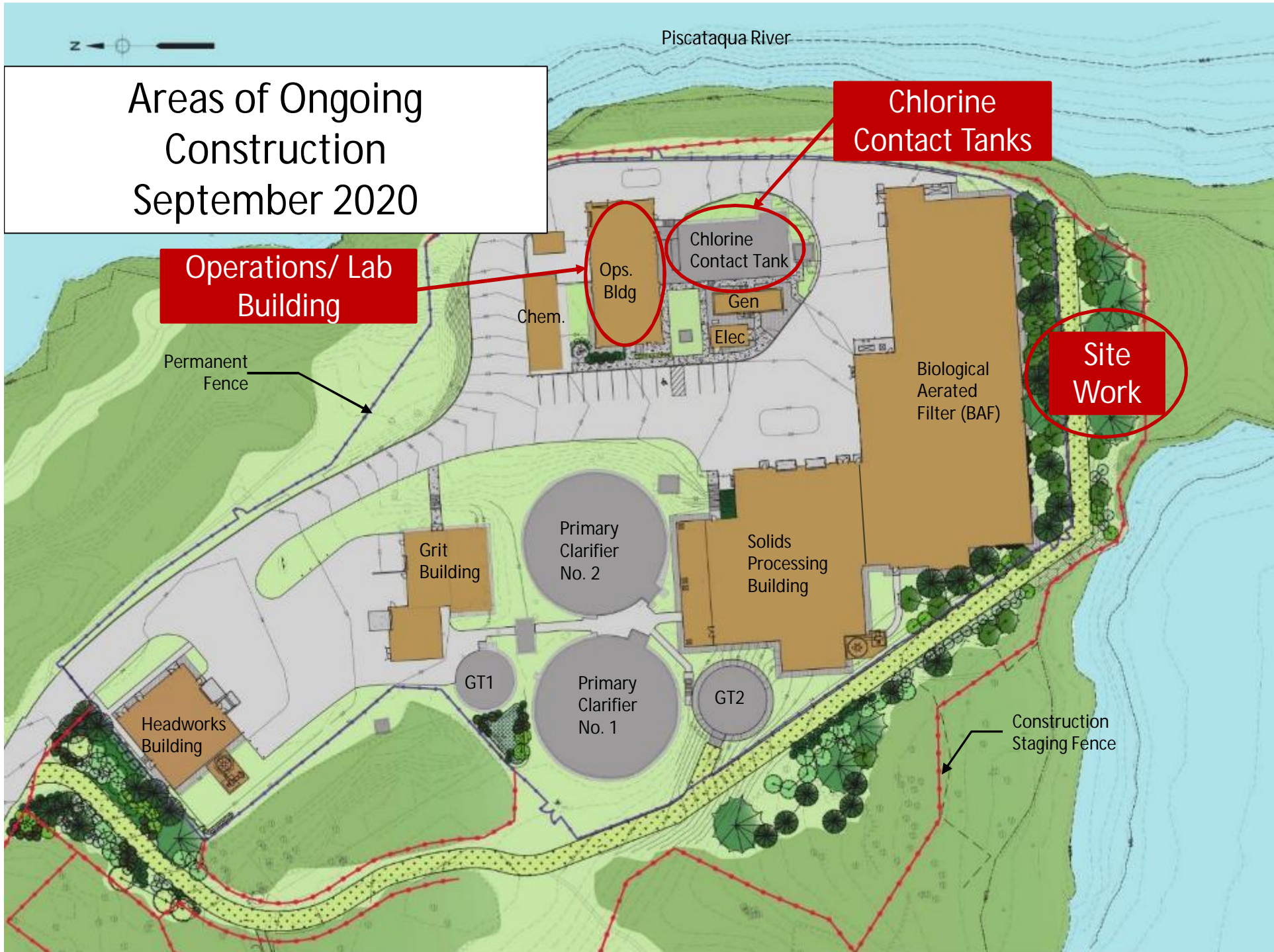
- Terry Desmarais, City Engineer, 603-766-1421
tldesmarais@cityofportsmouth.com

- Website:

<https://www.cityofportsmouth.com/publicworks/wastewater/peirce-island-wastewater-facility/peirce-island-wastewater-facility-upgrade-project>

- News and Updates
- Recreational Info
- Project Info
- Report Form
- Etc.





Site Overview November 2016



September 16, 2020



Peirce Island WWTF Upgrade Construction

Work Completed Since Last Meeting



Chlorine
Contact Tanks

Site Work

Operations/Lab
Building

September 16, 2020



Peirce Island WWTF Upgrade Construction

Work Completed Since Last Meeting



Site Work



Work Completed Since Last Meeting



Site Work

September 16, 2020



Peirce Island WWTF Upgrade Construction

Work Completed Since Last Meeting



Ops/Lab Building

September 16, 2020



Peirce Island WWTF Upgrade Construction

Work Completed Since Last Meeting



Ops/Lab Building



Work Completed Since Last Meeting



Ops/Lab Building



Work Completed Since Last Meeting



Ops/Lab Building

September 16, 2020



Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



Ops/Lab Building



Work Completed Since Last Meeting



Ops/Lab Building

September 16, 2020



Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



Ops/Lab Building

September 16, 2020



Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



Ops/Lab Building

September 16, 2020



Peirce Island WWTF Upgrade Construction

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Work to be Completed in Coming Month

- Continue minor finish work at the Headworks Building, Grit Building, Solids Building, and BAF Building
- Continue optimization of the BAF Building process
- Continue integration of the BAF control system with the plant's SCADA system
- Continue installation of the new Operations/Lab Building upper level metal wall façade and metal roof coping
- Continue installation of tile and rooftop equipment at the new Operations/Lab Building



Work to be Completed in Coming Month

- Begin installation of lockers, interior doors, and acoustic ceiling tiles at the Operations/Lab Building
- Begin plumbing finish work in the upper level of the Operations/Lab Building
- Continue mechanical process work at the new Operations/Lab Building
- Continue HVAC, electrical, plumbing, and fire protection rough in work at the new Operations /Lab Building
- Continue installation of chain link fence and gates
- Continue site restoration, plantings and seeding





Piscataqua River

Anticipated Construction
September – March 2021

Chlorine
Contact Tanks

Operations/Lab
Building

Ops.
Bldg

Chlorine
Contact Tank

Chem.

Gen

Elec

Site
Work

Permanent
Fence

Biological
Aerated
Filter (BAF)

Grit
Building

Primary
Clarifier
No. 2

Solids
Processing
Building

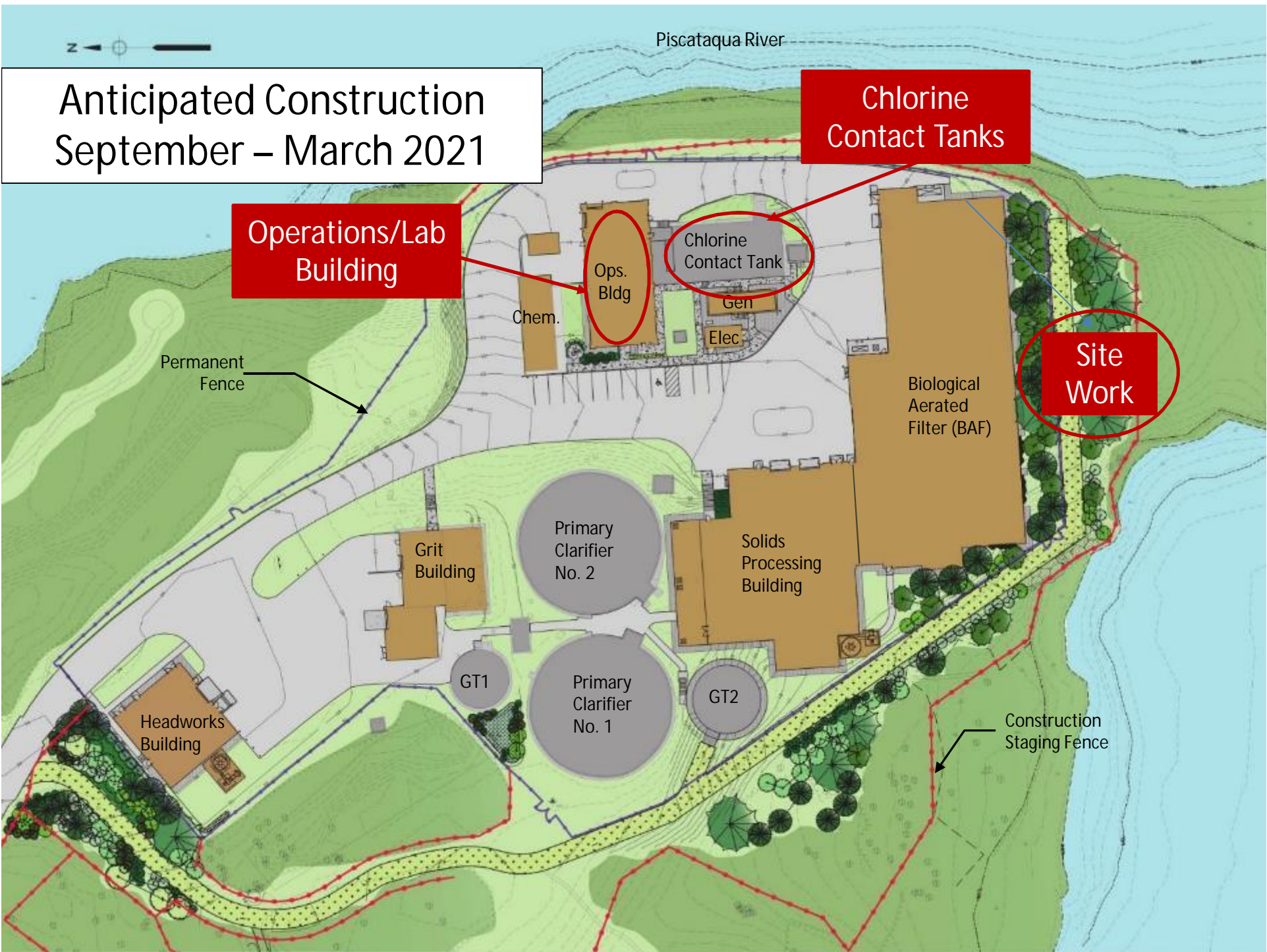
GT1

Primary
Clarifier
No. 1

GT2

Headworks
Building

Construction
Staging
Fence



Project Construction Costs

- Original Contract: \$72.786 million
- Change Order No. 1: \$0.367 million
- Change Order No. 2: \$0.547 million
- Change Order No. 3: \$0.093 million
- Change Order No. 4: \$0.163 million
- Change Order No. 5: \$0.250 million
- Change Order No. 6: \$0.292 million
- Change Order No. 7: \$0.169 million
- Change Order No. 8: \$0.113 million
- Change Order No. 9: \$0.242 million
- Change Order No. 10: \$0.123 million
- Total Contract: \$75.145 million



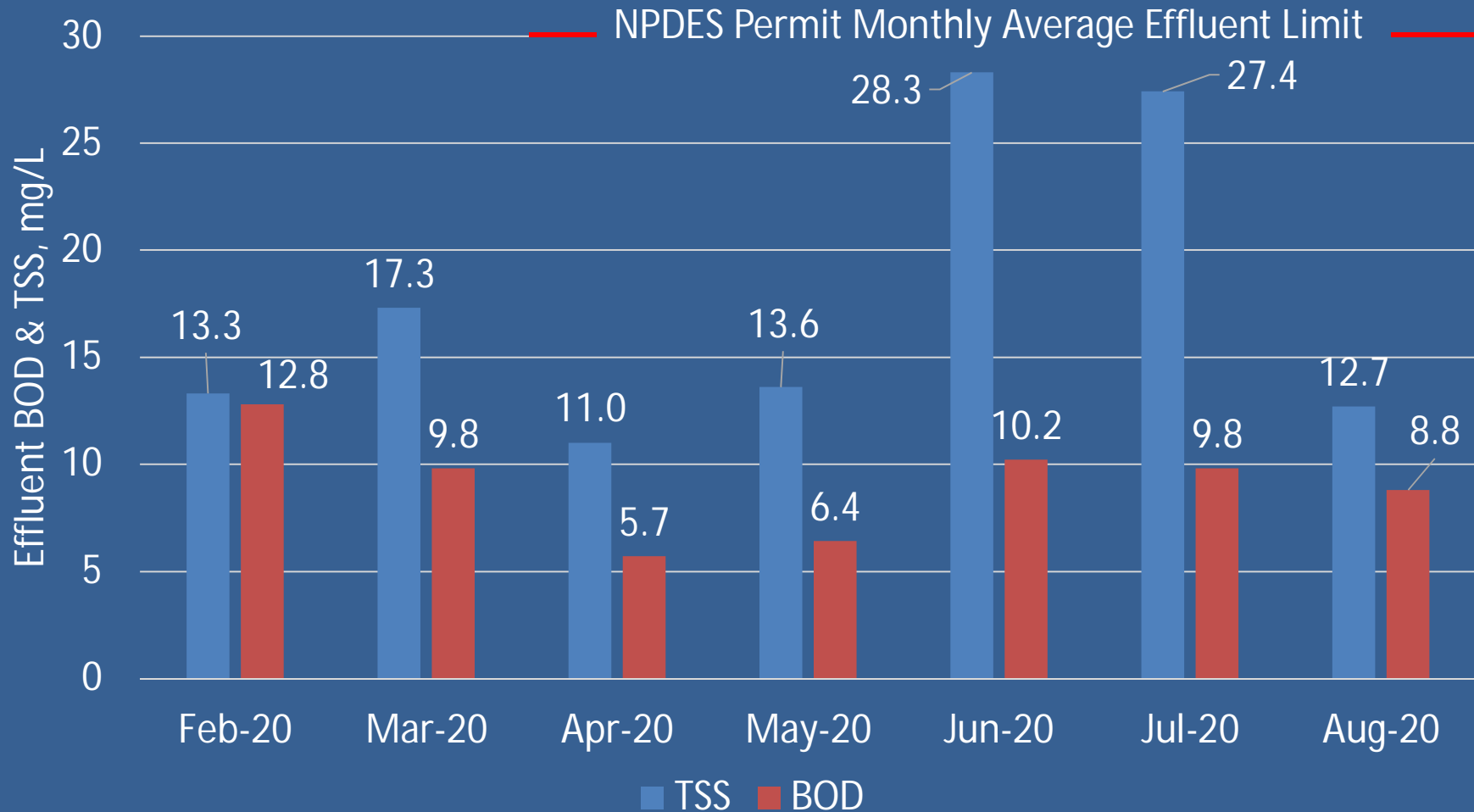
Consent Decree Schedule

Milestone	Date	Status
Execute Contract to Construct Upgrades	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	Complete
Additional Milestone 2: Startup and testing of the Secondary Influent Pump Station in the new Solids Building	May 9, 2019	Complete
BAF Substantial Completion	December 1, 2019 December 31, 2019	Complete
Achieve Compliance with NPDES Permit Limits	April 1, 2020	Complete
Achieve Compliance with Consent Decree Total Nitrogen Limits*	June 1, 2020	Complete

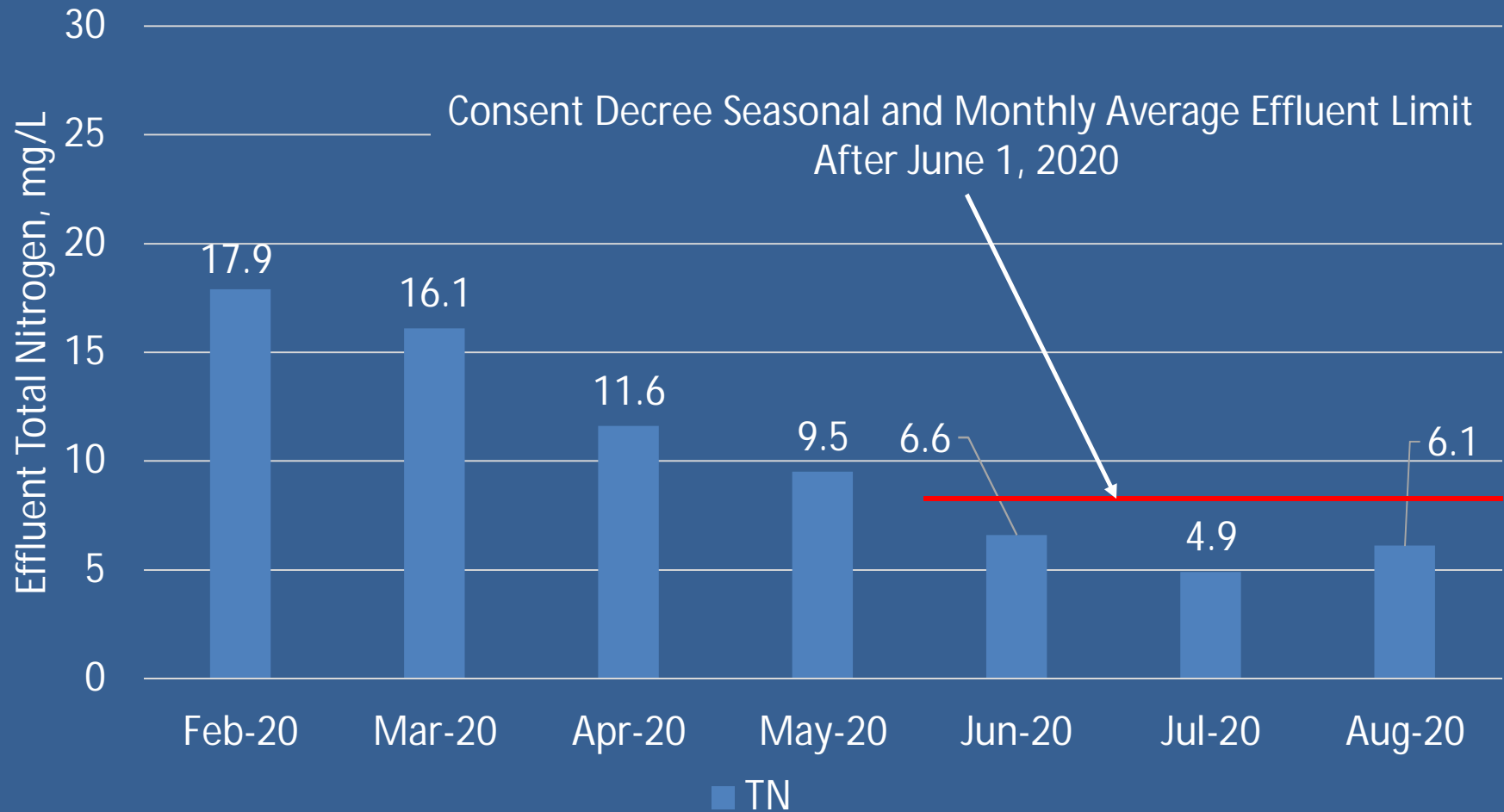
*Seasonal Limit May through October



Effluent Results



Effluent Results



Events and Recreation

- Upcoming
 - No events scheduled.





Public Input / Comments / Concerns

Next Meeting

- Public Construction Meeting
 - Next Meeting: October 21, 2020, 11:00 AM



Meeting Notes

Subject	Peirce Island WWTF Upgrade – Monthly Public Construction Meeting
Date	September 16, 2020
Time	11:00 AM
Location	Portsmouth, NH

Due to the Coronavirus (COVID-19) State of Emergency, the September 16, 2020 public meeting was held live at 11:00 AM over a Zoom video call. A record of the discussion follows:

Terry Desmarais, City Engineer, gave an introduction to the meeting and outlined the topics of discussion, including work completed since the last meeting, work to be completed in the coming month, work anticipated in the next six months, construction cost to date, summary of Consent Decree milestones, and events and recreation.

The members of the Project Team in attendance introduced themselves, and included:

- Peter Rice, Director Public Works
- Glen Wilson, Wastewater Operations Manager
- Erik Meserve, AECOM Project Engineer
- Andy Brodeur, Methuen Construction, Project Executive

Terry noted that to obtain additional information regarding the project, there is a project website that can be accessed through www.cityofportsmouth.com/publicworks/wastewater/peirce-island-wastewater-facility/peirce-island-wastewater-facility-upgrade-project. The website is updated weekly with news and recreational information and contains a link to a reporting form that can be used to provide feedback or notify the City of any issues associated with the project. Terry Desmarais, City Engineer, is the point of contact for the City.

Erik discussed work that has been completed this month. He noted areas where work is ongoing at the site, including:

- Existing Sludge Processing / New Operations/Lab Building
- Chlorine Contact Tanks
- Site Work

Erik reviewed photos of construction progress, including:

- Site Overview – Existing conditions of the Peirce Island Wastewater Treatment Facility in November 2016. Prior to construction, the treatment process consisted of the Aerated Grit Chambers, followed by the Primary Clarifiers and Chlorine Contact Tanks.
- Site Work – Work to restore and bring the site to final grade is continuing. Installation of the remainder of the paving and granite curbing is underway. In addition, portions of the permanent fence and site lighting are being installed.

- Existing Sludge Processing Building/New Operations/Lab Building – The last major building at the site that is under construction is the conversion of the existing Sludge Processing Building to the new Operations/Lab Building. Construction of the building envelope is continuing. Work to install the metal panel façade for the Upper Level is underway. On the roof of the building, work to install the HVAC equipment is continuing. In the interior of the building, rough in work of mechanical, electrical and plumbing piping and systems is continuing. On the Upper Level, door frames have been installed and painting of the drywall has begun. In the Upper Level Bathrooms, tiling is continuing. The upper level will consist of a suspended ceiling, work to install HVAC ductwork and fire protection piping above the suspended ceiling is underway. In the Lower Level, work install the new plumbing and fire protection systems is continuing. The Lower Level is a process space and work to install electrical conduit for equipment is underway. The carrier water system for the chemical feed systems has been installed. Installation of the HVAC system dedicated to the lower level has begun.

Andy discussed work anticipated for the coming month, including:

- Continue minor finish work at the Headworks Building, Grit Building, Solids Building, and BAF Building.
- Continue optimization of the BAF Building process.
- Continue integration of the BAF control system with the plant's SCADA system.
- Continue installation of the new Operations/Lab Building upper level metal wall façade and metal roof coping.
- Continue installation of the restroom tile and rooftop equipment at the new Operations/Lab Building.
- Begin installation of locker, interior doors and acoustic ceiling tiles at the new Operations/Lab Building
- Begin plumbing finish work in the upper level of the new Operations/Lab Building.
- Continue mechanical process work at the new Operations/Lab Building.
- Continue HVAC, electrical, plumbing and fire protection rough in work at the new Operations/Lab Building.
- Continue installation of chain link fence and gates.
- Continue site restoration, plantings and seeding.

Andy then discussed the work anticipated through August and into February 2021 includes:

- Headworks Building – Complete minor punch-list items. Complete installation of landscaping at the Headworks Building and installation of the permanent fence.
- Grit Building – Complete minor punch-list items. Complete installation of the permanent fence.
- BAF Building – Complete minor punch-list items. Complete installation of the permanent fence.
- Solids Building – Complete punch-list items. Complete landscaping on the west side of the building. Complete installation of the permanent fence.
- Existing Sludge / New Operations/Lab Building – Complete exterior metal wall panel installation and metal coping trim for the roof. Complete installation of the finished floors and ceilings within the building. Complete installation of exterior windows, doors and overhead doors at the building. Complete installation of the exterior stairs, including the stair ramps and railings, and bollards. Complete installation of bollards at the overhead doors. Complete the installation of interior wall framing, sheeting, tiling and painting. Complete installation of mechanical process piping and installation of equipment in the lower level, including the chemical systems. On the first floor, complete mechanical, electrical, plumbing, and fire protection rough-in work. On the first floor, complete installation of laboratory case work and installation of laboratory equipment. Complete installation of all flooring and ceiling systems.

- Primary Clarifiers – Complete installation of grating at the Primary Clarifier Effluent Distribution box.
- Site Work – Install remainder of the roadway paving and complete line striping of the roadway. Complete installation of granite curbing. Complete installation of stairs and railings at the Operations/Lab Building. Final grading and landscaping activities will be completed, this includes but is not limited to, grading for asphalt walkways and stone mowing strips; and installation of the permanent WWTF perimeter fence.

Erik provided an update on the project construction cost:

- Original Contract: \$72.786 million
- Change Order No. 1: \$0.367 million
- Change Order No. 2: \$0.547 million
- Change Order No. 3: \$0.093 million
- Change Order No. 4: \$0.163 million
- Change Order No. 5: \$0.250 million
- Change Order No. 6: \$0.292 million
- Change Order No. 7: \$0.169 million
- Change Order No. 8: \$0.113 million
- Change Order No. 9: \$0.242 million
- Change Order No. 10: \$0.123 million
- Total Contract: \$75.145 million

Erik provided a summary of the project milestones set by the Consent Decree:

- Execute Contract for Construction Upgrades - Date: 9/1/2016 - Status: Complete
- Submit Two Additional Milestones for EPA Review and Approval - Date: 12/1/2016 - Status: Complete
- Additional Milestone 1: Transfer of the Existing SCADA system to the New Headworks Building - Date: 11/21/2017 - Status: Complete
- Additional Milestone 2: Startup and Testing of the Secondary Influent Pump Station in the New Solids Building - Date: 5/9/2019 - Status: Complete
- BAF Substantial Completion - Date: ~~4/24/2019~~ 12/31/2019 - Status: Complete
- Achieve Compliance with NPDES Permit Limits - Date: 4/1/2020 - Status: Complete
- Achieve Compliance with Consent Decree Total Nitrogen Limits* - Date: June 1, 2020 – Status: Complete

*Seasonal Limit: May through October

Erik provided a description of the NPDES permit limits and Consent Decree total nitrogen limits. Effluent limits for total suspended solids (TSS) and biological oxygen demand (BOD) are regulated by the NPDES permit. The monthly average limit for both constituents in the plant effluent is 30 mg/L. These limits took effect April 1st. The monthly average of effluent BOD and TSS for February – August were presented and the effluent concentrations of the two constituents were well below the limit. See the table below for a summary.

Peirce Island TSS and BOD Effluent Results

	TSS	BOD
NPDES Permit Month Average Effluent Limit (mg/L)	30	30
Recorded Monthly Average, February (mg/L)	13.3	12.8
Recorded Monthly Average, March (mg/L)	17.3	9.8
Recorded Monthly Average, April (mg/L)	11	5.7
Recorded Monthly Average, May (mg/L)	13.6	6.4
Recorded Monthly Average, June (mg/L)	28.3	10.2
Recorded Monthly Average, July (mg/L)	27.4	9.8
Recorded Monthly Average, August (mg/L)	12.7	8.8

As a requirement of the NPDES permit, samples of the WWTF effluent are taken 2-3 times a week and the BOD and TSS concentrations documented. The average concentration of all the samples taken per month is the monthly average that is reported to the NHDES and USEPA. The City is required to submit reports on the Peirce Island WWTF monthly averages on the 15th the following month. Thus, reporting for the month of September will not be issued until October 15th.

Erik proceeded to present the effluent results for total nitrogen (TN) over the months of February – July. The Consent Decree states that the seasonal monthly average (May thru October) for total nitrogen in the effluent be 8.0 mg/L or less. The data from the past several months shows that the TN concentration is decreasing which indicates that biomass necessary to accomplish nitrogen removal within the BAF is growing. The data for the month of August has been collected and it can be seen that the TN effluent concentration was below the permit limit by the Consent Decree schedule. See the table below for a summary of TN Effluent data.

Peirce Island TN Effluent Results

	TN
Consent Decree Seasonal Monthly Average Effluent Limit (mg/L)	8
Recorded Monthly Average, February (mg/L)	17.9
Recorded Monthly Average, March (mg/L)	16.1
Recorded Monthly Average, April (mg/L)	11.6
Recorded Monthly Average, May (mg/L)	9.5
Recorded Monthly Average, June (mg/L)	6.6
Recorded Monthly Average, July (mg/L)	4.9
Recorded Monthly Average, August (mg/L)	6.1

The project team is continuing to coordinate construction with community events, however due to the Coronavirus (COVID-19) State of Emergency, there are no community events scheduled at this time.

The meeting was opened to public input and comments, however, there were no additional attendees to the live video conference. Terry noted if there are questions, they can be submitted to him or Terry Desmarais via email and responses will be provided.



The next public construction meeting will be October 21, 2020 at 11:00 AM. Whether the Public Meeting is held in person or via a video conference is to be determined prior to the next meeting.

These notes present a summary of the discussion that was held.