



Peirce Island WWTF Upgrade Construction
Public Information Meeting
June 17, 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:

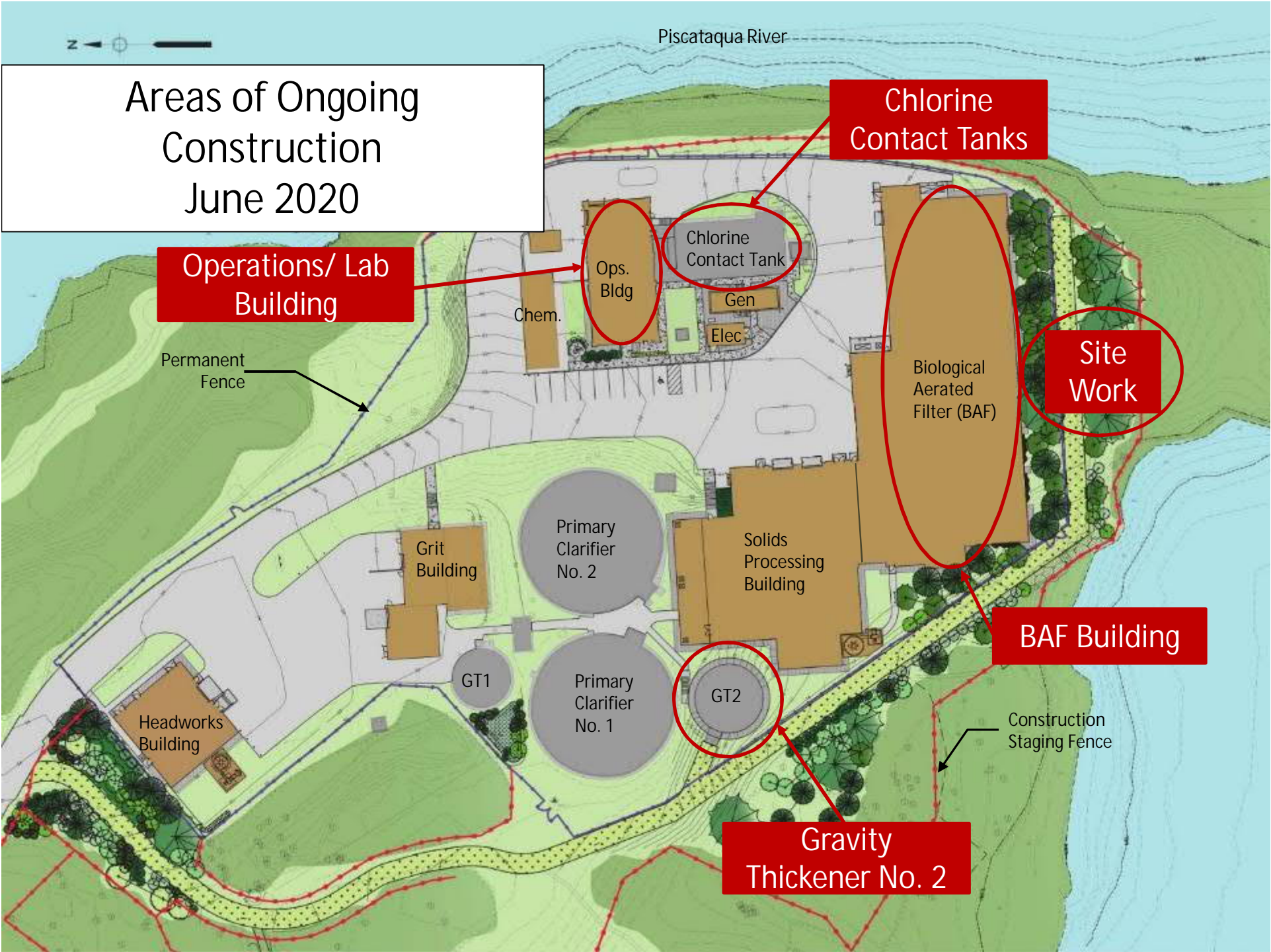
- Terry Desmarais, City Engineer, 603-766-1421
tldesmarais@cityofportsmouth.com

- 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.





Areas of Ongoing Construction
June 2020

Operations/ Lab Building

Chlorine Contact Tanks

Site Work

BAF Building

Gravity Thickener No. 2

Piscataqua River



Permanent Fence

Construction Staging Fence

Headworks Building

Grit Building

Chem.

Ops. Bldg

Chlorine Contact Tank

Gen

Elec

Biological Aerated Filter (BAF)

Solids Processing Building

Primary Clarifier No. 2

GT1

Primary Clarifier No. 1

GT2

Site Overview November 2016



June 17, 2020



Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



June 17, 2020



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Work Completed Since Last Meeting



Site Work

June 17, 2020



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Work Completed Since Last Meeting



Site Work



Work Completed Since Last Meeting



Site Work



Initial 2016 Rendering of BAF Building



Current View of BAF Building



June 17, 2020



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Work Completed Since Last Meeting



Site Work



Work Completed Since Last Meeting



Ops/Lab Building

June 17, 2020



Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



Ops/Lab Building

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Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



Ops/Lab Building

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Peirce Island WWTF Upgrade Construction

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Work Completed Since Last Meeting



Ops/Lab Building

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Work Completed Since Last Meeting



Ops/Lab Building

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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 startup of the BAF Building process
- Continue minor interior touch up painting in the BAF, Solids and Grit Buildings
- Continue integration of the BAF control system with the plant's SCADA system
- Complete startup of Gravity Thickener No. 2
- Complete installation of roofing system, interior metal stud framing, interior masonry, and exterior brick work at the new Operations/Lab Building

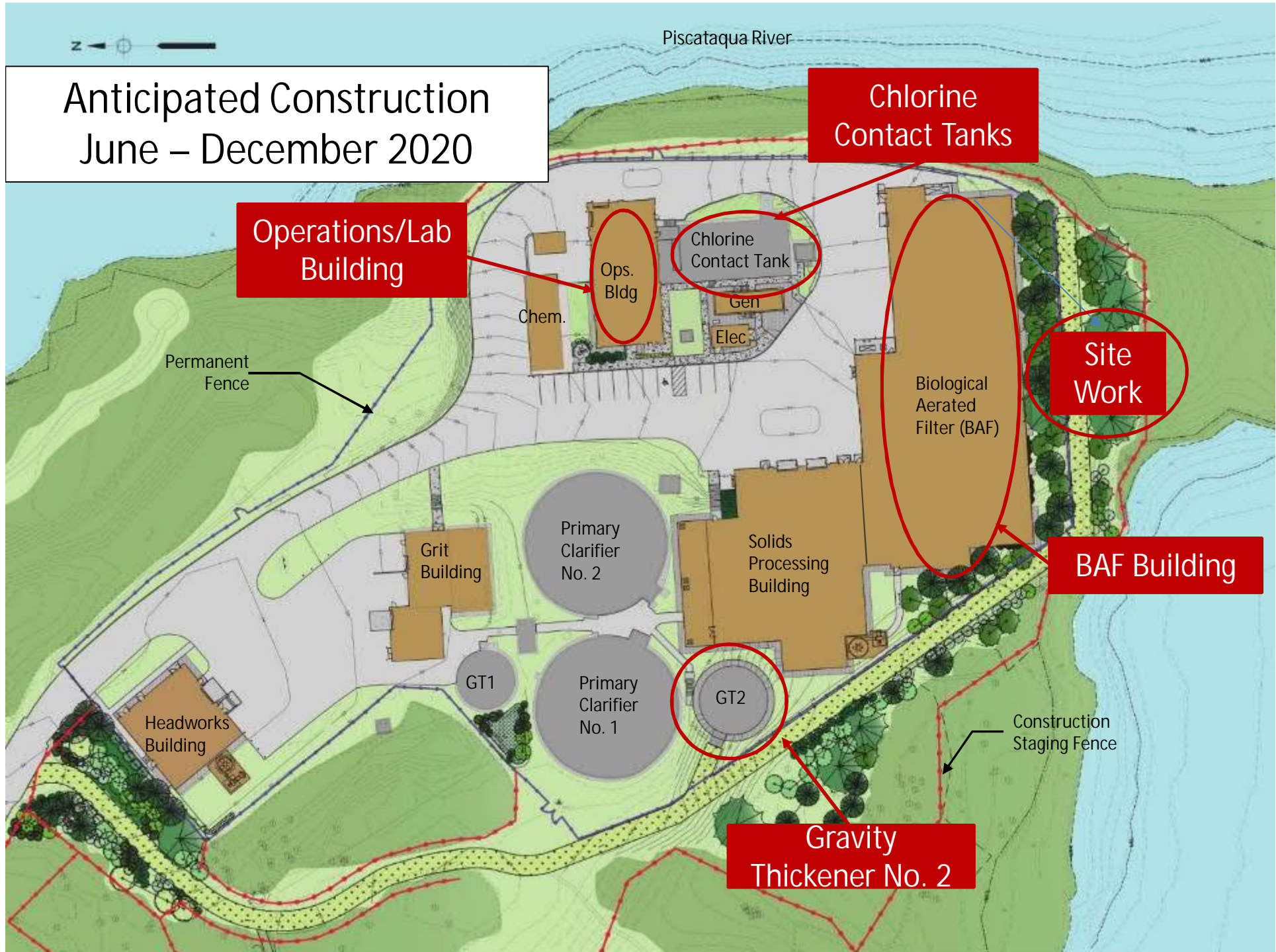


Work to be Completed in Coming Month

- Continue mechanical process work at the new Operations/Lab Building
- Continue HVAC, electrical, and plumbing rough in work at the new Operation /Lab Building lower level
- Continue installation of landscaping and work to bring site to final grade
- Complete placement of asphalt access walkways
- Complete installation of 12' wide Vegetated Maintenance Corridor
- Continue installation of chain link fence and gates
- Continue installation of site lighting
- Start installation of granite curb and concrete block retaining wall



Anticipated Construction
June – December 2020



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
- Total Contract: \$75.022 million



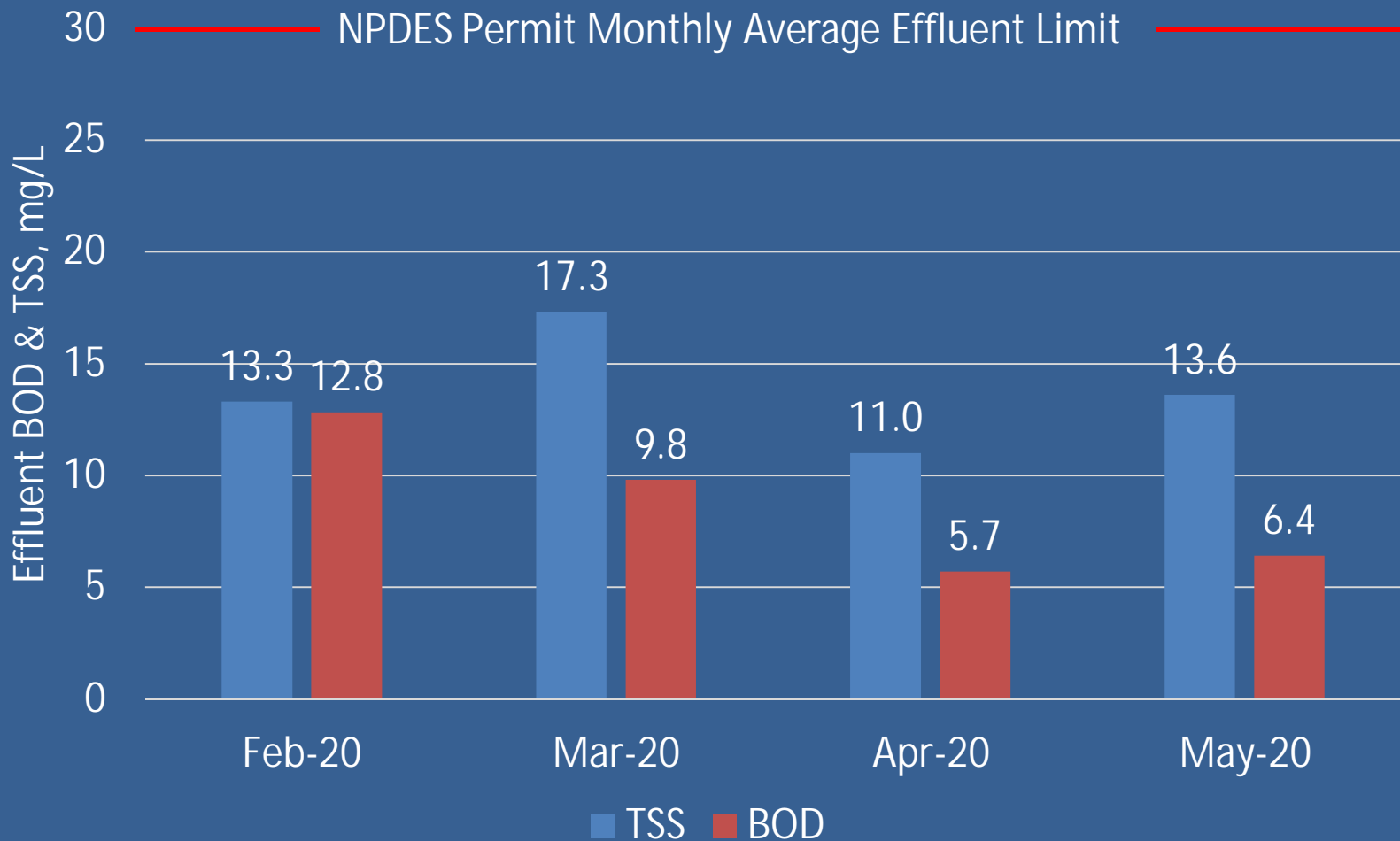
Consent Decree Schedule

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	On Schedule

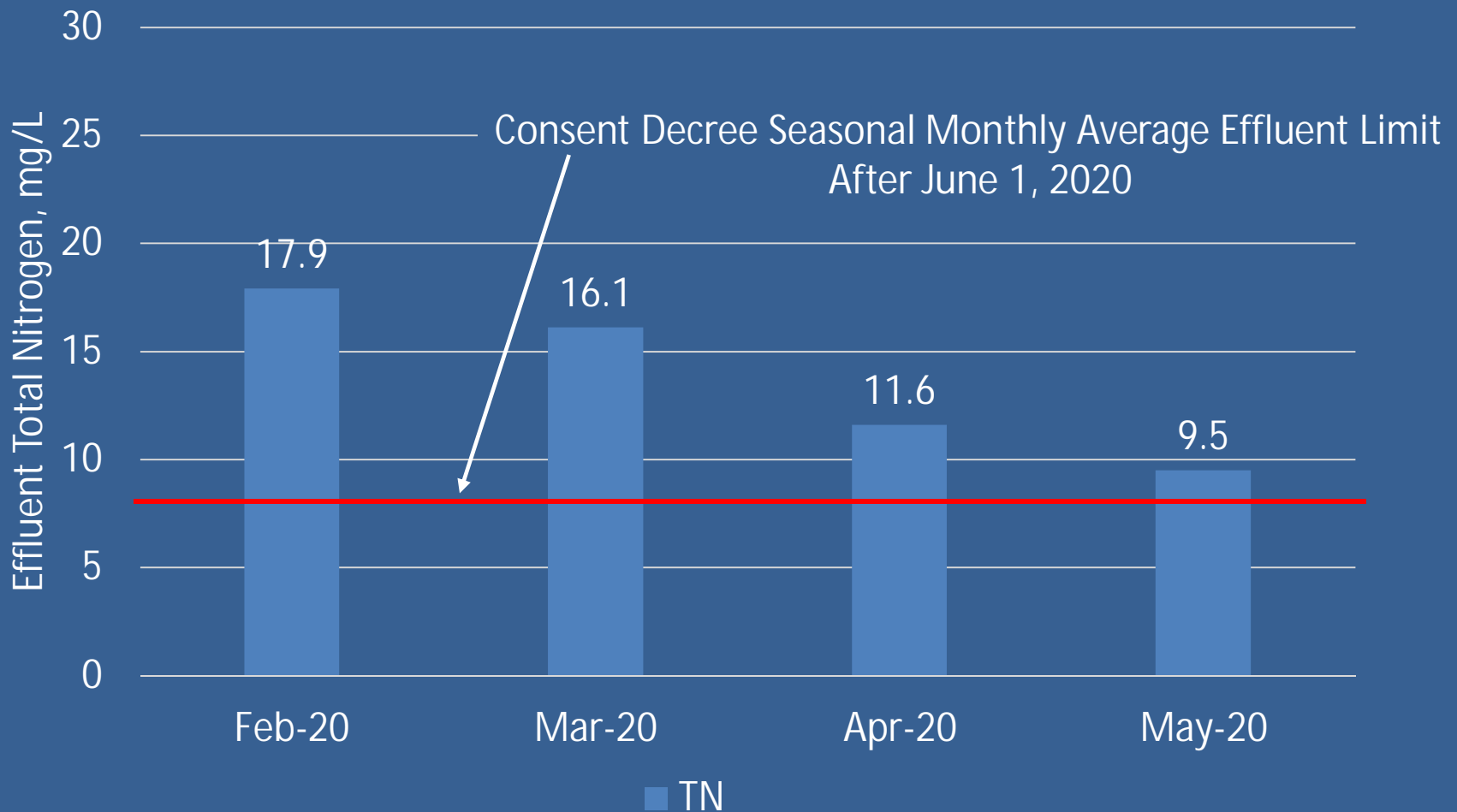
*Seasonal Limit May through October



Effluent Results



Effluent Results



Events and Recreation

- Upcoming
 - None scheduled at this time





Public Input / Comments / Concerns

Next Meeting

- Public Construction Meeting
 - Next Meeting: July 15, 2020, 11:00 AM



Meeting Notes

Subject	Peirce Island WWTF Upgrade – Monthly Public Construction Meeting
Date	June 17, 2020
Time	11:00 AM
Location	Portsmouth, NH

Due to the Coronavirus (COVID-19) State of Emergency, the June 17, 2020 public meeting was held live at 11:00 AM over a Zoom video call pursuant to NH RSA-91A: 2 Paragraph 3B guidelines for the subject project. 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:

- Terry Desmarais, City Engineer
- Jon Pearson, AECOM Project Manager
- Andy Brodeur, Methuen Construction, Project Manager

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.

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

- Biological Aerated Filter (BAF) Building
- Gravity Thickener No. 2
- Existing Sludge Processing / New Operations/Lab Building
- Chlorine Contact Tanks
- Site Work

Jon 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 landscaping is continuing at the Headworks, Solids, and BAF Buildings. On the west side of the island, construction of the 12' wide vegetated maintenance corridor is continuing. At the BAF Building, planting of the Virginia Creeper vines that grow up on the cable trellis on the south face of the building has been completed. In addition, portions of the permanent fence are being installed and protective bollards at the chemical fill stations and generator have been installed.
- View of BAF Building from Piscataqua River – In 2016, in preparation for the project a rendering was prepared to illustrate the appearance of the WWTF from Shapleigh Island looking to the BAF Building would be after construction. This rendering has been used as the opening slide of the Construction Progress Public Meeting presentations for the past several years. Recently a photograph was taken from the same vantage point and shows the current conditions. A comparison of the rendering and recent photograph show that what has been installed is nearly identical to what was planned in 2016.
- 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 underway and installation of the brick façade is continuing. Note that the Upper Level will consist of a metal panel façade as well. Installation of the metal roof deck is continuing. In the interior of the building, installation of the metal stud walls is continuing on the Upper Level. Rough-in work for the mechanical, electrical and plumbing piping in the Upper Level is also underway. In the Lower Level, work to construct equipment pads and place equipment is underway.

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 startup of the BAF Building process.
- Continue minor interior touch up painting in the BAF, Solids, and Grit Buildings.
- Continue integration of the BAF control system with the plant's SCADA system.
- Complete startup of Gravity Thickener No. 2.
- Complete installation of roofing system, interior metal stud framing, interior masonry, and exterior brick work at the new Operations/Lab Building
- Continue mechanical process work at the new Operations/Lab Building.
- Continue HVAC, electrical, and plumbing rough in work at the new Operations/Lab Building lower level.
- Continue installation of landscaping and work to bring site to final grade.
- Complete placement of asphalt access walkways.
- Complete installation of 12' wide Vegetated Maintenance Corridor.
- Continue installation of chain link fence and gates.
- Continue installation of site lighting.
- Start installation of granite curb and concrete block retaining wall.

Andy then discussed the work anticipated through June and into December 2020 includes:

- Headworks Building – 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 landscaping on the west and south sides of the building. 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 installation of new structural steel, including roof beams, truss system and decking. Complete exterior sheeting and exterior masonry work. Complete installation of the new roof system 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. Complete installation of bollards at the overhead doors. Complete the installation of interior wall framing, sheeting, and painting. Complete installation of mechanical process piping rough-in work and installation of equipment in the lower level, including the chemical systems. On the first floor, complete mechanical, electrical and plumbing rough-in work. On the first floor begin case work and installation of laboratory equipment. Complete installation of flooring systems.
- Primary Clarifiers – Complete installation of grating at the Primary Clarifier Effluent Distribution box.
- Site Work – Construct remainder of binder course pavement at the Operations/Lab Building and install curbing. Complete installation of sidewalks, 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; installation of the 12' wide vegetated maintenance corridor; installation of the rain garden, and installation of the permanent WWTF perimeter fence. Complete installation of remaining bollards and guard posts. Terry noted that although it is not shown in the rendering, the City intends to extend the trail that runs along the Piscataqua River side of the site. The trail will begin at the existing trail overlook and continue to the south east corner of the BAF Building.

Jon 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
- Total Contract: \$75.022 million

Jon 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: ~~12/1/2019~~ 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: On Schedule

*Seasonal Limit: May through October

In regards to the Consent Decree Total Nitrogen milestone, Jon noted that although June 1st has passed, the data to determine whether the limit was met is currently being collected throughout the month of June and will be reported in mid-July.

Jon 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 governed 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 – May 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

	NPDES Permit Month Average Effluent Limit (mg/L)	Recorded Monthly Average, February (mg/L)	Recorded Monthly Average, March (mg/L)	Recorded Monthly Average, April (mg/L)	Recorded Monthly Average, May(mg/L)
TSS	30	13.3	17.3	11.0	13.6
BOD	30	12.8	9.8	5.7	6.4

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 June will not be issued until July 15th.

Jon proceeded to present the effluent results for total nitrogen (TN) over the months of February, March and April. As noted in the project milestone discussion, the final milestone for the project is to meet the Consent Decree TN limits by June 1, 2020. 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 month by month which indicates that biomass necessary to accomplish nitrogen removal within the BAF is growing. Work is proceeding towards meeting the Consent Decree TN permit for the month of June, however, the data is currently being collected and will not be reported until July 15th. See the table below for a summary of TN Effluent data.

Peirce Island TN Effluent Results

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

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 via email and responses will be provided.

The next public construction meeting will be July 15, 2020 at 11:00 AM. Whether the Public Meeting is held in person via a video conference is to be determined prior to the next meeting.

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