

**Due to the Coronavirus (COVID-19) State of Emergency, the April 15, 2020 Public Information Meeting was previously recorded and posted online. Questions on this presentation will be received by email to Terry Desmarais, City Engineer at [tldesmarais@cityofportsmouth.com](mailto:tldesmarais@cityofportsmouth.com) until April 17, 2020. Answers will be posted on the City's website at <https://www.cityofportsmouth.com/publicworks/wastewater/public-meetings>**



# Peirce Island WWTF Upgrade Construction

## Public Information Meeting

### April 15, 2020

# Topics of Discussion

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- 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

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- 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.





Piscataqua River

# Areas of Ongoing Construction April 2020

**Operations/ Lab Building**

**Chlorine Contact Tanks**

Permanent Fence

Ops. Bldg

Chem.

Chlorine Contact Tank

Gen

Elec

**Site Work**

Biological Aerated Filter (BAF)

**BAF Building**

Grit Building

Primary Clarifier No. 2

Solids Processing Building

Construction Staging Fence

GT1

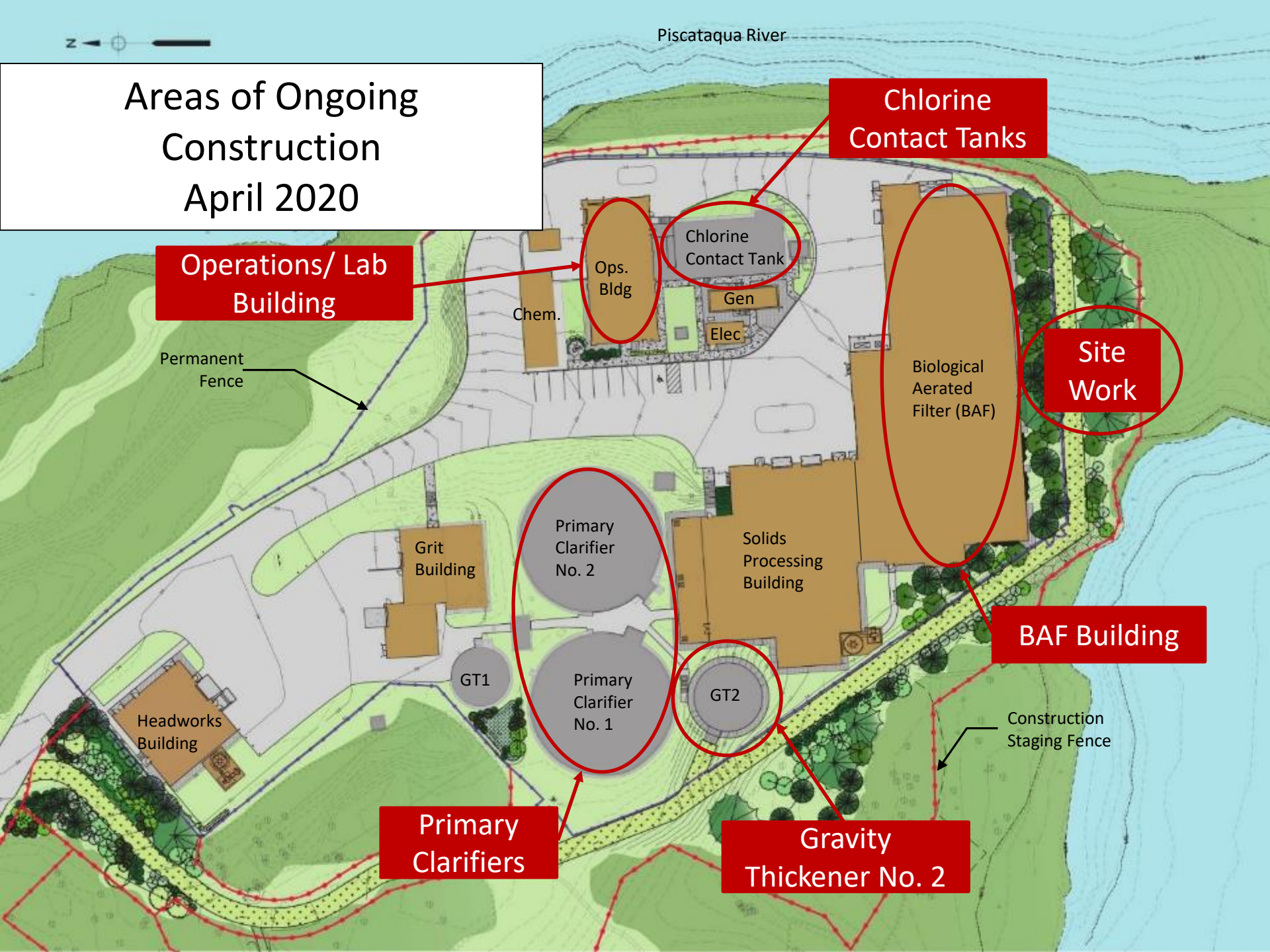
Primary Clarifier No. 1

GT2

Headworks Building

**Primary Clarifiers**

**Gravity Thickener No. 2**



# Site Overview November 2016



# Work Completed Since Last Meeting



# Work Completed Since Last Meeting



Site Work



# Work Completed Since Last Meeting



## Site Work





# Work Completed Since Last Meeting



Site Work



# Work Completed Since Last Meeting



**Primary Clarifier**

# Work Completed Since Last Meeting



# Work Completed Since Last Meeting



Ops/Lab Building



# Work Completed Since Last Meeting



**Ops/Lab Building**



# Work Completed Since Last Meeting



**Ops/Lab Building**

# Work Completed Since Last Meeting



Ops/Lab Building



# Work Completed Since Last Meeting



Ops/Lab Building





# Work Completed Since Last Meeting



**Gravity Thickener No. 2**



# Work to be Completed in Coming Month

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- 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 installation, check out, and startup of Gravity Thickener No. 2 mechanism and scum pumps
- Continue structural and architectural modifications to the new Operations/Lab Building
- Begin mechanical process work at the new Operations/Lab Building
- Prepare site for planting and begin installation of landscaping



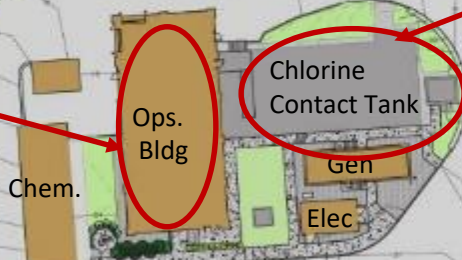


Piscataqua River

Anticipated Construction  
April – October 2020

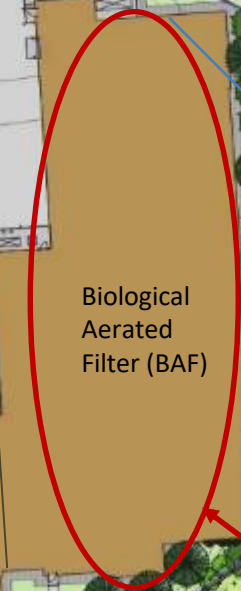
Chlorine Contact Tanks

Operations/Lab Building

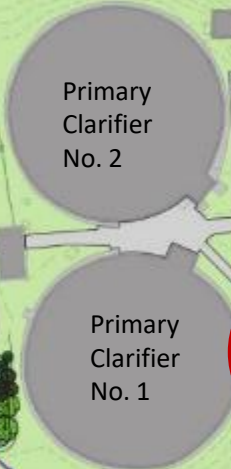


Site Work

Permanent Fence



BAF Building



Gravity Thickener No. 2

Construction Staging Fence



Headworks Building

Grit Building

Solids Processing Building

GT1

Primary Clarifier No. 1

Primary Clarifier No. 2

Ops. Bldg

Chlorine Contact Tank

Gen

Elec

Chem.

Biological Aerated Filter (BAF)

Site Work

BAF Building

Gravity Thickener No. 2

Construction Staging Fence

# Project Construction Costs

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- 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
- Total Contract: \$74.780 million



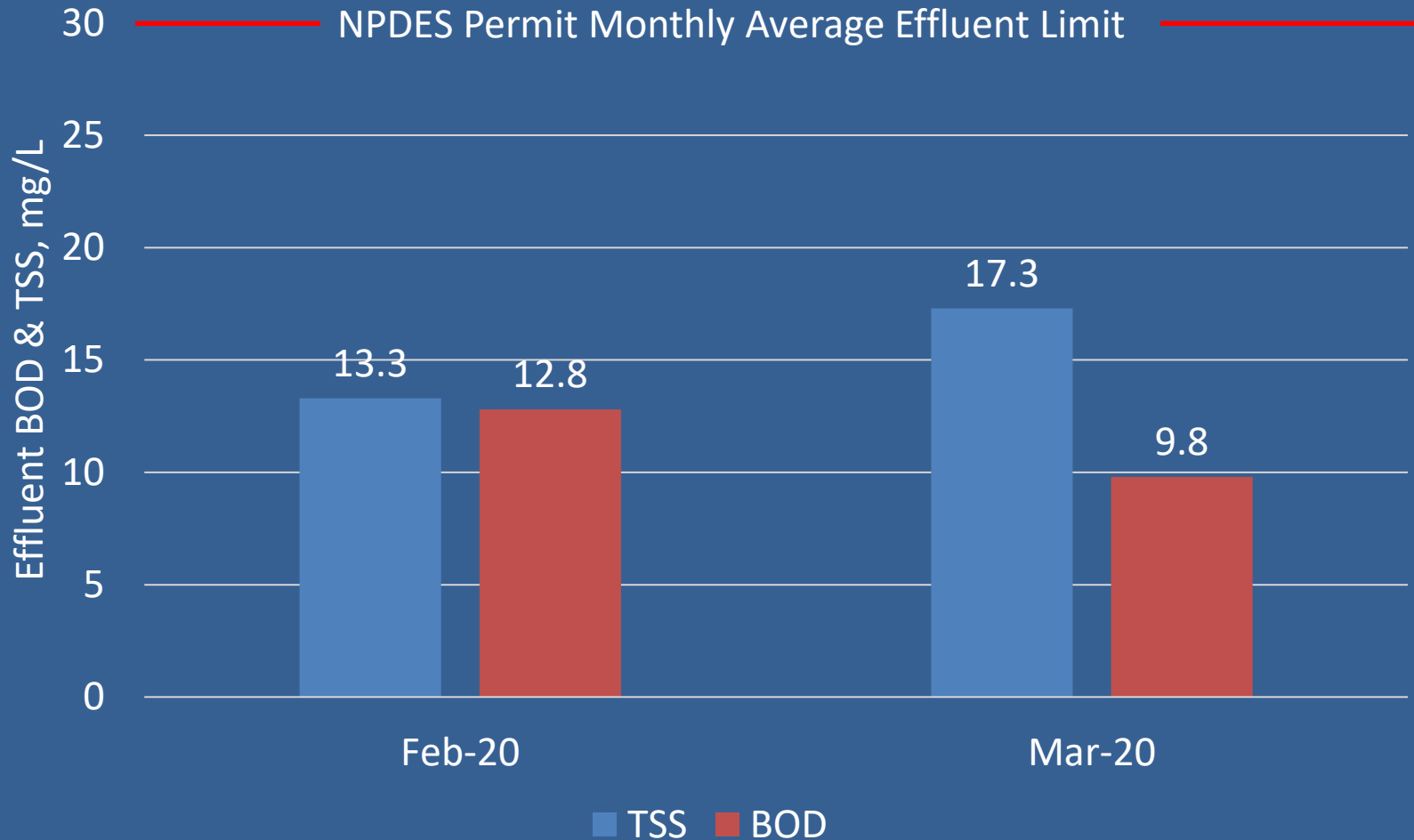
# Consent Decree Schedule

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	<del>December 1, 2019</del> 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



# Events and Recreation

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- Upcoming
  - None scheduled at this time





# Public Input / Comments / Concerns

Questions on this presentation will be received by email to Terry Desmarais, City Engineer at [tldesmarais@cityofportsmouth.com](mailto:tldesmarais@cityofportsmouth.com) until April 17, 2020. Answers will be posted on the City's website at <https://www.cityofportsmouth.com/publicworks/wastewater/public-meetings>



# Next Meeting

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- Public Construction Meeting
  - Next Meeting: May 20, 2020, 11:00 AM
  - Public Meeting is likely to be pre-recorded similar to this meeting



## Meeting Report

Subject	Peirce Island WWTF Upgrade – Monthly Public Construction Meeting
Date	April 15, 2020
Time	11:00 AM
Location	Portsmouth, NH

Due to the Coronavirus (COVID-19) State of Emergency, the April 15, 2020 Public Construction Meeting was previously recorded and posted online. Questions on the presentation were to be submitted by email to Terry Desmarais, City Engineer at [tldesmarais@cityofportsmouth.com](mailto:tldesmarais@cityofportsmouth.com) until April 17, 2020. Answers were to be posted on the City's website at [www.cityofportsmouth.com/publicworks/wastewater/public-meetings](http://www.cityofportsmouth.com/publicworks/wastewater/public-meetings). 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](http://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:

- Primary Clarifiers
- 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 prepare the site for final landscaping and grading has begun. On the west side of the island, excavation and fill for the vegetated maintenance corridor is underway. The corridor is a 12' pathway that will be used by City personnel for access along the west side of the WWTF and behind the BAF Building. Behind the BAF Building on the south side of the site, work to achieve final grade is underway. Topsoil has been brought in and placed in this area and mowing strips along the south side of the BAF Building have been installed. There are gaps between the mowing strips where vine plantings will be installed, the vines will grow up along the cable trellis system installed on the south side of BAF Building. A requirement of the wetlands permitting associated with the construction work was to remove invasive species from the site. This work has resumed and the removed invasive species are hauled off site for disposal.
- Primary Clarifiers – The primary clarifier scum pumps have been put into service, work this past month included completion of heat tracing and insulation of piping.
- Existing Sludge Processing Building/New Operations/Lab Building – The first floor of the building has been demolished and hazardous material abatement has been completed. Structural work is in progress so that it can be converted from its previous use as a Sludge Processing Building to its new use as the Operations/Lab Building. This includes installation of interior and exterior CMU walls, and infill of the top slab penetrations from the existing staircases that once ran through the slab to connect the two floors. The existing stairs have been removed as the 1<sup>st</sup> floor and bottom floor of the building will be isolated. Additional structural modifications that are underway include the installation of the brick shelf that will be used to support the brick work for the exterior building façade. Exterior site work at the Operations/Lab Building consists of preparation for construction of walkways, ramps and stairs, this includes installation of frost walls and underground electrical conduit.
- Gravity Thickener No. 2 – Installation of the railings at the gravity thickener are underway and near completion.

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.
- Continue installation, check out, and startup of Gravity Thickener No. 2 mechanism and scum pumps.
- Continue structural repair and modifications to the new Operations/Lab Building.
- Begin mechanical process work at the new Operations/Lab Building.
- Prepare site for planting and begin installation of landscaping.

Andy then discussed the work anticipated through April and into October 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.

- BAF Building – Complete minor punch-list items. Complete backfilling and grading around the building, and complete landscaping on the west and south sides of the building.
- Solids Building – Complete punch-list items. Complete landscaping on the west side of the building.
- Existing Sludge / New Operations/Lab Building – Complete installation of new floor slab, including floor slab infills, membrane layer, insulation and 4” topping slab. Complete installation of new structural steel, including roof beams, truss system and decking. Complete exterior wall framing and sheeting, and exterior masonry work. Complete installation of the new roof system. Complete installation of interior CMU walls and chemical containment curbs in the lower level. Continue the installation of interior wall framing and sheeting. At the lower level, continue mechanical process piping rough-in work. On the first floor, begin mechanical, electrical and plumbing rough-in work. Complete installation of overhead doors at the building.
- Gravity Thickener No. 2 – Complete hand railings and finishes at Gravity Thickener No. 2.
- Primary Clarifiers – Complete painting and installation of turnbuckles. Complete installation of grating at the Primary Clarifier Effluent Distribution box.
- Underground Piping and Utility Services – Complete installation of utility connections to the Operations/Lab Building. Construct remainder of binder course pavement at the Operations/Lab Building and install curbing. Continue installation of sidewalks, stairs and railings at the Operations/Lab Building. Final grading and landscaping activities will resume, this includes but is not limited to, grading for asphalt walkways and stone mowing strips; installation of the 12’ vegetated maintenance corridor; installation of the rain garden and installation of the permanent WWTF perimeter fence; and removal of invasive species. Complete installation of remaining bollards and guard posts.

Terry noted that additional work, outside of the WWTF perimeter fence line includes, construction of an extension of the public trail that extends from the BAF Building to the existing overlook, replacement of the water main from the Pool House to the Peirce Island Bridge, and there is an ongoing discussion to raise the elevation of Peirce island Road by the snow dump in order to accommodate the rise in sea level. A schematic summarizing the ongoing work that is outside of the construction fence but near the staging areas will be provided in the next meeting.

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
- Total Contract: \$74.780 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: ~~4/4/2019~~ 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

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 1<sup>st</sup>. The monthly average of effluent BOD and TSS for February and March were presented and it can be seen that the effluent concentrations of the two constituents were well below the limit before the permit took effect. See the table below for a summary.

**Peirce Island Effluent Results**

	NPDES Permit Month Average Effluent Limit (mg/L)	Recorded Monthly Average, February (mg/L)	Recorded Monthly Average, March (mg/L)
TSS	30	13.3	17.3
BOD	30	12.8	9.8

Monthly average effluent concentrations for the month of April are also trending to be below the permit limits. Terry noted that 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 15<sup>th</sup> the following month. Thus, reporting for the month of April will not be issued until May 15<sup>th</sup>.

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.

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The next public construction meeting will be May 20, 2020 at 11:00 AM. The Public Meeting is likely to be pre-recorded, similar to the April meeting.

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