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Meeting Notes

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

Due to the Coronavirus (COVID-19) State of Emergency, the July 15, 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
- Terry Desmarais, City Engineer
- Erik Meserve, AECOM Project Engineer
- 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.

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

- Biological Aerated Filter (BAF) Building
- 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, including hydroseeding areas that are to have grass. On the west side of the island, construction of the 12' wide vegetated maintenance corridor has been completed. Paving of walkways underway. In addition, portions of the permanent fence and site lighting are being installed, the retaining wall at the Effluent Distribution Box is under construction, and protective bollards at the generator have been installed and painted. There will be a rain garden installed on site for stormwater treatment, construction of which has started.
- 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 with the brick work for the façade being completed this month. Note that the Upper Level will consist of a metal panel façade as well. Installation of the roof system has been completed and work to install HVAC equipment on the roof is underway. In addition to HVAC equipment, solar tubes have been installed on the roof in many of the rooms. These tubes allow for natural lighting to enter the building and reduce electricity use. 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 install process piping is underway. In the Electrical Room, electrical and instrumentation components such as the motor control center (MCC), SCADA remote input/output (RIO) panel, and transformers have been installed.

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 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.
- Begin installation of exterior windows, doors and drywall at 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 lower level.
- Continue installation of chain link fence and gates.
- Continue installation of granite curb, sidewalks and pavement.

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

- Headworks Building – Complete minor punch-list items at the Headworks Building.
- Grit Building – Complete minor punch-list items.
- BAF Building – Complete minor punch-list items.
- Solids Building – Complete punch-list items.
- Existing Sludge / New Operations/Lab Building – Complete exterior metal wall panel installation. 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, 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, plumbing, and fire protection

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 rain garden, and installation of the permanent WWTF perimeter fence. Complete installation of remaining bollards and guard posts.

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
- Total Contract: $75.022 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: ~~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: 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 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 – June 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

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 July will not be issued until August 15th. There was an increase in TSS, however the average was below the permit limit and the BAF is being optimized to resolve this issue.

Erik proceeded to present the effluent results for total nitrogen (TN) over the months of February – June. 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, and the monthly average (June thru October) 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. The data for the month of June has been collected and the TN effluent concentration is 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

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 August 19, 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.