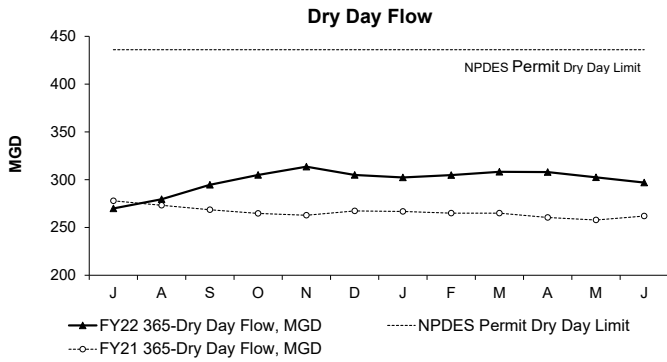
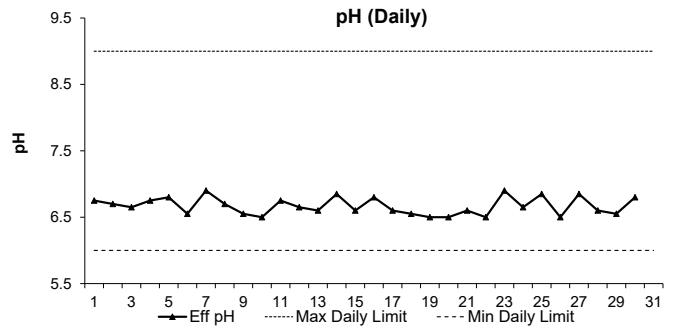


Deer Island Operations

June 2022 - FY22

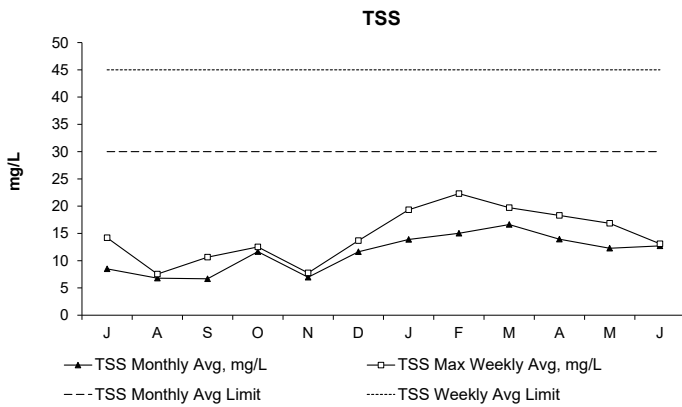


June's Dry Day Flow is the average of all dry weather influent flows over the previous 365 days from 7/1/2021 to 6/30/2022. The Dry Day Flow for the month was 297.0 MGD, well below the permit limit of 436 MGD. Previous Dry Day Flow averages had been elevated since July due to much higher-than-expected plant flows during the first several months of the fiscal year as a result of much higher-than-expected rainfall.



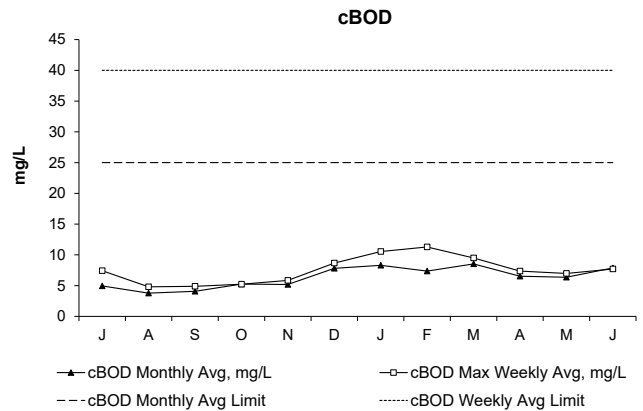
In June, all pH measurements were fairly typical for the season and within permit limits.

pH is a measure of the acidity or basicity of the effluent. Small fluctuations in pH do not have an adverse effect on marine environments. Because pure oxygen is used in the activated sludge reactors, the effluent pH tends to be at the lower range.



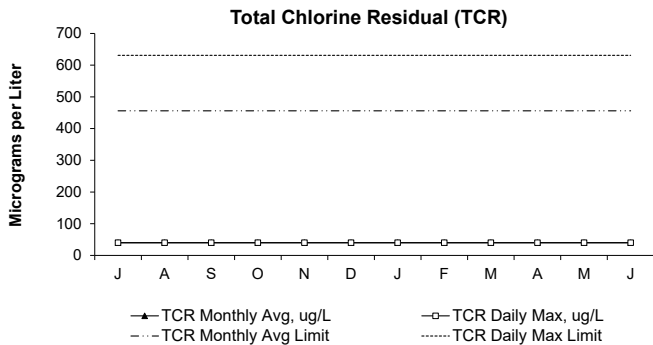
In June, both the weekly and monthly concentrations of TSS were below permit limits. The elevated TSS Monthly Avg and Max Weekly Avg in January and February were due to the impacts of several rain/snow melt events which resulted in periods with higher plant flows and a decrease in removal efficiencies. Additionally, the increase in effluent TSS during the spring season is not uncommon due to the seasonal change in the wastewater temperature resulting in a shift in the biological activity of the secondary activated sludge microbes.

TSS, or Total Suspended Solids, in the effluent is a measure of the amount of solids that remain suspended after treatment.



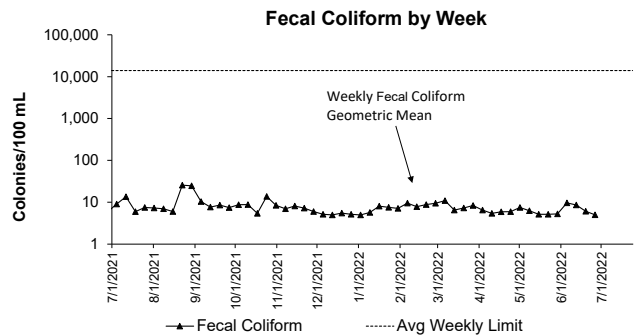
In June, both the weekly and monthly concentrations of cBOD were well below permit limits. The elevated cBOD Monthly Avg and Max Weekly Avg in January and February were due to the impacts of several rain/snow melt events which resulted in periods with higher plant flows and a decrease in removal efficiencies. Additionally, the increase in effluent cBOD during the spring season is not uncommon due to the seasonal change in the wastewater temperature resulting in a shift in the biological activity of the secondary activated sludge microbes.

cBOD, or Carbonaceous Biochemical Oxygen Demand, is a measure of the amount of dissolved oxygen required for the decomposition of organic materials in the environment.



In June, both the maximum daily and monthly concentrations of TCR were below permit limits. The TCR Monthly Avg and the TCR Daily Max values were non-detectable at 40 ug/L each month in FY22. Therefore, both parameters appear to be represented by the same trendline in the above graph.

TCR, or Total Chlorine Residual, in the effluent is a measure of the amount of chlorine that remains after the disinfection/dechlorination process. If the chlorine residual in the effluent is too high, it may threaten marine organisms.



In June, all permit conditions for Fecal Coliform were met. Fecal Coliform is an indicator for the possible presence of pathogens. The levels of these bacteria after disinfection show how effectively the plant is inactivating many forms of disease-causing microorganisms.

There are four (4) conditions in the permit that must be met: daily geometric; weekly geometric; 10% of all samples in a month; and greater than three (3) consecutive samples not to exceed 14,000 colonies/100mL.