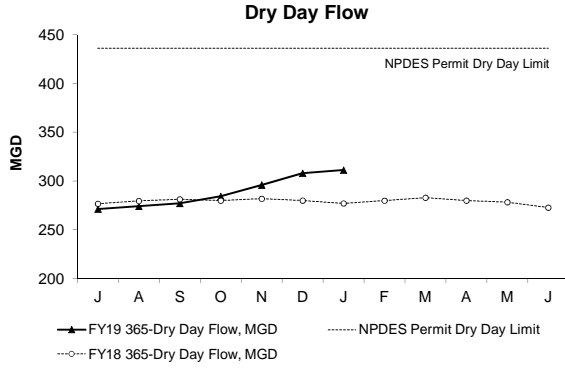


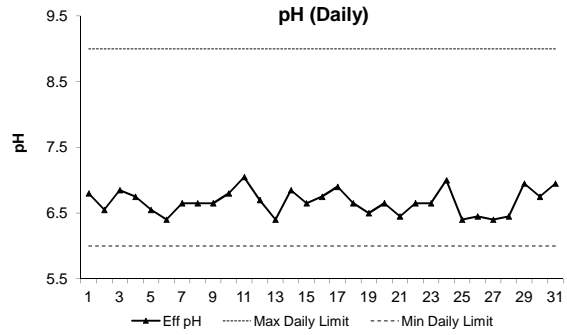
Deer Island Operations

January 2019 - FY19

Treatment Plant Performance

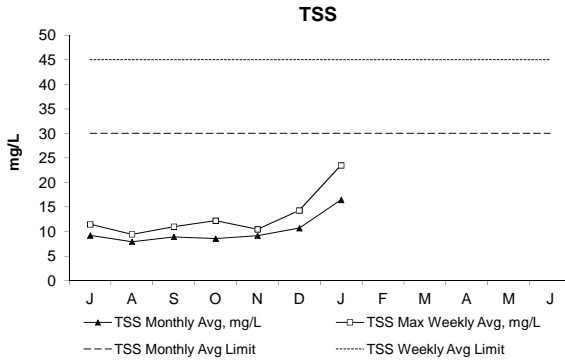


January's Dry Day Flow is the average of all dry weather influent flows over the previous 365 days from 2/1/2018 to 1/31/2019. The Dry Day Flow for the month was 311.2 MGD, well below the permit limit of 436 MGD. The recent increasing trend in the Dry Day Flow is a result of the much higher than average precipitation observed in November and December which has caused plant flow to remain elevated even during designated dry day periods.



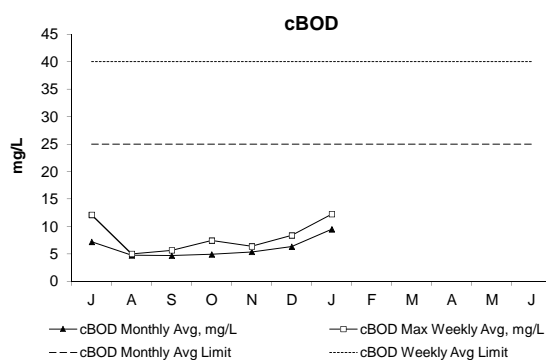
In January, all pH measurements were fairly typical for the season and within permit limits.

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.



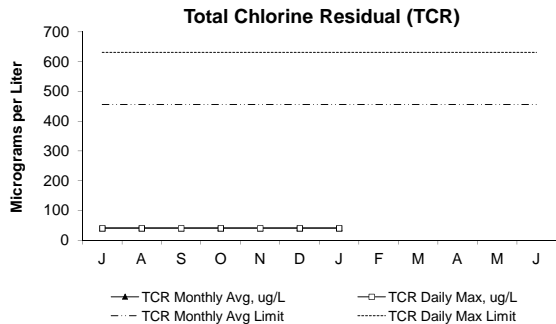
In January, both the weekly and monthly concentrations of TSS were below permit limits. The elevated TSS Monthly Avg and Max Weekly Avg in January were due to the impacts of several significant rain/snow melt events which resulted in an extended period of sustained high plant flow and a decrease in removal efficiencies as a result of secondary blending. This increase in effluent TSS is not uncommon during this time of the season.

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



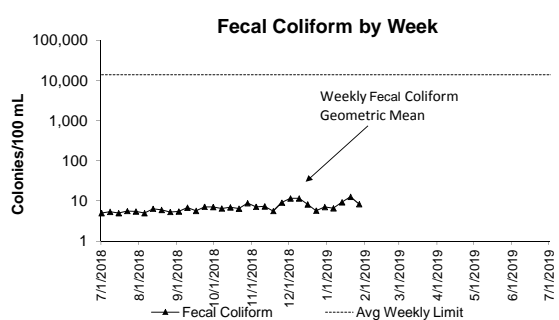
In January, both the weekly and monthly concentrations of cBOD were well below permit limits. The elevated cBOD Monthly Avg and Max Weekly Avg in January were due to the impacts of several significant rain/sno melt events which resulted in an extended period of sustained high plant flow and a decrease in removal efficiencies as a result of secondary blending. This increase in effluent cBOD is not uncommon during this time of the season.

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 January, both the maximum daily and monthly concentrations of TCR were below permit limits. Both the TCR Monthly Avg and the TCR Daily Max values were non-detectable at 40 ug/L from July through January. 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 January, 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 mean; weekly geometric mean; 10% of all samples in a month; and greater than three (3) consecutive samples not to exceed 14,000 colonies/100mL.