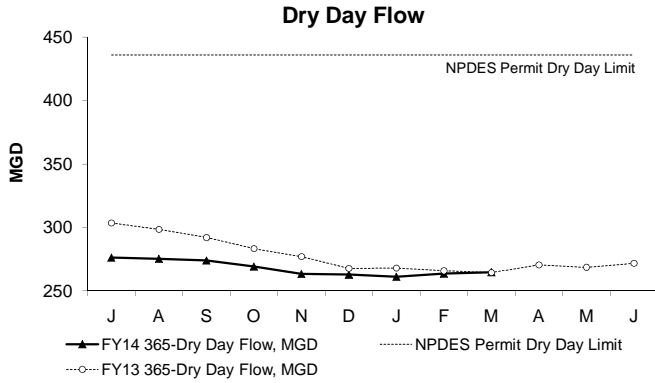
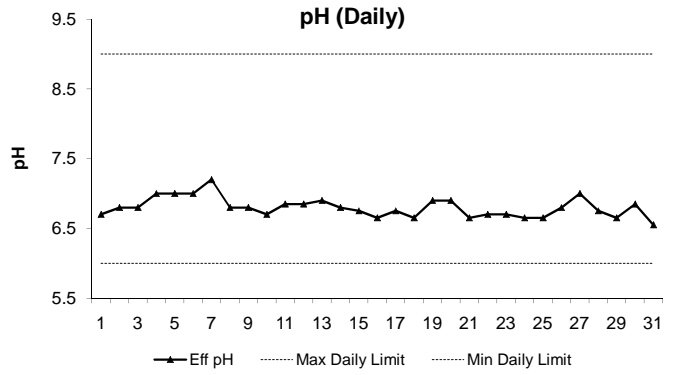


# Massachusetts Water Resources Authority Deer Island Treatment Plant Performance March 2014

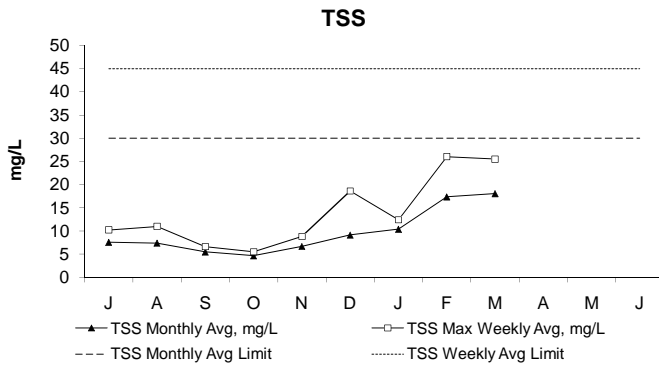


March's Dry Day Flow is the average of all dry weather influent flows over the previous 365 days from 4/1/2013 to 3/31/2014. The Dry Day Flow for March was 264.7 MGD, well below the permit limit of 436 MGD.



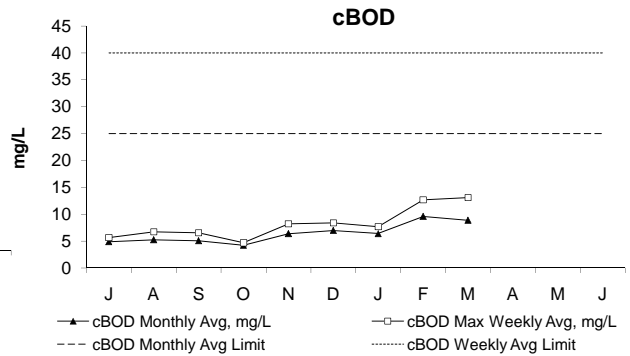
In March, all pH measurements were fairly typical for the season and within permit limits.

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.



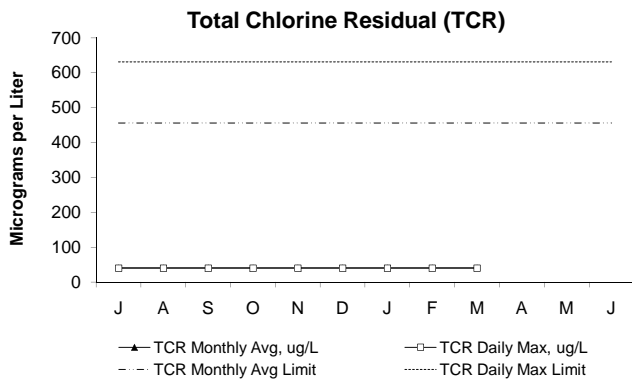
In March, both the weekly and monthly concentrations of TSS were below permit limits and within the expected ranges for the season. Both the Monthly and the Max Weekly Avg TSS concentrations were slightly elevated this month due to a combination of factors including slower settling as a result of the wastewater being denser during the winter, the colder temperatures resulting in slower microbiological activity in the secondary activated sludge process, and also because of slightly higher plant flows following several rain events combined with snowmelt.

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



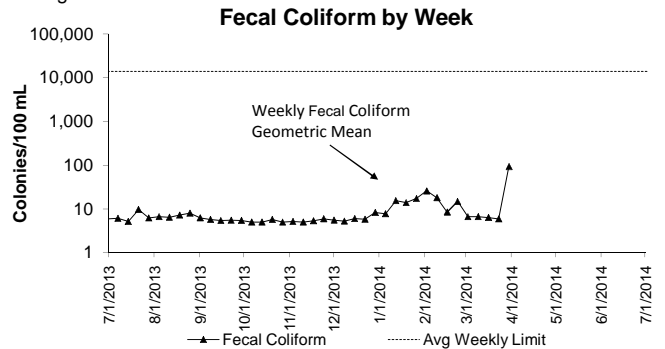
In March, both the weekly and monthly concentrations of cBOD were well below permit limits and within the expected ranges for the season. Both the Monthly and the Max Weekly Avg cBOD concentrations were slightly elevated this month due to the colder temperatures resulting in slower microbiological activity in the secondary activated sludge process and also because of slightly higher plant flows following several rain events combined with snowmelt.

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 March, both the maximum daily and monthly concentrations of TCR were below permit limits. Note: Both the TCR Monthly Avg and the TCR Daily Max values have been non-detectable at 40 ug/L for each month of FY14. Therefore, both parameters are 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 March, all permit conditions for Fecal Coliform were met. Fecal Coliform is an indicator of the presence of pathogens. The levels of these bacteria after disinfection show how effectively the plant is inactivating many forms of disease-causing microorganisms. The very high Avg Weekly Fecal Coliform result for the final week of March is biased high because this average consists of only two (2) days of results (from March 30 and 31) during a very significant storm event with an ongoing secondary blending event.

There are four conditions in the permit that must be met: daily geomean; weekly geomean; 10% of all samples; and greater than three consecutive samples not to exceed 14,000 col/100mL.