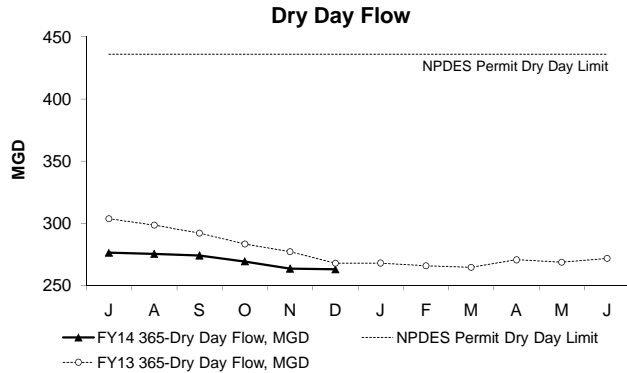
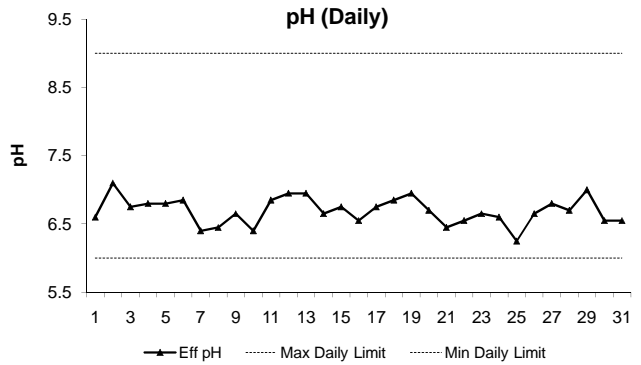


**Massachusetts Water Resources Authority
Deer Island Treatment Plant Performance
December 2013**



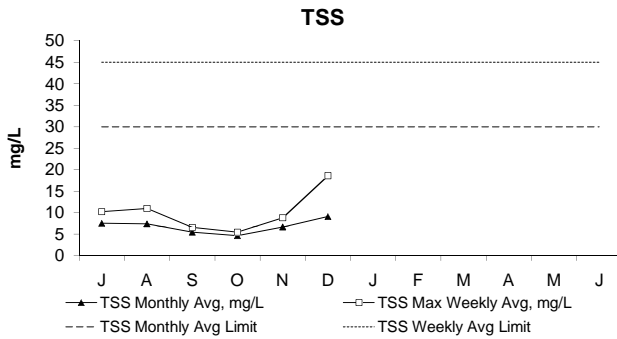
December's Dry Day Flow is the average of all dry weather influent flows over the previous 365 days from 1/1/2013 to 12/31/2013. The Dry Day Flow for December was 262.8 MGD, well below the permit limit of 436 MGD.

The continuation of the low plant flow trend produced a record setting low in the 365-dry day flow by the end of December.



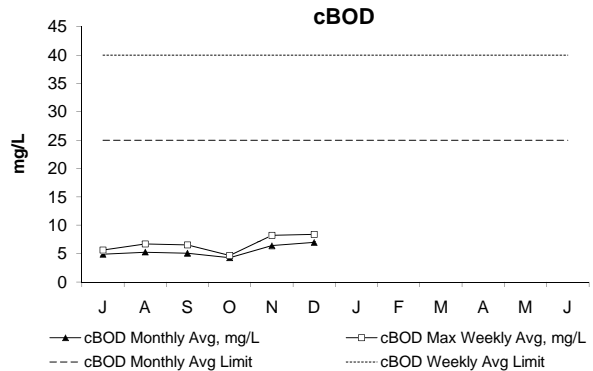
In December, all pH measurements were fairly typical for the season and within permit limits.

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.



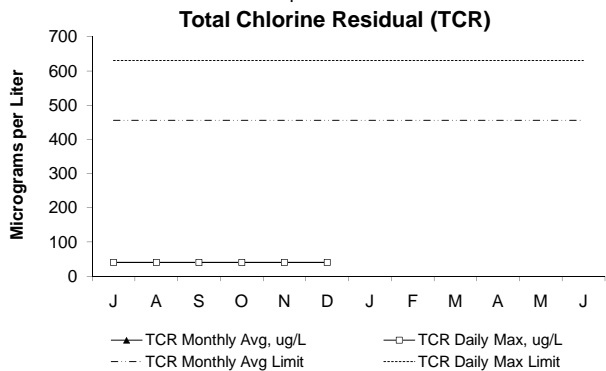
In December, both the weekly and monthly concentrations of TSS were below permit limits and within the expected ranges for the season. The TSS Max Weekly Avg of 18.6 mg/L is biased high as this weekly average included only the results from the last three (3) days in the month when plant flows were elevated as a result of 1.32 inches of rainfall combined with snowmelt on December 29. The result for December 29 alone was 30.2 mg/L of TSS.

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



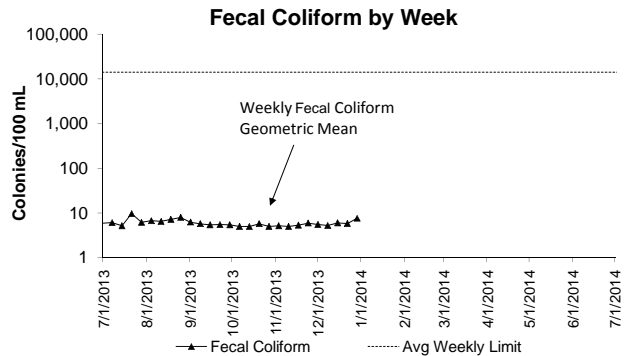
In December, both the weekly and monthly concentrations of cBOD were well below permit limits.

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 December, 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 December, 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.

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