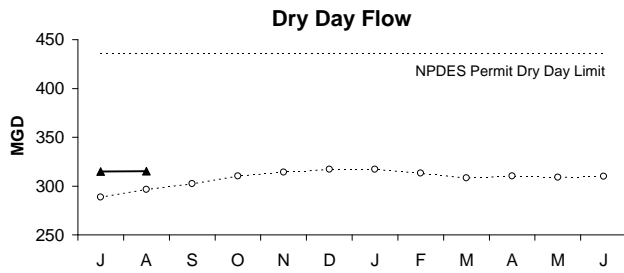


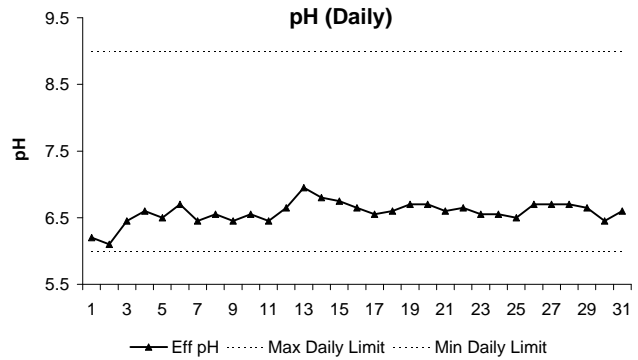
Massachusetts Water Resources Authority Deer Island Treatment Plant Performance August 2009



▲ FY10 365-Dry Day Flow, MGD NPDES Permit Dry Day Limit
 ○ FY09 365-Dry Day Flow, MGD

August's Dry Day Flow is the average of all dry day flows for the period from 9/1/2008 to 8/31/2009.

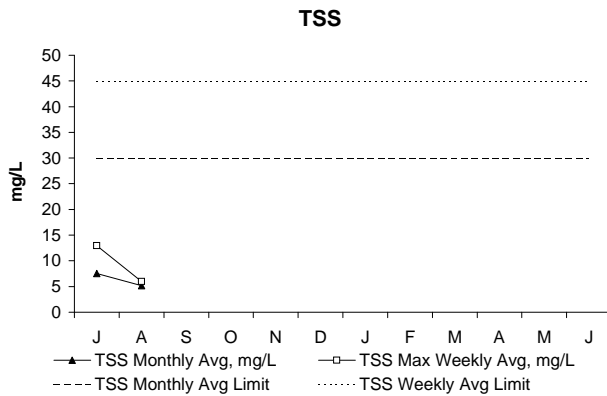
Dry Day Flow is calculated by averaging influent flows over the previous 365 days during dry weather.



▲ Eff pH Max Daily Limit Min Daily Limit

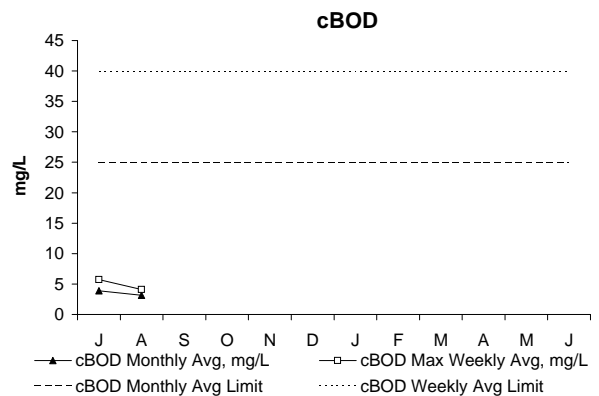
In August, all pH measurements were fairly typical for the season and within permit limits.

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.



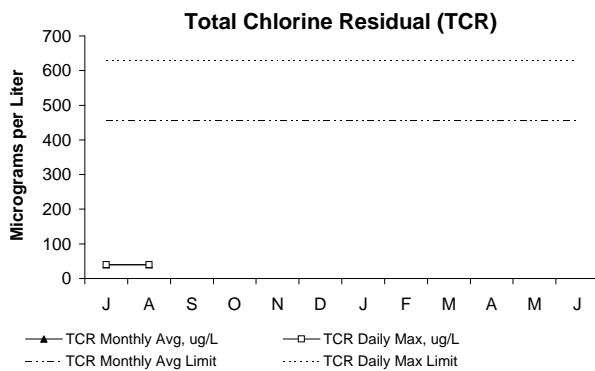
▲ TSS Monthly Avg, mg/L □ TSS Max Weekly Avg, mg/L
 --- TSS Monthly Avg Limit TSS Weekly Avg Limit

In August, both the weekly and monthly concentrations of TSS were below permit limits. TSS, or Total Suspended Solids in the effluent, is a measure of the amount of solids that remain suspended after treatment.



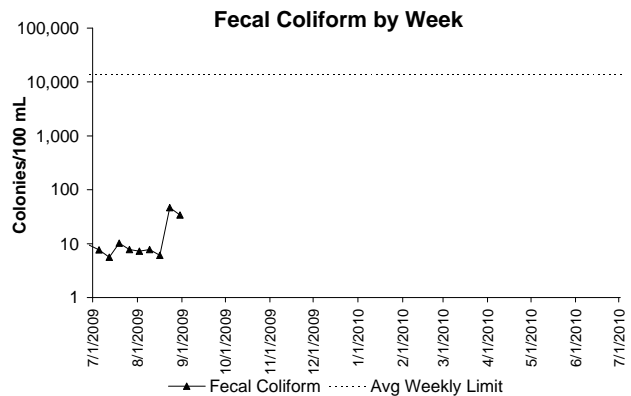
▲ cBOD Monthly Avg, mg/L □ cBOD Max Weekly Avg, mg/L
 --- cBOD Monthly Avg Limit cBOD Weekly Avg Limit

In August, 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.



▲ TCR Monthly Avg, ug/L □ TCR Daily Max, ug/L
 --- TCR Monthly Avg Limit TCR Daily Max Limit

In August, both the maximum daily and monthly concentrations of TCR were below permit limits. 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.



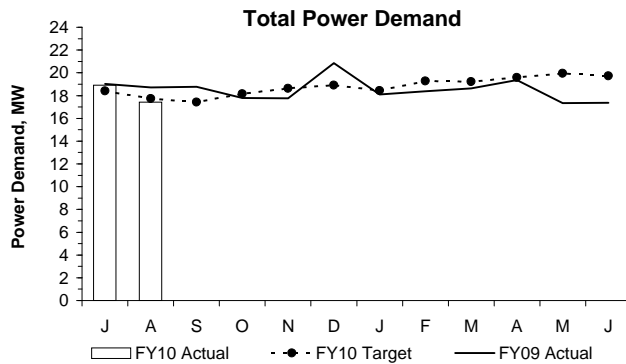
▲ Fecal Coliform Avg Weekly Limit

In August, 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.

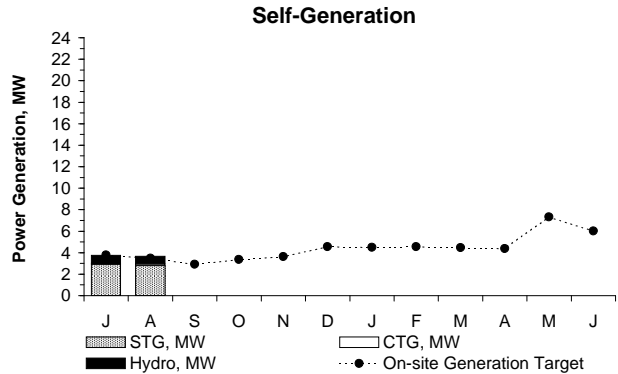
There are four conditions in the permit that must be met: daily geomean; weekly geomean; 10% of all samples; and greater than three consecutive samples not to exceed 14,000 col/100mL.

Massachusetts Water Resources Authority

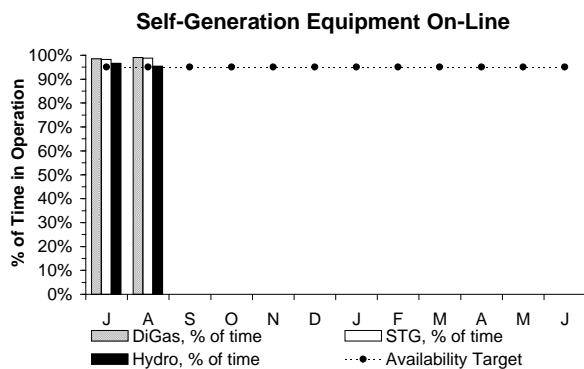
Deer Island Treatment Plant Performance



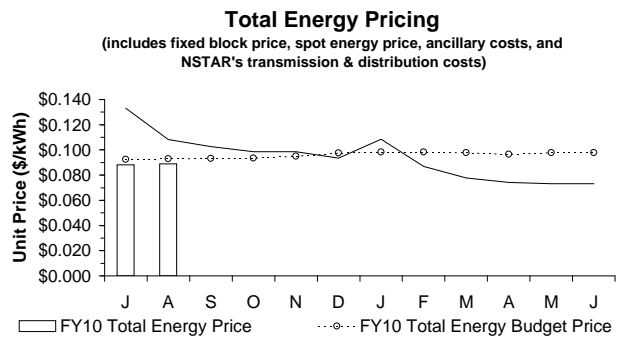
Total Power Demand for August was just under the FY10 projections by 2% even though Total Plant Flow for the month was 5% greater than the FY10 target. Power demand from total pumping alone was 5.4% higher than the FY10 projections due to above average rainfall and the subsequent higher plant flows. However, overall energy demand for most of the other treatment processes were lower than their projected targets thereby offsetting the higher than targeted power demand for pumping.



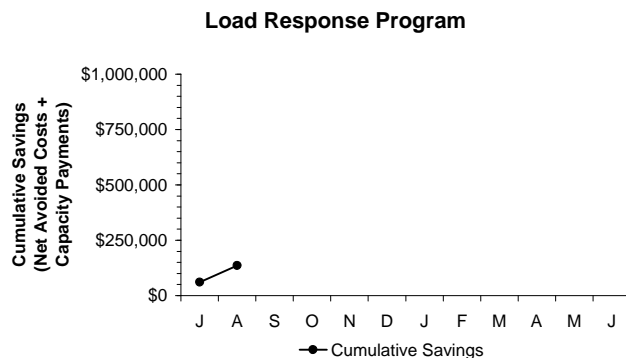
Power generated on-site was slightly above target (+5%) for August. Power generation was 3% above target by the STG and 14% above target by the Hydro turbines due to slightly higher than normal plant flows. The 0.147 MW of power generated by the CTGs was 33% higher than the 0.110 MW target due to nearly 8 hours of CTG operation during the month for a Demand Response event on August 24 and for equipment maintenance/checkout purposes (on August 18, 19, and 28).



The STG, Hydro turbines, and DiGas systems all exceeded their 95% availability target for the month of August.

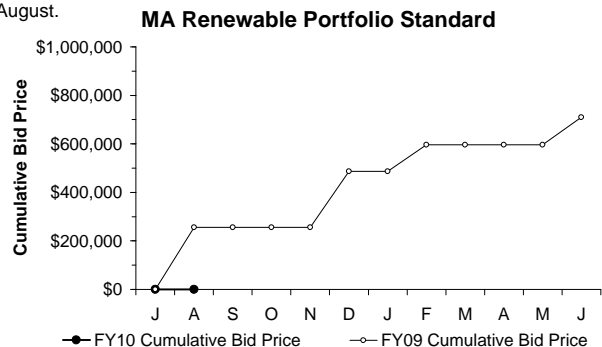


Under the new energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. The total energy price in August was 4% below the FY10 target for the month due to lower than budgeted spot energy prices. The total energy price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges. Please note the July and August FY10 total energy prices are an estimate as the invoices have not been received. Year-to-date costs as a result of the lower energy pricing are estimated at approximately \$41,122 less than budgeted as of the end of August.



DI participated in one (1) demand response event called on August 24 (see Ops and Maintenance Report section for details).

Deer Island participates in the ISO-New England Load Response Programs. By agreeing to have its Combustion Turbine Generators available to run and thus relieve the New England energy grid of Deer Island's load during times of high energy demand or high pricing, MWRA receives monthly Capacity Payments from ISO-NE. When it runs the CTGs at ISO-NE's request, Deer Island receives energy payments from ISO-NE and also avoids NSTAR transmission and distribution charges. "Net Avoided Cost" is the avoided NSTAR payments offset by the cost of running the CTGs, and the energy payments from ISO-NE. Cumulative savings are the sum of Net Avoided Costs and monthly Capacity Payments. \$136,183 through August.

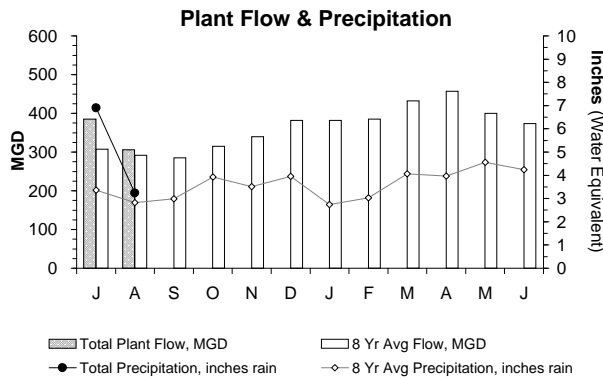


There were no Renewable Energy Certificate (REC) bids in August.

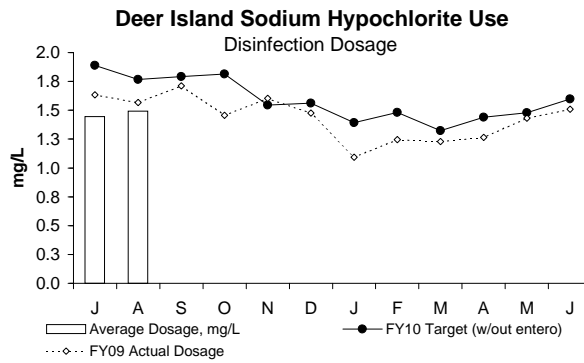
REC prices reflect the bid prices on the date that bids are accepted. Cumulative bid price reflects the total value of bids received to date.

Massachusetts Water Resources Authority

Deer Island Treatment Plant Performance



Total Plant Flow for the month of August (306 MGD) was 5% higher than the target 8-year average flow estimate for the month (291.7 MGD) as precipitation was 15% higher than the 8-year average precipitation for the month (3.24 inches actual vs. 2.82 inches expected).



The disinfection dosing rate was 16% lower than target for August and 5% lower than the FY09 actual for the same period. The lower than expected dosage this month may be due to lower than expected chlorine demand. Chlorine demand was less than historical because the wastewater continues to contain less overall solids and organic material due to the high amount of rainfall and the resulting higher plant flow in July and August.

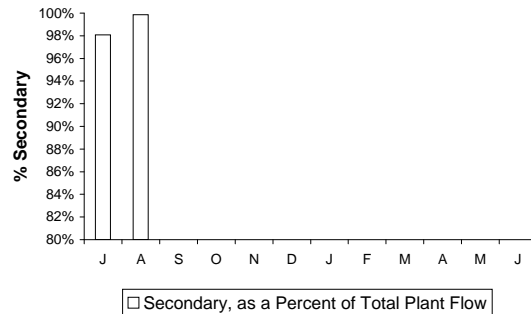
The overall disinfection dosing rate (target and actual) is dependent on plant flow, target effluent total chlorine residual levels, effluent quality and NPDES permit levels for fecal coliform.

Secondary Blending Events

Month	Count of Blending Events	Count of Blending Events Due to Rain	Count of Blending Events Due to Non-Rain-Related Events	Secondary, as a Percent of Total Plant Flow	Total Hours Blended During Month
J	8	8	0	98.1%	30.2
A	1	1	0	99.9%	3.99
S					
O					
N					
D					
J					
F					
M					
A					
M					
J					
Total	9	9	0	99.0%	34.2

99.9% of all flows were treated at full secondary for the month of August as there was only one (1) blending event, on August 29, with 3.99 hours of blending and 14.0 Mgal of flow blended with secondary effluent. This blending event was triggered by the 1.65 inches of rain that fell, as a tropical depression passed offshore, and the resulting high plant flows. **Secondary permit limits were met at all times.**

Deer Island Secondary Treatment as a Percent of Total Plant Flow



99.9% of the total plant flow to DITP was treated through secondary treatment in August. The Maximum Secondary Capacity for the entire month was 700 MGD.

Deer Island Operations & Maintenance Report

Environmental/Pumping:

Overall precipitation for the month of August was higher than the 8-year historical average for the month with a total of 3.24 inches of water equivalent precipitation. Measurable rain fell on nine (9) days, with an overall monthly precipitation 15% higher than the 8-year average precipitation for the month of 2.82 inches. The heaviest rainfall occurred August 28-29 for a total of 1.74 inches. The overall total plant flow for the month was 5% higher than target (306 MGD actual vs. 292 MGD target) as a result of the high monthly rainfall total.

The plant achieved a maximum average hourly flow rate of 827 MGD on August 28 as a result of a nor'easter storm event that brought heavy rain to the area and produced a total of 1.74 inches of rainfall over two days. Pumping and treatment operations continued without incident through this storm event, as well as, throughout the entire month.

Massachusetts Water Resources Authority

Deer Island Treatment Plant Performance

Deer Island Operations & Maintenance Report (continued)

Secondary Treatment:

There was one (1) secondary blending event that occurred due to a heavy rain event and the resulting high plant flow. This secondary blending event lasted 3.99 hours and a total of 13.97 million gallons of primary-only treated effluent was blended with secondary effluent. Overall, 99.9% of the flow for the month received secondary treatment. The secondary process maximum limit during this blending event and for the entire month was 700 MGD. No permit exceedences occurred as a result of this secondary blending event.

Primary and Secondary Treatment:

Contractors started work on a major Primary and Secondary Clarifier Rehabilitation Project, MWRA contract #6899. The primary scope of this three (3) year, \$59.4 million contract project is to replace all the chains and sprockets in the Primary and Secondary Clarifiers. This contract also includes some other limited repairs including replacement of broken flights, concrete and Linabond repairs in the Primary Clarifiers and replacement of Secondary Clarifier Battery C headshafts. Site work on the clarifiers started on August 3. Coordination of the work with DITP Operations is a critical aspect of this contract.

At the present time the contractor is working in four (4) Primary Clarifiers and three (3) Secondary Clarifiers. The contractor is limited by the construction documents to working in no more than four (4) Primary Clarifiers (all of which will be in one battery) and three (3) Secondary Clarifiers (one Secondary Clarifier in each of Secondary Batteries A, B, and C). The work is expected to be completed on the first clarifier (Secondary Clarifier B-14) on or about September 28. After an initial period of adjustments to work conditions, it is expected that the contractor will be completing, on average, the rehabilitation work on approximately one Primary or Secondary Clarifier each week.

Odor Control Treatment:

Contractors started work in late August to clean and thoroughly inspect several odor control carbon adsorber (CAD) units in the North Main Pumping Odor Control, West Odor Control (primary batteries C & D, grit), and Residuals Odor Control Facilities. Some CAD units merely require the routine replacement of spent activated carbon with new (regenerated) carbon material, while some units may require additional repairs based on the outcome of these inspections. This cleaning and inspection will continue into September.

Energy:

Deer Island is currently enrolled in the Demand Response Program. The Demand Response Program (administered by the not-for-profit Independent System Operators of New England or ISO-NE) compensates energy users for reducing their electrical consumption during a called event to help alleviate fuel supply constraints and elevated pricing in the region. DITP participated in one demand response event in August. This particular event on August 24 was an unannounced test called by ISO-NE to confirm facility and equipment availability in the event an actual demand response event is called. CTG #1 was operated for 2.8 hours during this test. Participation in this called event resulted in a Net Avoided Cost of approximately \$16,000.

"Renewable Portfolio Standard Credits" (RPS) Credits - No bids were received in August.

Under the new energy supply contract, a block portion of DI's energy is a fixed rate and the variable load above the block is purchased in real time. The total energy price in August was 4% lower than the FY10 target for the month due to lower than budgeted spot energy prices. The total energy price in August FY10 was 18% lower than the total energy price in August FY09. The total energy price includes a fixed block price, spot energy price, transmission & distribution charges, and ancillary charges. Please note the July and August FY10 total energy prices are an estimate as the invoices have not been received.

The installation of two 190 foot, 600 kW wind turbine generators by Lumus Construction, Inc. is now well underway with the physical installation of both wind turbine structures taking place in August. The first wind turbine was erected on August 10 and the second turbine on August 14. The remaining portion of the installation process and connection to the plant's existing electrical system continues. The power generated by the wind turbines will be used onsite to offset Deer Island's electricity purchases. With the addition of these two turbines, Deer Island's self-generation will increase from 23% to 26%. Plans are also underway to install three more wind turbines at DITP, with the Federal Aviation Administration agreeing to allow the turbines to be installed one at a time, after 30 days of operation with no negative impact on aviation for each additional turbine.

On August 11, Governor Deval Patrick visited Deer Island to celebrate the installation of the two wind turbines as a symbol of Massachusetts' commitment to clean energy. He was joined by House Speaker Robert DeLeo, Senator Anthony Petrucci, the Secretary of the Massachusetts Office of Energy and Environmental Affairs, Ian A. Bowles,