

July, 2014

Biosolids Resource Recovery Monthly Report

NUTRIENTS and CARBON RECYCLING

FARMING

Provides carbon and nutrients valued at \$300.00 per acre.

SILVICULTURE

Increases yield and improves sustainability.

RECLAMATION

Restoring meads to their natural state and providing wildlife habitats.

URBAN RESTORATION

Grow trees and reduce runoff.

dc water is life BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT: **A RESOURCE RECOVERY FACILITY**

water • nutrients • carbon • energy

GREEN ENERGY BIORENEWABLES

POWER FROM THE PEOPLE

THERMAL HYDROLYSIS PROCESS (THP) AND DIGESTION FACILITY

DC Water will be the first in North America to use thermal hydrolysis for wastewater treatment. When completed, this facility will be the largest plant of its kind in the world.

GREEN BENEFITS:

- Produce combined heat and power, generating 13 MW of electricity
- Save DC Water \$10 million annually cutting grid demand by a third (DC Water is the largest consumer of electricity in the District)
- Reduce carbon emissions by approximately 50,000 metric tons of CO₂e per year.
- Reduce trucking by 1.7 million miles per year.
- Save \$10 million in biosolids trucking costs
- Produce Class A biosolids to grow trees, sequester carbon and reduce runoff.

dcwater.com/biosolids

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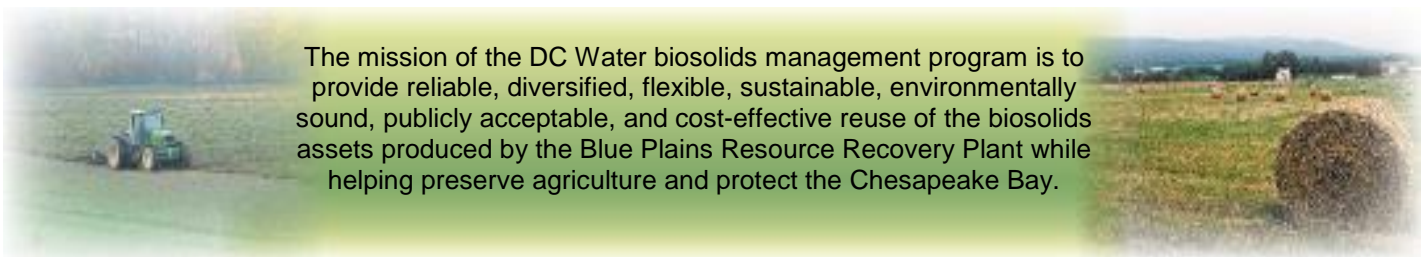
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DC Water

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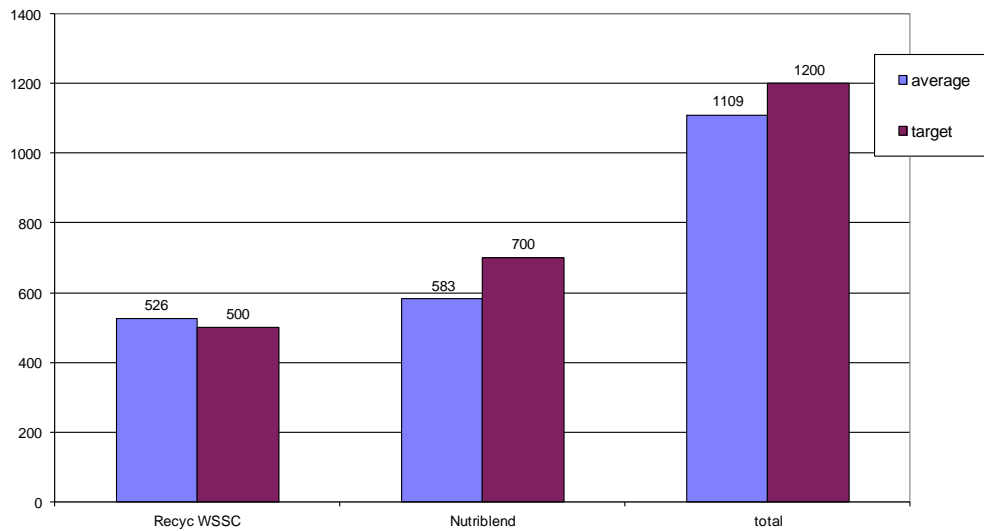


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and protect the Chesapeake Bay.

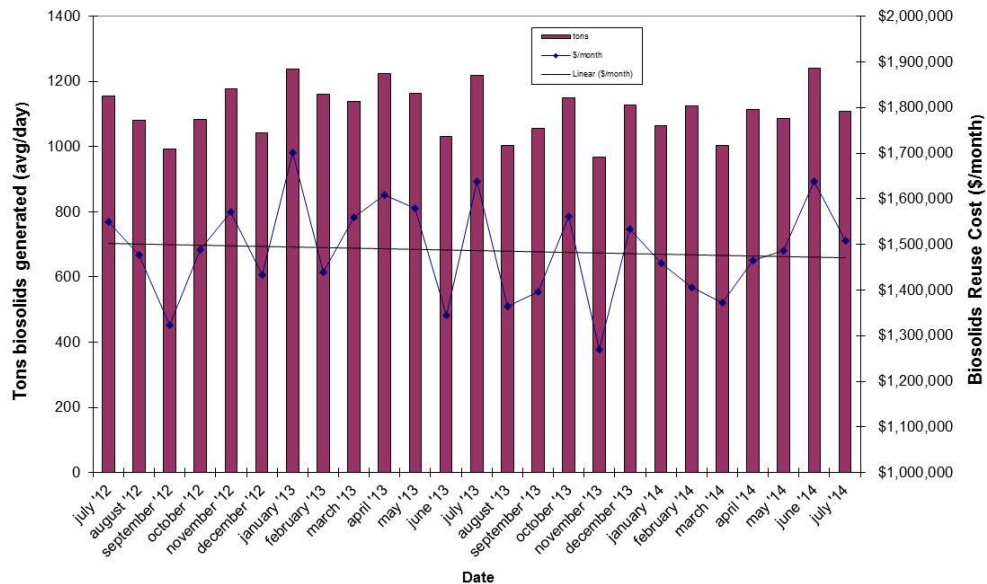
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In July, biosolids hauling averaged 1109 wet tons per day. The graph below shows the hauling by contractor for the month of July. Average % solids for the unlimed cake was 27.9%. Average lime dose for the month was 25.2%. At the end of July the Cumberland County storage pad had approximately 15,000 tons (~25,000 tons capacity), and the Cedarville lagoon had approximately 0 tons of Blue Plains biosolids (~30,000 tons capacity).

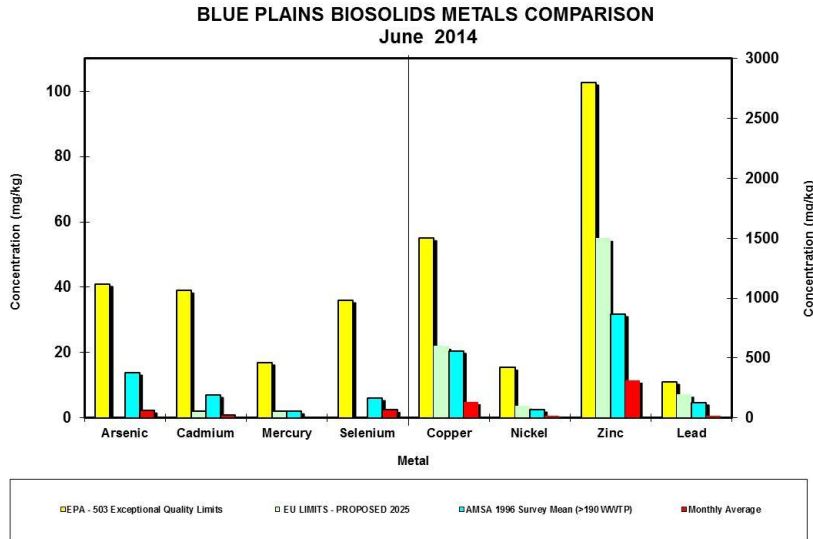
Average Daily Hauling by Contractor for July 2014



Average Daily Biosolids Production and Reuse Cost



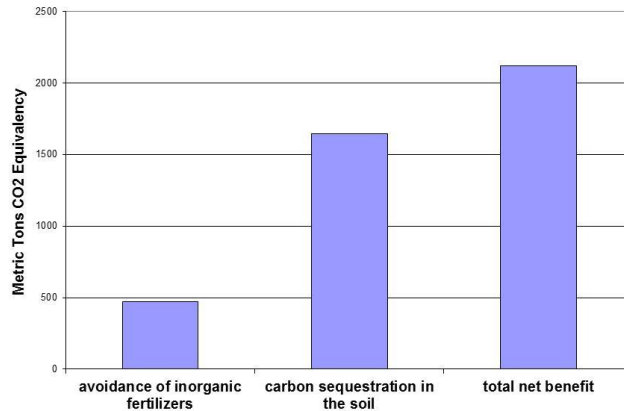
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of June 2014. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) limits. The EU limits are more conservative than the USEPA limits, and Blue Plains biosolids metals content is lower than the EU standards as well.



Environmental Benefits

The quantity land applied in June coming directly from the plant and from storage facilities equaled 35,326 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 2117 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 4,312,609 car miles off the road in the month of June (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since January, 2006 is 131,147 metric tons CO₂ equivalent.

DCWater Biosolids Recycling Program
Greenhouse Gas Balance Benefits
June 2014 Totals



July Highlights

Blue Plains solar Power Project

The DC Water Blue Plains solar power project RFQ was advertised on June 8th from which DC Water received 10 qualifications packages from teams of companies desiring to build solar capacity at Blue Plains. This RFQ was designed to solicit qualifications from firms capable of building out solar power capacity on the 157 acres at Blue Plains, at the provider's expense, with the understanding that DC Water would sign a power purchase agreement to purchase the power for use at Blue Plains. Preliminary feasibility estimates indicate that accessible areas could provide 8 – 10 MW of power during daylight hours. Due to federal tax incentives and the high value of the solar renewable energy credits (SRECs) in DC, staff believes the solar power can be purchased for less than our current grid power costs. The responses to the RFQ were due July 9th, and staff will review these packages in Early August. DETS will request full proposals from the prequalified firms, due September 17th, with contract review and approval leading to a mid-January start date for construction.

Map of Blue Plains Biosolids Applications and Agricultural \$'s for June 2014

