

October, 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



dcwater.com/biosolids

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.

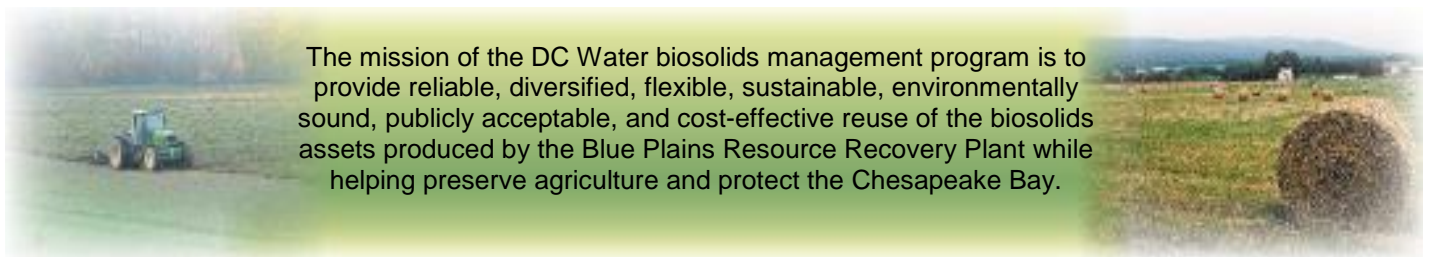
GREEN BENEFITS:

- 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.

DC Water

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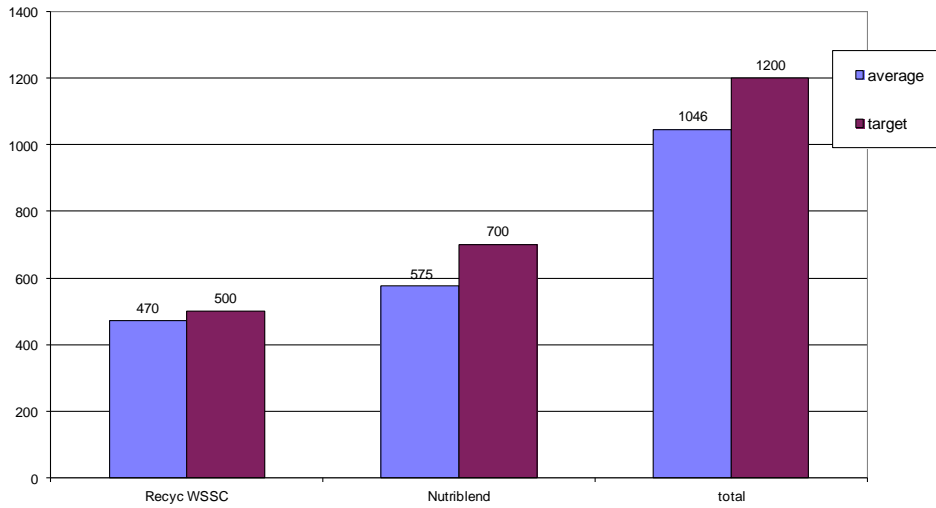
The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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



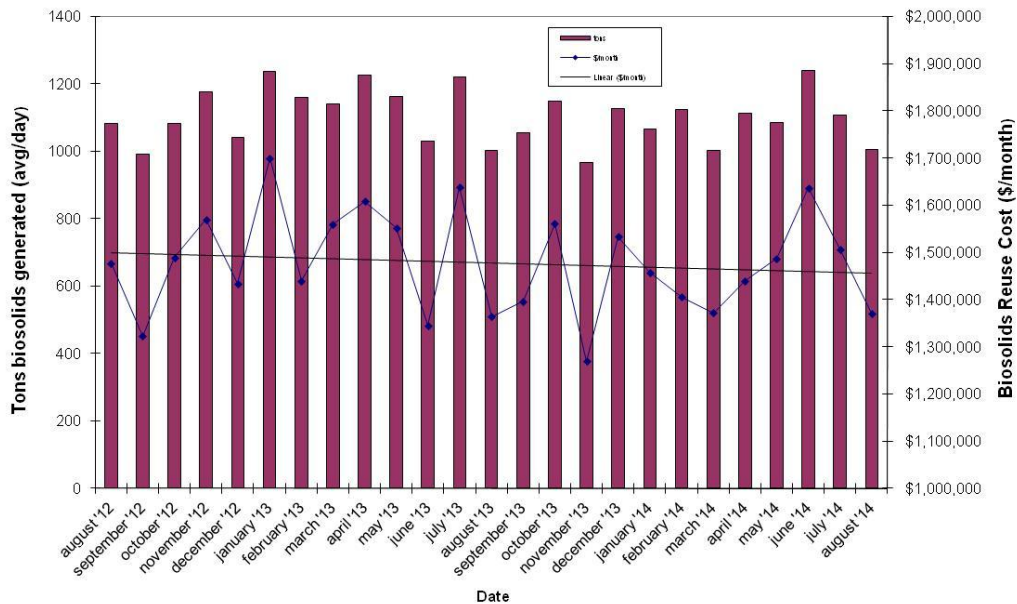
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In October, biosolids hauling averaged 1046 wet tons per day. The graph below shows the hauling by contractor for the month of October. Average % solids for the unlimed cake was 27.9%. Average lime dose for the month was 24.1%. At the end of October the Cumberland County storage pad had approximately 17,000 tons (~25,000 tons capacity), the Fauquier pad had 1300 wet tons (15,000 ton capacity), and the Cedarville lagoon had 0 tons of Blue Plains biosolids (~30,000 tons capacity).

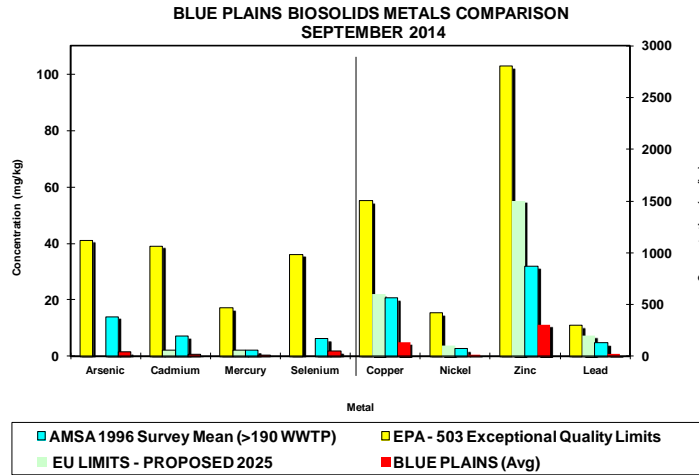
Average Daily Hauling by Contractor for October 2014



Average Daily Biosolids Production and Reuse Cost



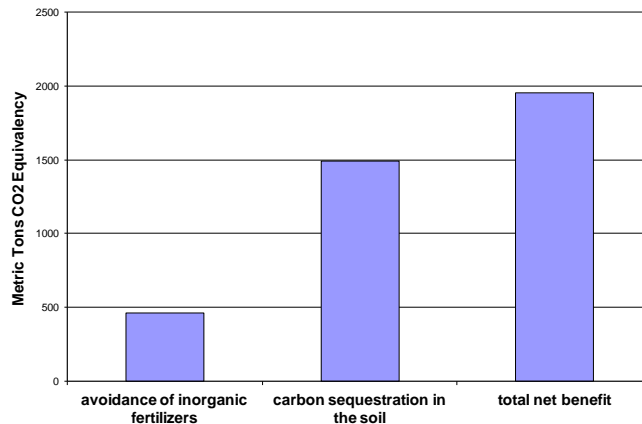
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of September 2014. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union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



Environmental Benefits

The quantity land applied in September coming directly from the plant and from storage facilities equaled 32,453 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 1951 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 3,974,471 car miles off the road in the month of September (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since January, 2006 is 134,698 metric tons CO₂ equivalent.

**DCWater Biosolids Recycling Program
Greenhouse Gas Balance Benefits
September 2014 Totals**



October Highlights

Staff delivered and helped spread a truckload of compost to a DDOT tree planting site on the 1300 block of D St, NE. The DDOT Urban Forestry Administration removed an 80' section of sidewalk to install several tree boxes. The soil was badly compacted and very low in organic matter. One to two inches of compost was incorporated into the soil. To test the effectiveness of the compost, DDOT incorporated the material at different rates and left one tree box unamended. Other UFA staff have subsequently picked up more compost from Blue Plains for use in other soil remediation efforts.



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

