

September, 2015

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 meets 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

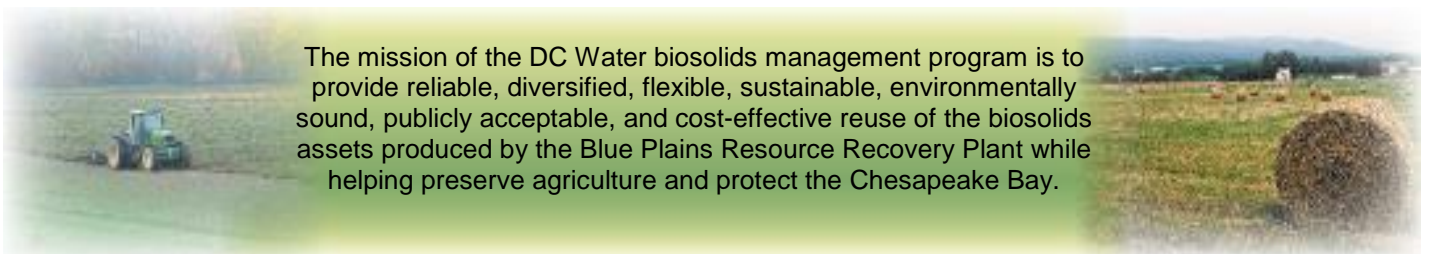
DC Water will be the first in North America to use thermal hydrolysis for wastewater treatment. When completed, this facility will be the largest plant of its kind in the world.

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

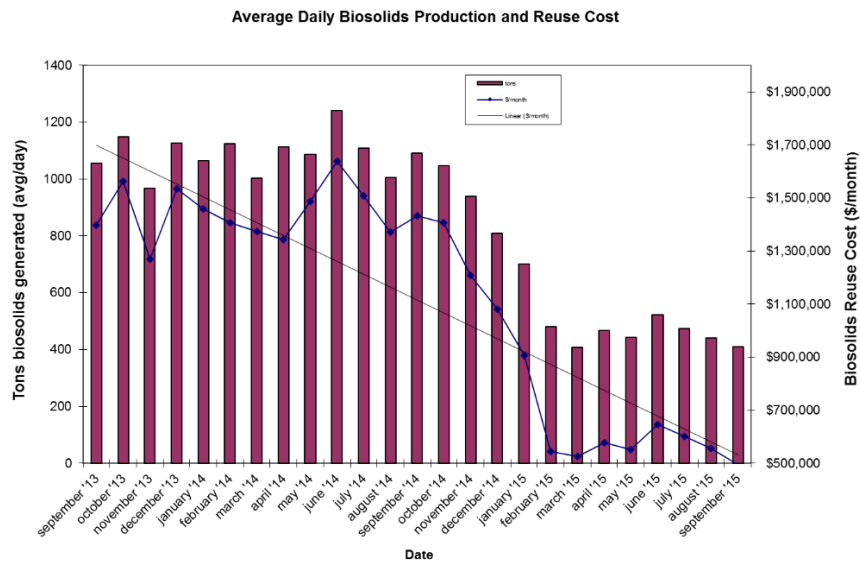
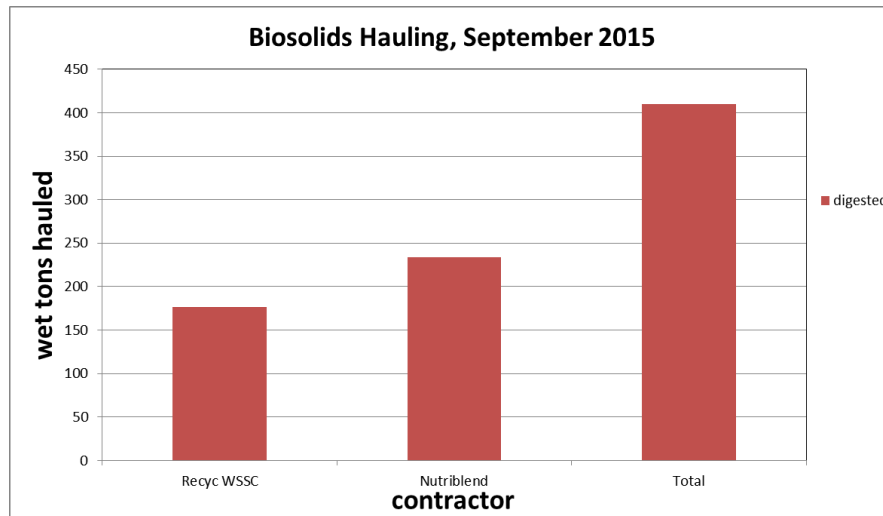
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The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery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

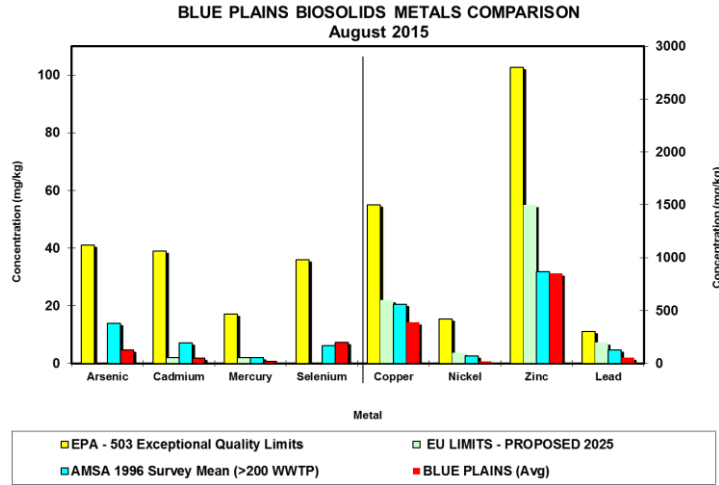
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In September, biosolids hauling averaged 410 wet tons per day (wtpd). The graph below shows the total hauling by contractor for the month of September. The average percent solids for the digested material was 30.8%. At the end of September the Cumberland County storage pad had approximately 2000 tons (~25,000 tons capacity), Cedarville lagoon had approximately 2026 tons of Blue Plains biosolids (~30,000 tons capacity), and Fauquier lagoon had 2355 tons (~15,000 tons capacity).

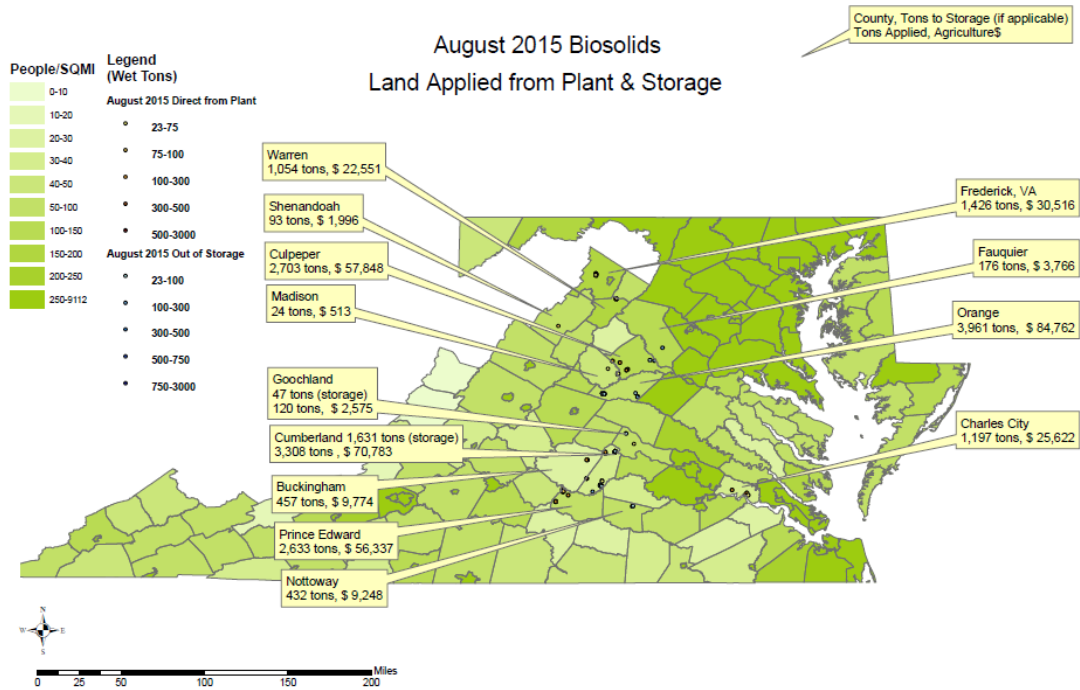


Please note the drop in biosolids management costs (second graph below, right vertical axis) due to the reduction in solids production since digesters came on line, and also due to the drop in fuel costs. In September, diesel prices averaged \$2.67/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost in September for the two contracts (DC Water and WSSC) was \$40.29/wet ton. For comparison, in September 2014 the average diesel price was \$3.90/gal and the average contract cost was \$43.66/wet ton.

The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of August 2015. 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.



Map of Blue Plains Biosolids Applications and Agricultural \$'s for August 2015



Environmental Benefits

The quantity land applied in August coming directly from the plant and from storage facilities equaled 17,583 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 9331227 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 2,500,215 car miles off the road in the month of August (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 142,000 metric tons CO₂ equivalent.

DCWater Biosolids Recycling Program Greenhouse Gas Balance Benefits August 2015 Totals

