

May, 2016

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.



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



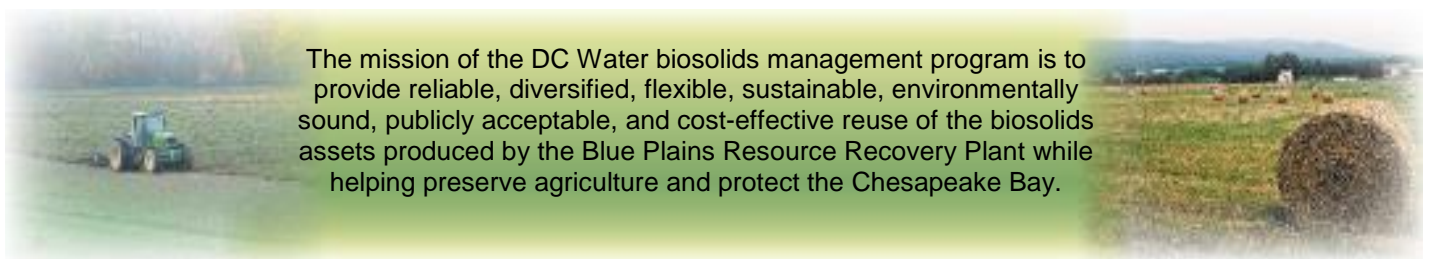
DC Water will be the first in North America to use thermal hydrolysis for wastewater treatment. When completed, this facility will be the largest plant of its kind in the world.

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

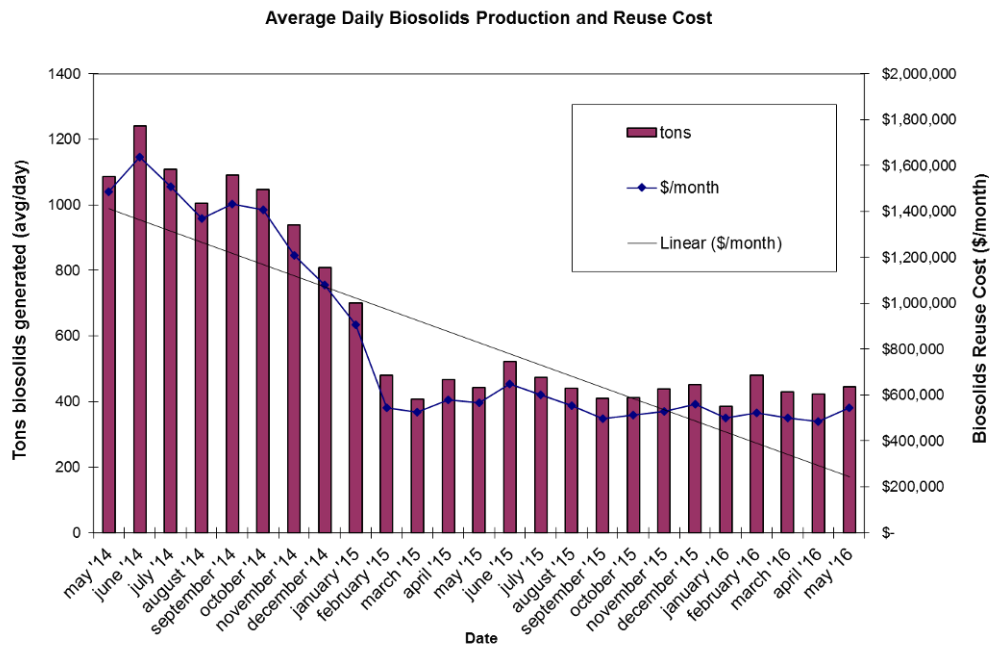
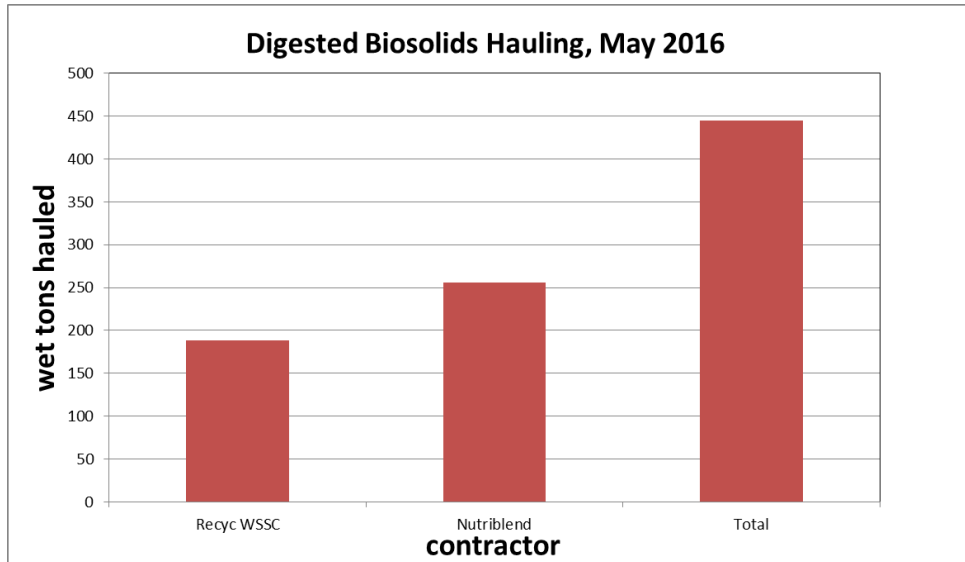
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The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery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

May 2016 Resource Recovery Report

In May, biosolids hauling averaged 445 wet tons per day (wtpd). The graph below shows the total hauling by contractor for the month of May. The average percent solids for the digested material was 31.4%. At the end of May the Cumberland County storage pad had approximately 5000 tons (~25,000 tons capacity), Cedarville lagoon had approximately 0 tons of Blue Plains biosolids (~30,000 tons capacity), Goochland pad had 1000 tons, and Fauquier lagoon had 3409 tons (~15,000 tons capacity).

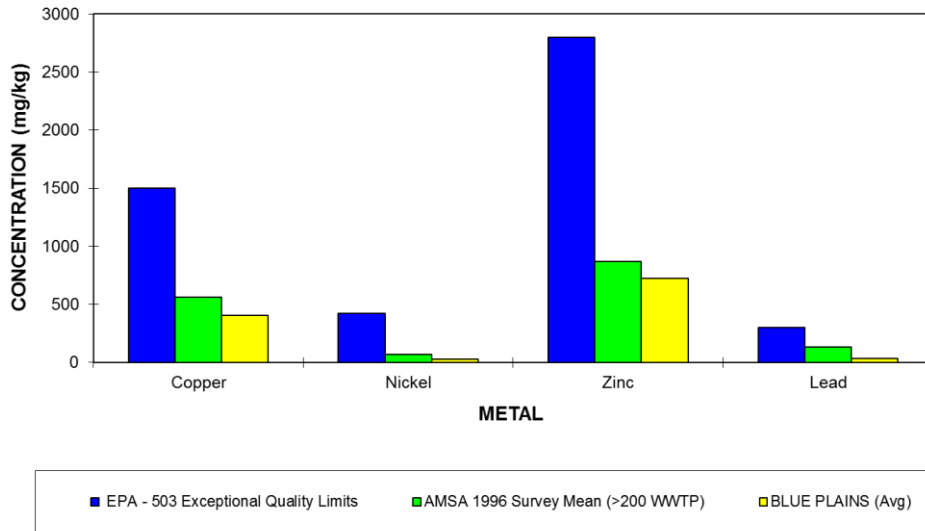


In May, diesel prices averaged \$2.44/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost was \$39.41/wet ton.

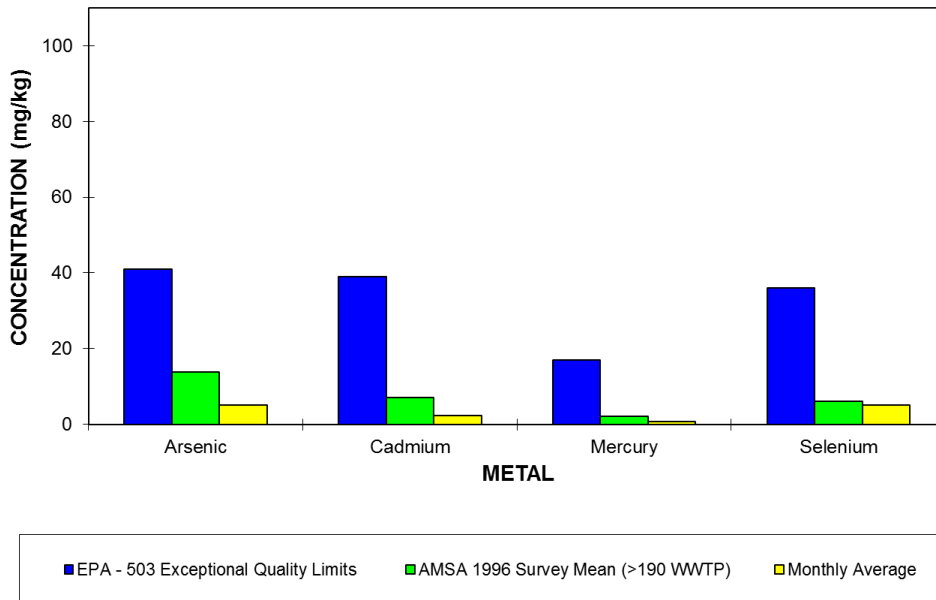
Product Quality

The graph below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of April 2016. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits and the national average.

**BLUE PLAINS BIOSOLIDS METALS COMPARISON
April 2016**



**BLUE PLAINS BIOSOLIDS METALS COMPARISON
APRIL 2016**



Environmental Benefits

The quantity land applied in April coming directly from the plant and from storage facilities equaled 22,635 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 1507 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 3,199,008 car miles off the road in the month of April (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since, January 2006 is 146,041 metric tons CO₂ equivalent.

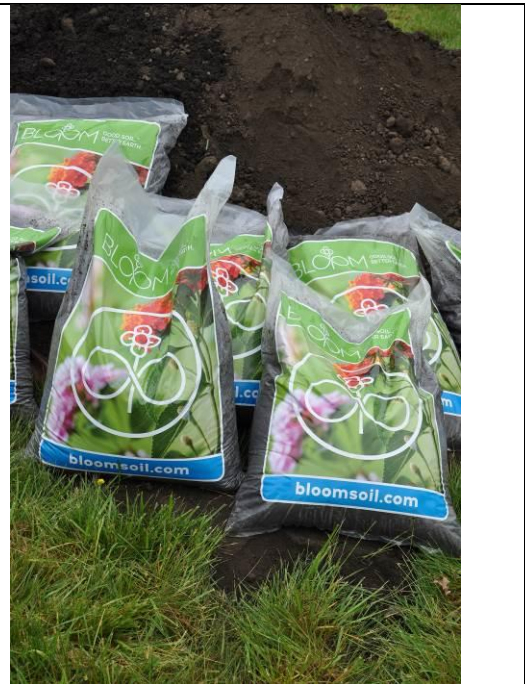
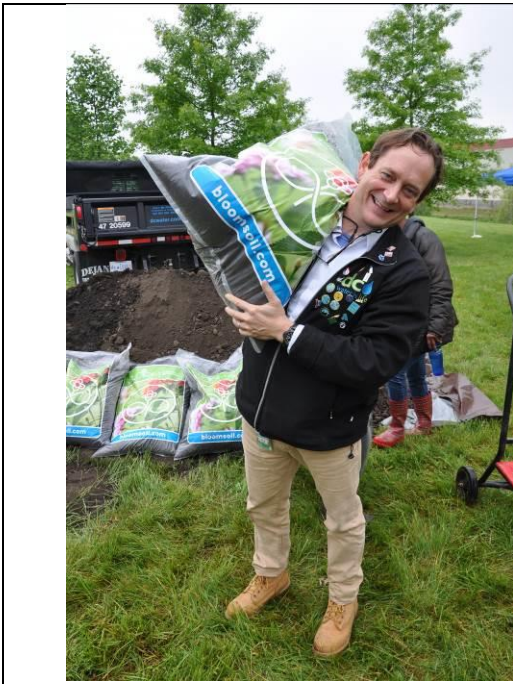
Highlights

Worldwatch Institute Presentation

Staff presented at the premier annual event of the Worldwatch Institute, celebrating the release of their annual publication looking at significant global issues, *State of the World*. The title of this year's publication was, "Can a City be Sustainable?" Staff presented on areas for potential improvement in urban water systems in the U.S. and discussed some of the sustainable solutions DC Water is pursuing, including biosolids recycling, biogas power generation, green infrastructure and tentative plans for co-digestion of food waste and solar panel installations. A video of the presentation can be found here: <https://goo.gl/TajeZg>. UN Water tweeted about the presentation to its 21,000 followers.

Bloom Product Launch

Staff organized a launch of our first biosolids product, Bloom. The event was held at a DC Park in SW where we had donated product for use in tree planting by Casey Trees. Attendees included the DC Water Board Chair, the Executive Director of Casey Trees, and the Director of DOEE. Also in attendance were three of DC Water's strategic partners, who will use the product in the next 6 months to help determine the best mix recipes and market uses. Attendees received a native tree sapling, planted in a bag of Bloom product.



Biosolids Applications and Agricultural \$'s for April 2016

