

April, 2012

Biosolids Reuse Monthly Report

NUTRIENTS and CARBON RECYCLING

FARMING

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

SILVICULTURE

Increases yield and improves undergrowth.

RECLAMATION

Restoring miles to their natural state and providing wildlife habitats.

URBAN RESTORATION

Grow trees and reduce runoff.



BLUE PLAINS SERVICE AREA
DC Water receives and treats wastewater collected from the District of Columbia sewer system and from the Maryland and Virginia suburbs. On an average day, more than 300 million gallons of raw sewage flow into the Blue Plains Advanced Wastewater Treatment Plant from area jurisdictions.

BLUE PLAINS
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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THERMAL HYDROLYSIS PROCESS (THP) AND DIGESTION FACILITY

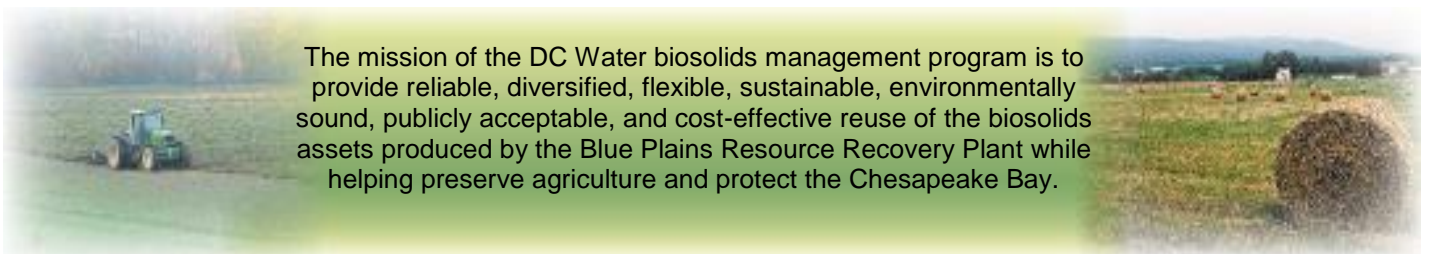
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DC Water

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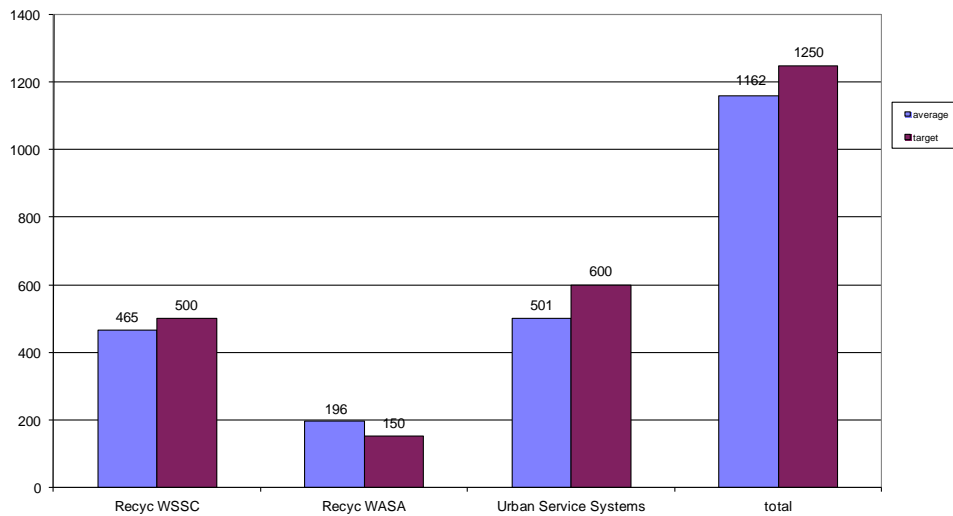


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

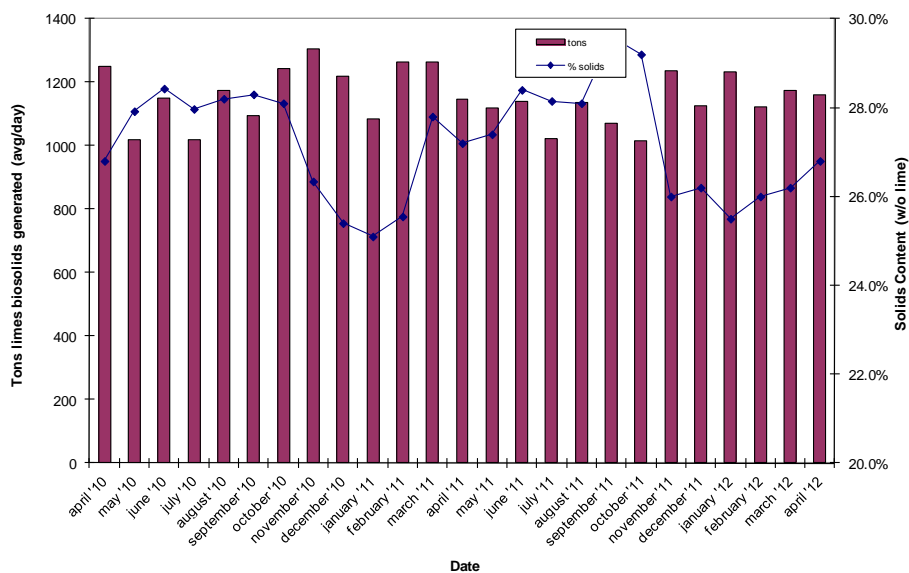
April 2012 Biosolids Division Report

In April, biosolids hauling averaged 1162 wet tons per day. The average solids content before liming was 26.8%. The average lime dose was 22.4%. The graph below shows the hauling by contractor for the month of April. In April, DC Water again shipped biosolids to the McGill Compost Facility in Waverly, VA. This is done through the Urban Service Systems contract. In April a total of 2519 tons went to compost production. At the end of April the Cumberland County storage pad had 4000 tons (~25,000 tons capacity), the Fauquier Lagoon (~20,000 ton capacity) had zero tons, and the Cedarville lagoon (~30,000 tons capacity) had zero tons.

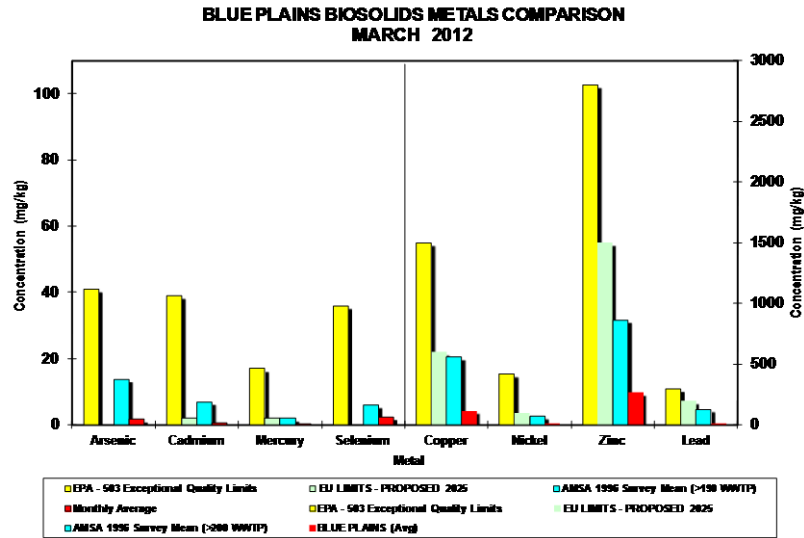
Average Daily Hauling by Contractor for April 2012



Average Daily Biosolids Production and Solids Content



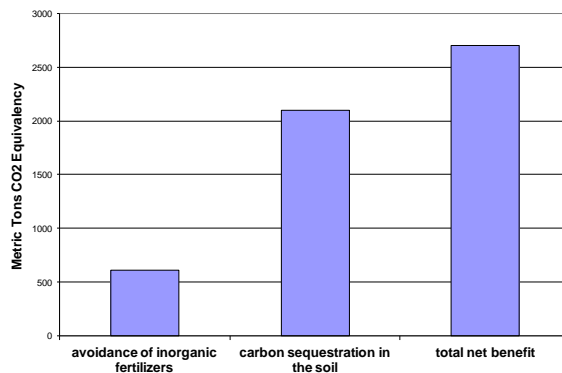
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of March 2012. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) 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 coming directly from the plant and from storage facilities equaled 47,125 tons. In addition, 1805 tons went to composting. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 2705 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 3,624,349 car miles off the road in the month of March (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 98,641 metric tons CO₂ equivalent.

**DCWASA Biosolids Recycling Program
Greenhouse Gas Balance Benefits
March 2012 Totals**



April Events

Staff participated in a Water Environment Federation (WEF) webinar on April 25th. Over 300 people registered for and participated in the webinar, which centered on the DC Water digestion project, with a special emphasis on the thermal hydrolysis process. Walt Bailey presented the history of the digester project and described the decisions that led to our project. Other presentations on the project included one on the planning process (Brown and Caldwell), specifics about the Thermal Hydrolysis process (Cambi), and the design/construction (CDM).

Staff coordinated the delivery of 10 loads of Blue Plains biosolids compost for a DC DOT restoration project at the intersection of New York Avenue and South Dakota Avenue NW. This site is slated for restoration and tree planting, as it is the gateway to DC for cars entering the District from the east on NY Avenue.

Staff attended the awards banquet for the American Association of Environmental Engineers (AAEE) on April 26th. AAEE recognized DC Water with three awards, including one for planning of the digester project, one for research associated with the nitrogen removal project at blue Plains, and one for communications and outreach for the Clean Rivers Project.

Map of Blue Plains Biosolids Applications and Agricultural \$'s for March 2012

