

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 sites 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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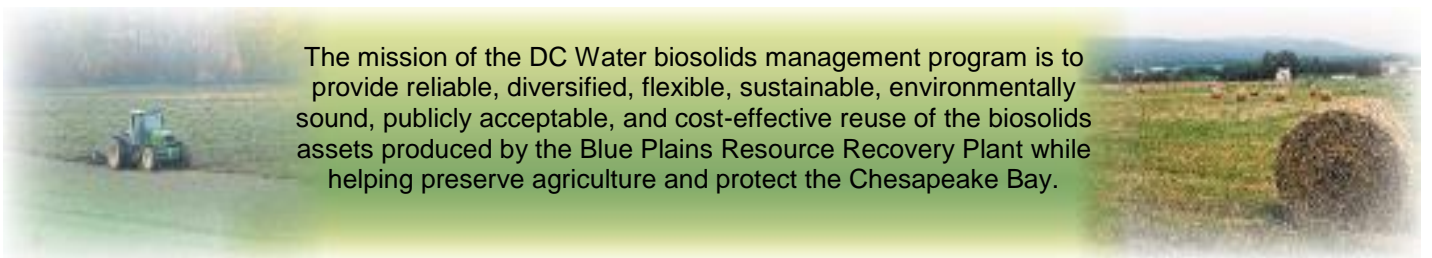
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DC Water

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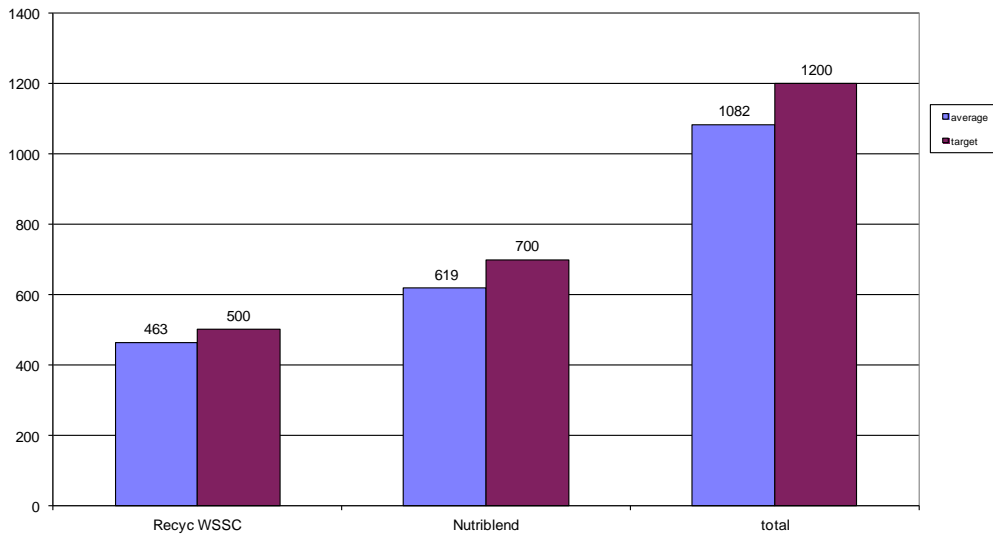


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

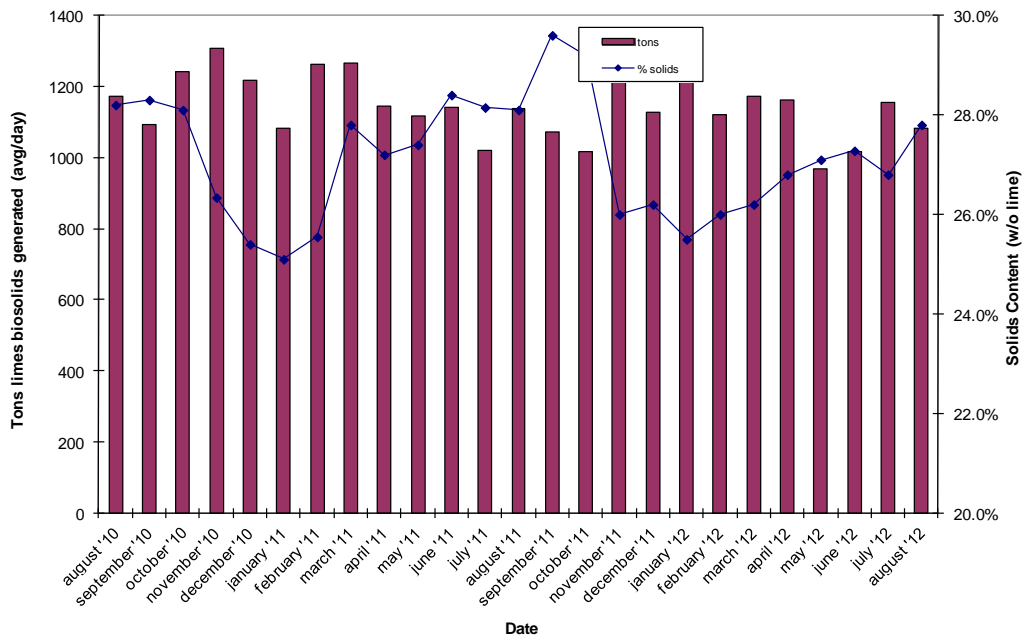
August 2012 Biosolids Division Report

In August, biosolids hauling averaged 1082 wet tons per day. The graph below shows the hauling by contractor for the month of August. Average % solids for the unlimed cake was 27.8%. Average lime dose for the month was 18.8%. At the end of August the Cumberland County storage pad had 224 tons (~25,000 tons capacity).

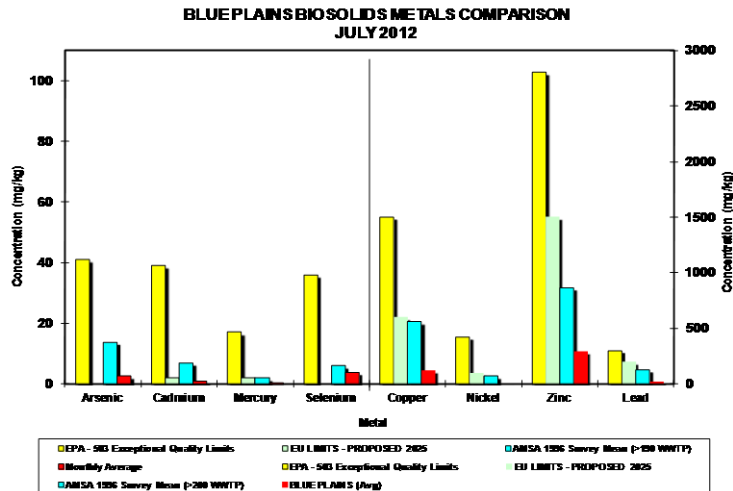
Average Daily Hauling by Contractor for August 2012



Average Daily Biosolids Production and Solids Content



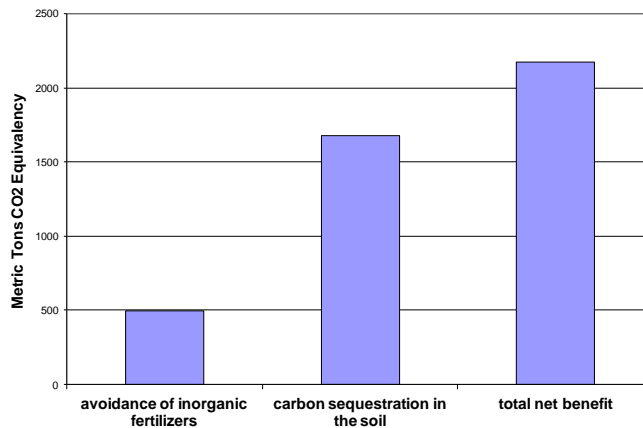
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of July 2012. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) 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 39,102 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 2,176 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 4,432,507 car miles off the road in the month of July (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 104,940 metric tons CO₂ equivalent.

DCWASA Biosolids Recycling Program Greenhouse Gas Balance Benefits July 2012 Totals



Highlights

Staff participated in two outreach efforts this past month, one with Science magazine, and another with Voice of America. The science reporter called the DC Water External Affairs office to gather information for a story, and decided to come for a visit. Upon hearing about the innovations ongoing at Blue Plains, DC Water became the central focus of the article, describing both the digester project and the ERN/annamox research. A link to the article and video is below.

<http://video.sciencemag.org/SciOriginals/wastetx/>

As a result of the Science article, a reporter from Voice of America made contact with External Affairs, hoping to run a similar story on innovations at Blue Plains. Staff led the tour and for this effort, conducted after a lengthy interview with the General Manager. VOA will produce an article, video, and slide presentation from the content gathered, likely to be finalized early this fall.

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

