

# Biosolids Reuse Monthly Report

**NUTRIENTS and CARBON RECYCLING**

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

**SILVICULTURE**  
  
Increase yield and improve sustainability.

**RECLAMATION**  
  
Restoring sites to their natural state and providing wildlife habitat.

**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](http://dcwater.com/biosolids)

**GREEN ENERGY BIORENEWABLES**

**POWER FROM THE PEOPLE**  

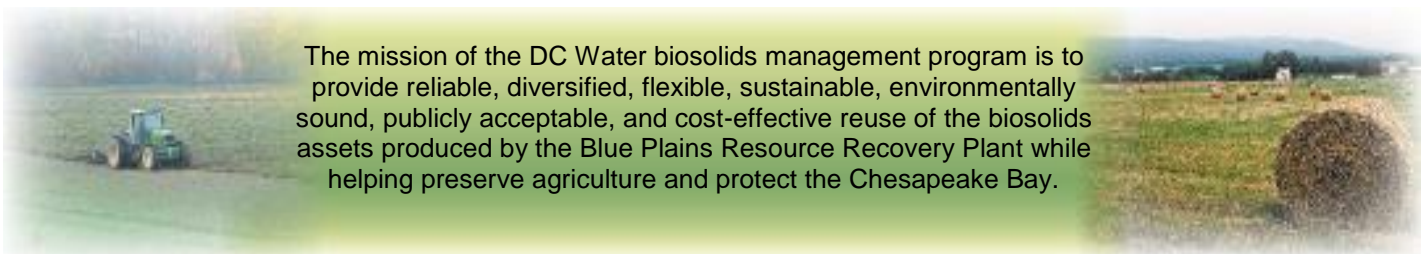

**THERMAL HYDROLYSIS PROCESS (THP) AND DIGESTION FACILITY**  
  
DC Water will be the first in North America to use thermal hydrolysis for wastewater treatment. When completed, this facility will be the largest plant of its kind in the world.

**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 CO<sub>2</sub>e 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

Resource Recovery Division  
 5000 Overlook Avenue SW  
 Washington, DC 20032  
 202-787-4329; 202-787-4226 (fax)  
 cpeat@dcwater.com

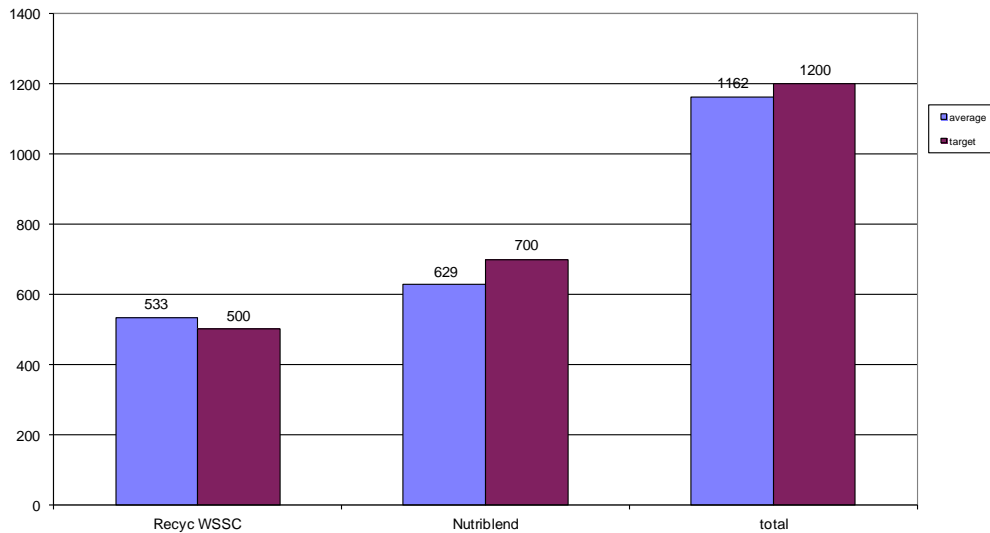


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

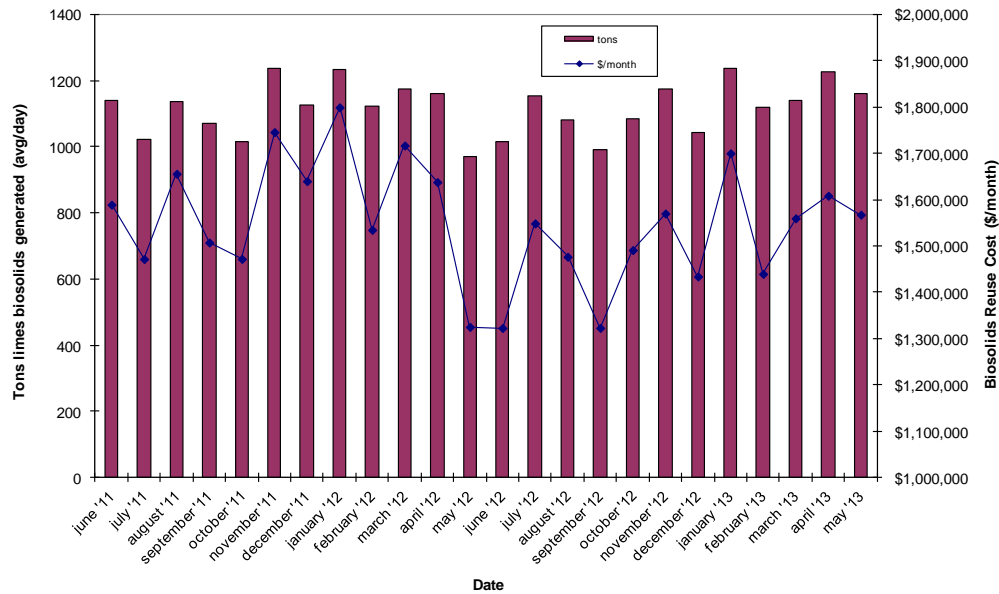
## May 2013 Biosolids Division Report

In May, biosolids hauling averaged 1162 wet tons per day. The graph below shows the hauling by contractor for the month of May. Average % solids for the unlimed cake was 26.7%. Average lime dose for the month was 16.7%. Nutriblend took 431 tons of biosolids to the Spottsylvania County compost facility. At the end of May the Cumberland County storage pad had 18,560 tons (~25,000 tons capacity), and the Cedarville lagoon was emptied (~30,000 tons capacity).

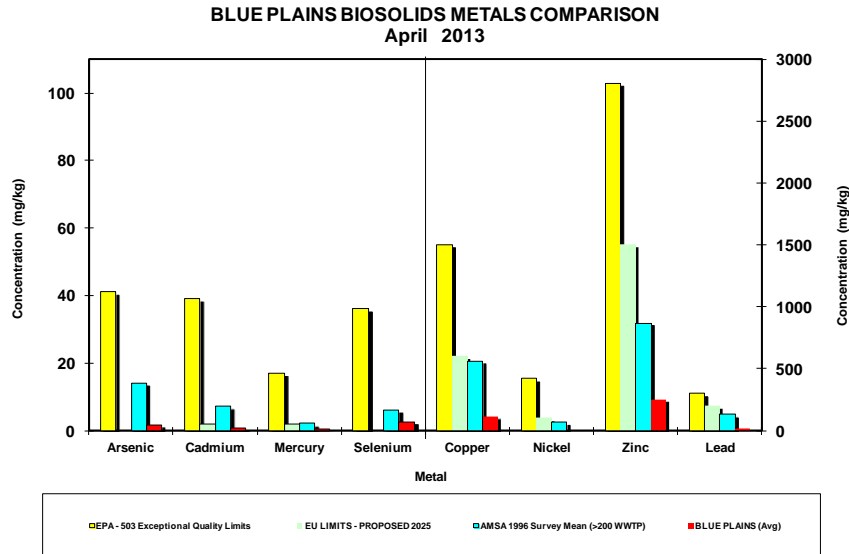
Average Daily Hauling by Contractor for May 2013



Average Daily Biosolids Production and Reuse Cost



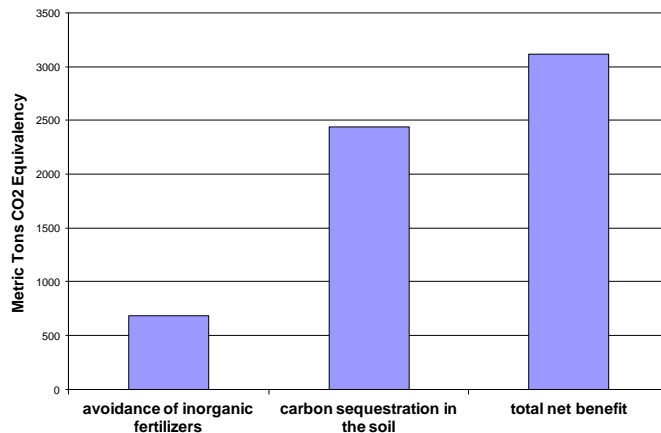
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of April 2013. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) 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 57,271 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 3120 metric tons CO<sub>2</sub> equivalent avoided emissions. This is equivalent to taking 6,354,665 car miles off the road in the month of April (assumes 20 mpg, 19.4 lb CO<sub>2</sub> equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 119,739 metric tons CO<sub>2</sub> equivalent.

**DCWater Biosolids Recycling Program**  
**Greenhouse Gas Balance Benefits**  
April 2013 Totals



## May Highlights

### Small Grains Research Site Visit

Staff attended a research site visit in New Kent County, VA, to observe the field portion of a project funded by the Virginia Biosolids Council (supported by DC Water and other VBC members) to look at nutrient dynamics for biosolids applied to small grain fields. Current biosolids regulations restrict the wintertime application of nitrogen because of assumed low uptake rates with crops. Va Tech is studying the nutrient dynamics and uptake of small grains for all four seasons to determine if this assumption is accurate. The field day involved researchers, generators, farmers, and regulators.



### Camden County Municipal Utility Authority Solar Farm Site Visit

Staff arranged for a site visit with the CCMUA at their wastewater treatment facility to learn about their solar panel installation. They have a power purchase agreement with a company that built the panels and operates and maintains them, inverting the DC solar power to AC and sending it to a meter, from which CCMUA draws power. Staff has scheduled a meeting with the company to determine if this might be a good fit for DC Water and Blue Plains.



# Map of Blue Plains Biosolids Applications and Agricultural \$'s for April 2013

