



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.

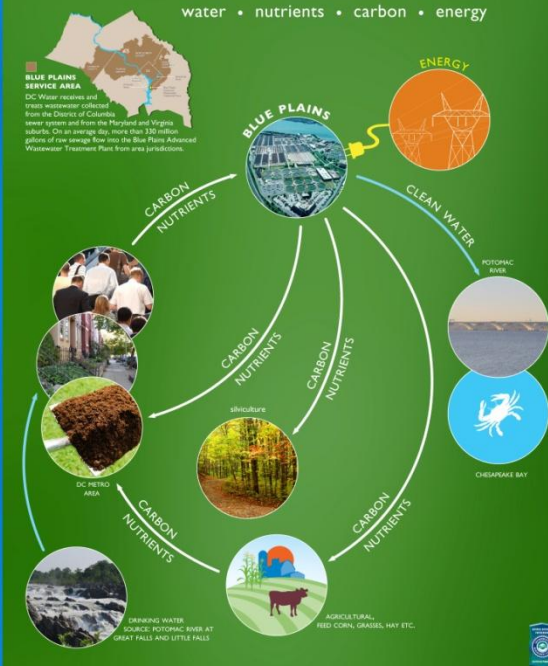
RECLAMATION

Restoring miles to their natural state and providing wildlife habitats.

URBAN RESTORATION

Grow trees and reduce runoff.


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


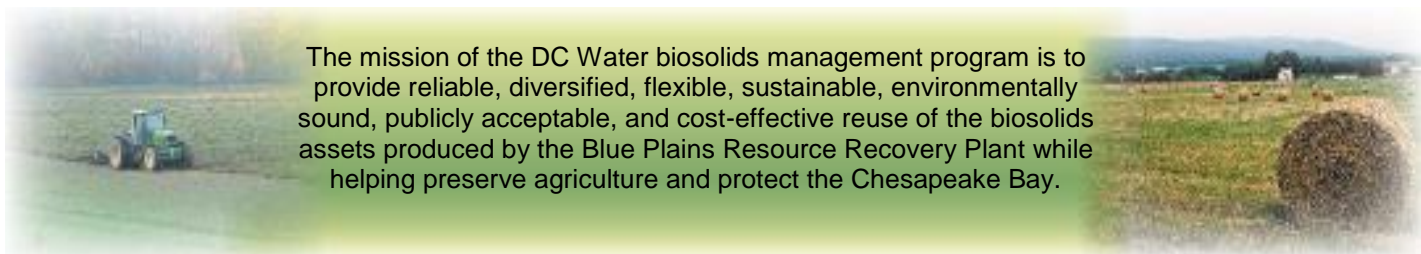
THERMAL HYDROLYSIS PROCESS (THP) AND DIGESTION FACILITY

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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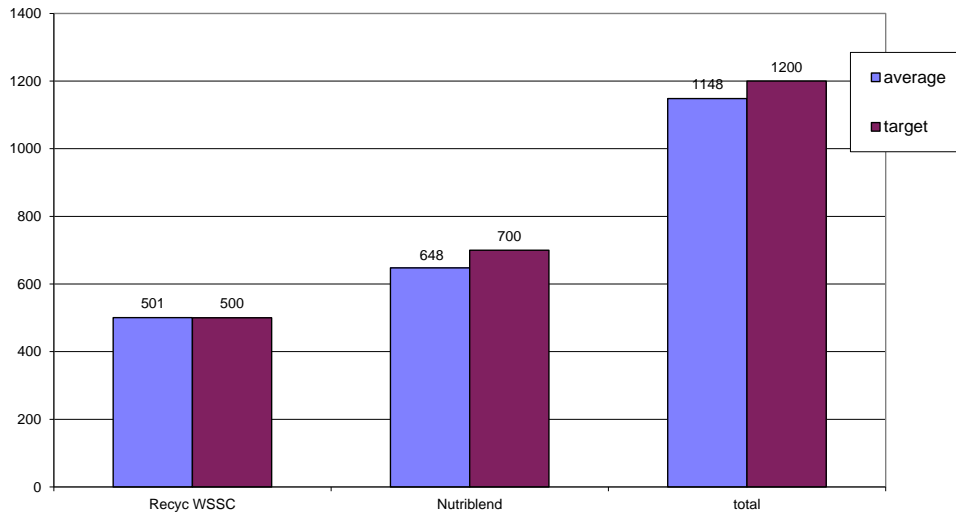


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

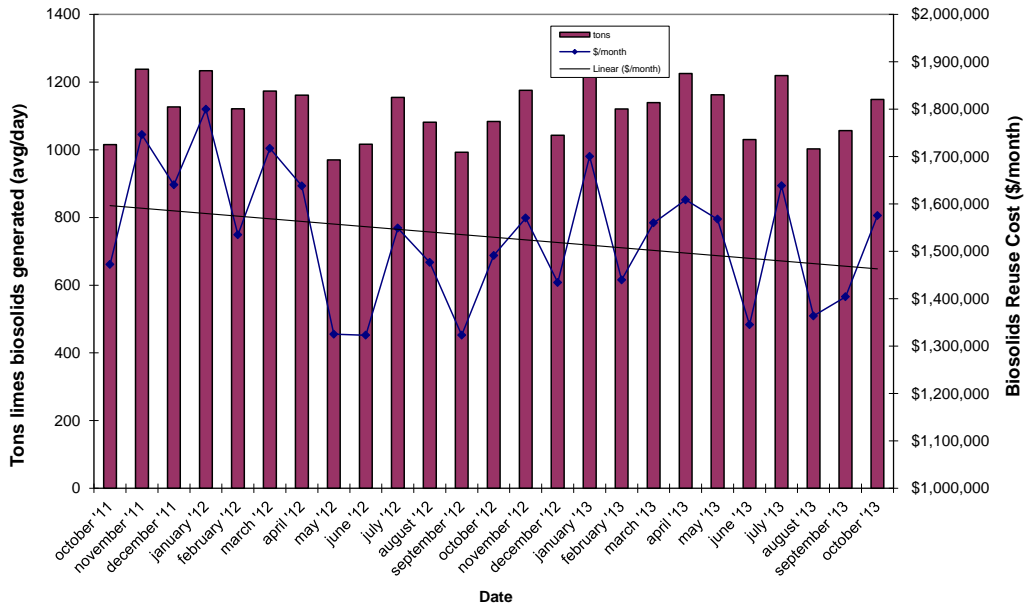
October 2013 Biosolids Division Report

In October, biosolids hauling averaged 1148 wet tons per day. The graph below shows the hauling by contractor for the month of October. Average % solids for the unlimed cake was 27.5%. Average lime dose for the month was 19.7%. Nutriblend took 326 tons of biosolids to the Spottsylvania County compost facility. At the end of October the Cumberland County storage pad had 2300 tons (~25,000 tons capacity), and the Cedarville lagoon was emptied (~30,000 tons capacity).

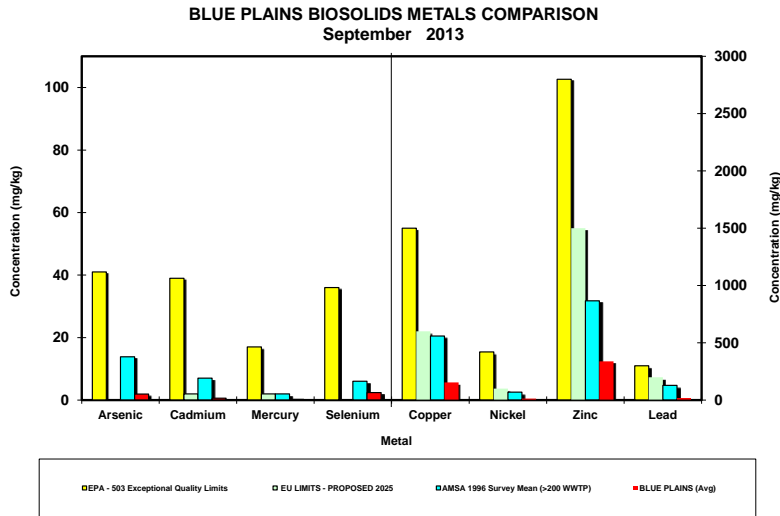
Average Daily Hauling by Contractor for October 2013



Average Daily Biosolids Production and Reuse Cost



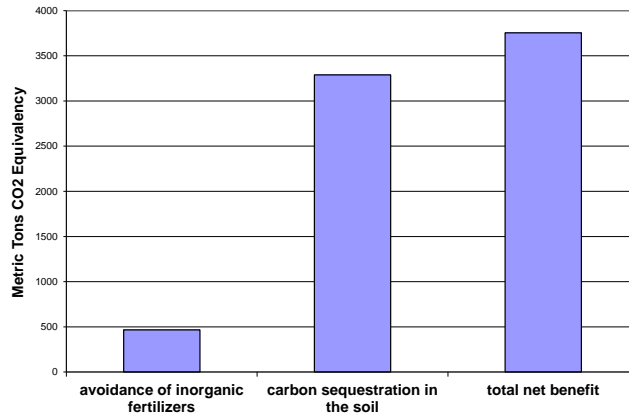
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of September 2013. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (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 in September coming directly from the plant and from storage facilities equaled 37381 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 3753 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 7,645,939 car miles off the road in the month of September (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 110,737 metric tons CO₂ equivalent.

DCWater Biosolids Recycling Program
Greenhouse Gas Balance Benefits
September 2013 Totals



October Highlights

In May of this year, the Biosolids Program started a small vegetable garden at Blue Plains (with help from Facilities for the initial installation). Plants grew very well in soil amended with biosolids compost. In the first growing season, the garden produced more than 50 pounds of tomatoes, peppers, eggplant, herbs and other produce. This produce was given away to various DC Water departments with a note about its source to get people within the organization talking about the potential of Class A biosolids for use in home lawns and gardens. The produce also provided a fitting (and delicious) prop in a meeting with the D.C. Department of Parks & Recreation, in which staff were discussing plans to develop projects using biosolids at other local agencies. The garden was featured in the July issue of DC Water's FOCUS internal newsletter and drives home the value of this product on plant tours. A fall/winter crop of garlic, beats, radishes and carrots was recently planted.



Staff coordinated and attended a Department of Parks and Recreation brown bag lunch discussion to speak about the use of biosolids compost and blended soil on DPR land. DPR staff agreed to investigate the concept and identify a field for a demonstration site. Staff will continue the discussion and keep the communication lines open and active.

Staff attended WEFTEC in Chicago and conducted a discussion at the WEF Meet the Experts series to discuss the value of biosolids products and converting a biosolids program from one of waste management to that of resource recovery. Staff emphasized steps taken over the past 5 years and steps currently taken in anticipation of producing Class A biosolids from the digesters. Blue Plains Class B biosolids is valued by farmers at approximately \$300 per acre and we currently pay a third party \$43 to transport it and we do not extract any of this value ourselves. Class A material blended into topsoils will allow DC Water to make use of product in the service area for tree planting, urban restoration, and green infrastructure.

