



# Biosolids Reuse Monthly Report

**NUTRIENTS and CARBON RECYCLING**

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

**SILVICULTURE**  
  
Increases yield and improves sustainability.

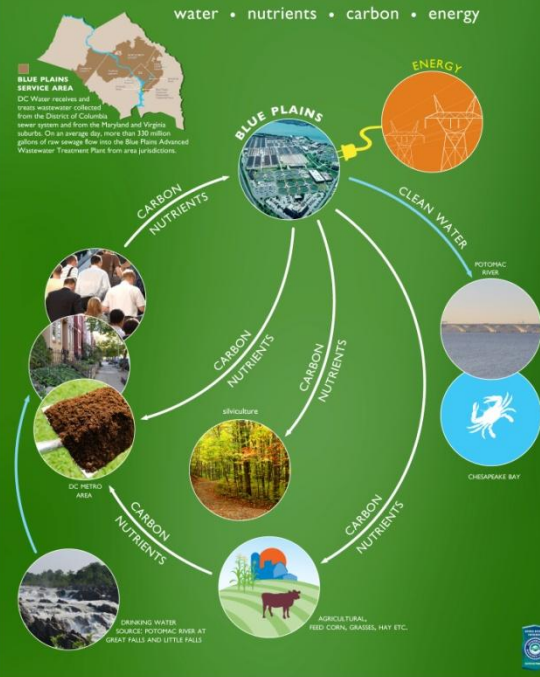
**RECLAMATION**  
  
Restoring mines to their natural state and providing wildlife habitats.

**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



**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 30,000 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.

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

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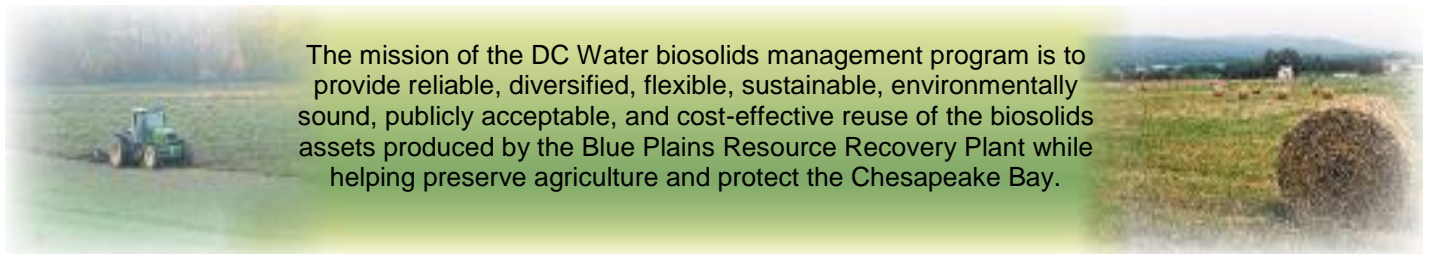
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## DC Water

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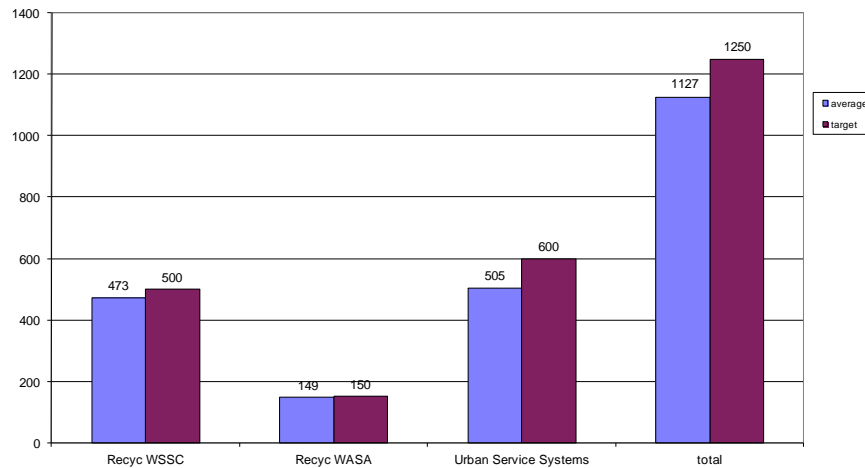
The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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



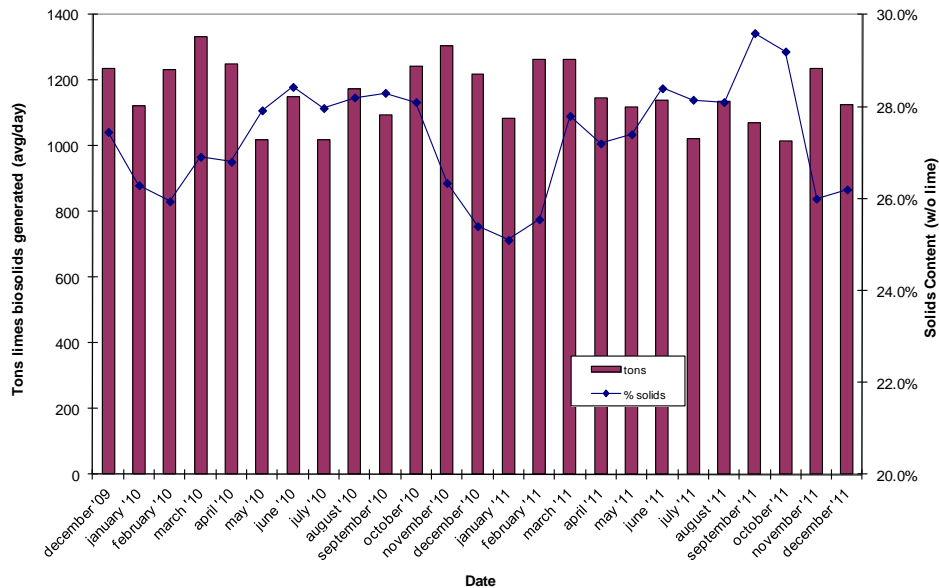
## December 2011 Biosolids Division Report

In December, biosolids hauling averaged 1127 wet tons per day. The average solids content was 26.2%. The average lime dose was 22.6%. The graph below shows the hauling by contractor for the month of December. In December, DC Water again shipped biosolids to the McGill Compost Facility in Waverly, VA. This is done through the Urban Service Systems contract. In December a total of 1600 tons went to compost production. At the end of December the Cumberland County storage pad had 9,600 tons (~25,000 tons capacity) and the Cedarville lagoon (~30,000 tons capacity) had 14,978 tons.

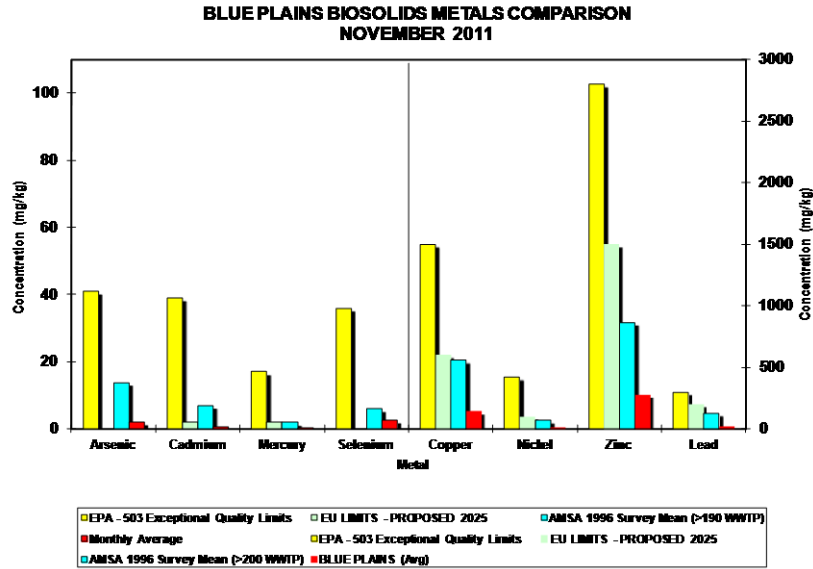
Average Daily Hauling by Contractor for December 2011



Average Daily Biosolids Production and Solids Content



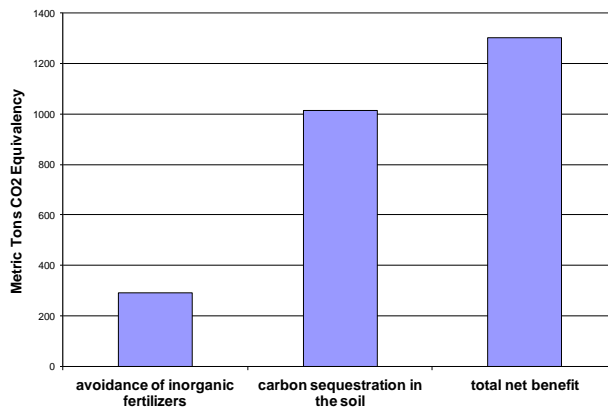
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of November 2011. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (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 21,775 tons. In addition, 2019 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 1303 metric tons CO<sub>2</sub> equivalent avoided emissions. This is equivalent to taking 2,654,668 car miles off the road in the month of November (assumes 20 mpg, 19.4 lb CO<sub>2</sub> equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since January, 2007 is 90,782 metric tons CO<sub>2</sub> equivalent.

**DCWASA Biosolids Recycling Program  
Greenhouse Gas Balance Benefits  
November 2011 Totals**



## December Highlights

### Virginia Biosolids Council meeting

Staff attended the Virginia Biosolids Council annual meeting, also attended by representatives of Virginia Department of Environmental Quality (DEQ, regulatory agency for biosolids use in VA) and Department of Conservation and Recreation (DCR, responsible for nutrient management planning in VA). DC Water is a board member of VBC, and contributes to the organization's annual budget and with volunteer hours. During the meeting, members heard of three goals met in the previous year. These include the re-design of the VBC webpage to include testimonials from farmers, posting of informational videos on YouTube, and the launch of a Facebook page. Links to all three of these are listed below. Please take the time to view the short YouTube video describing biosolids recycling in Virginia.

<http://www.virginiabiosolids.com/>

<http://www.youtube.com/watch?v=1avekQ1mYUM&feature=youtu.be>

<https://www.facebook.com/pages/Virginia-Biosolids-Council/281732988519325>

### Research planning meeting

Staff organized a meeting with researchers from U of MD, USDA, and Virginia Tech to discuss biosolids research needs and begin the process of planning for FY2012 research. Staff discussed the desire to solicit research designed to make use of and extract value from a Class A biosolids product. With the digester project underway, staff recognizes the opportunity to make use of the product within the service area, and will focus a portion of research resources toward developing products for this use. Of the tree sources of funds available for Blue Plains biosolids research (biosolids contract nutrient rebate, COG Blue Plains Regional Committee, and WSSC), the COG funds will be dedicated solely to this purpose. Other funds will look at this as well, but will also continue to seek answers to persistent questions about quality, odors, and nutrient dynamics.

### Map of Blue Plains Biosolids Applications and Agricultural \$'s for November 2011

