

February, 2015

# Biosolids Resource Recovery 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 meads 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**

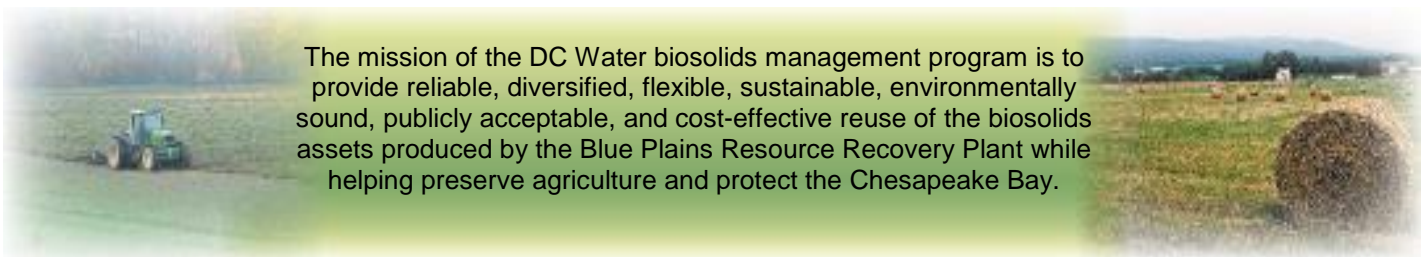
DC Water will be the first in North America to use thermal hydrolysis for wastewater treatment. When completed, this facility will be the largest plant of its kind in the world.

**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 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

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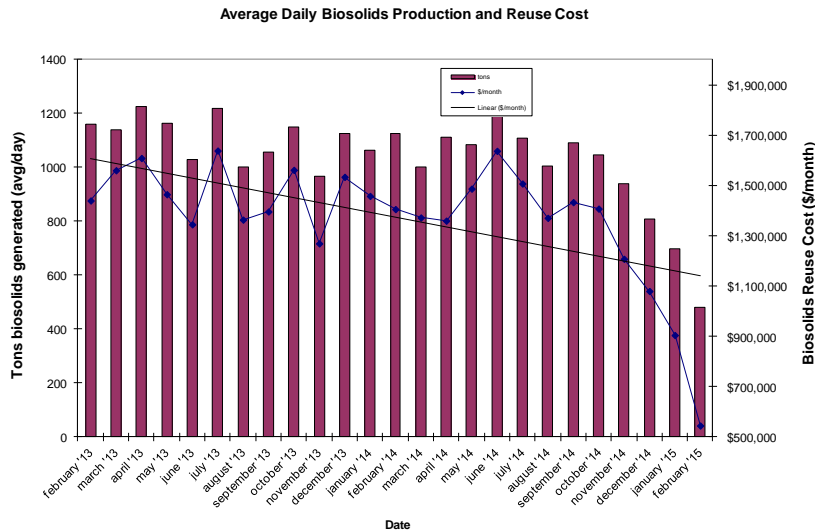
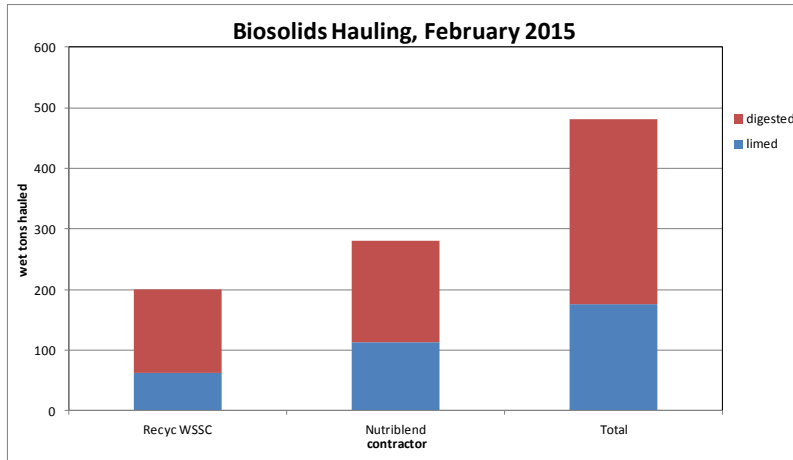


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

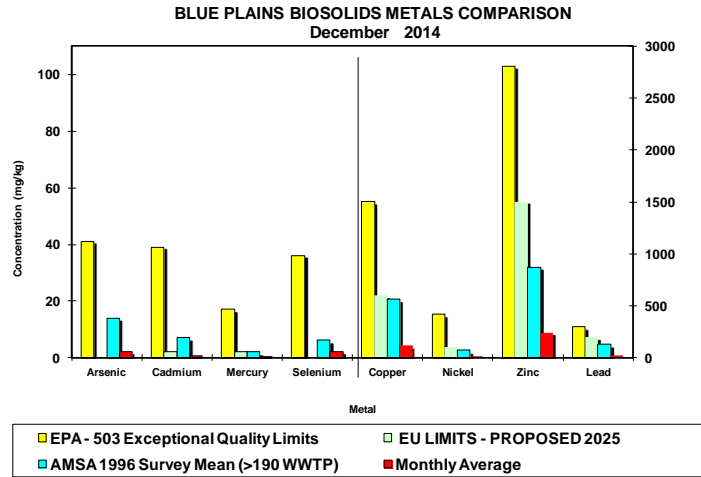
## February 2015 Resource Recovery Report

In February, biosolids hauling averaged 700 wet tons per day (wtpd). Of this total, 176 wtpd (36.6%) were lime stabilized Class B, and 305 wtpd (63.4%) were digested. The graph below shows the total hauling by contractor for the month of February. The average percent solids for the unlimed cake was 27.5%, and for digested material was 30.2%. The average lime dose for the Class B biosolids was 19.3%. At the end of February the Cumberland County storage pad had approximately 20,000 tons (~25,000 tons capacity), Cedarville lagoon had approximately 10,000 tons of Blue Plains biosolids (~30,000 tons capacity), and Fauquier lagoon had 800 tons (~15,000 tons capacity).

Please note the drop in biosolids management costs (second graph below, right vertical axis) due to the reduction in solids production since digesters came on line, and also due to the drop in fuel costs. In February, diesel prices averaged \$2.86/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost in February for the two contracts (DC Water and WSSC) was \$40.54/wet ton. For comparison, in February 2014 the average diesel price was \$4.34/gal and the average contract cost was \$44.59/wet ton.



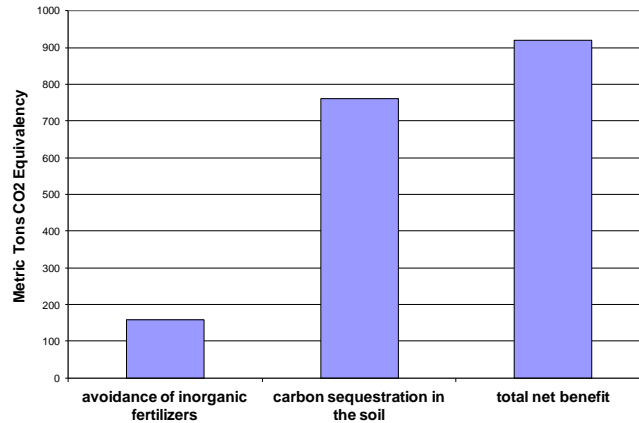
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of December 2014. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (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 January coming directly from the plant and from storage facilities equaled 13,674 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 920 metric tons CO<sub>2</sub> equivalent avoided emissions. This is equivalent to taking 1,874,065 car miles off the road in the month of January (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 139,017 metric tons CO<sub>2</sub> equivalent.

**DCWater Biosolids Recycling Program**  
**Greenhouse Gas Balance Benefits**  
January 2015 Totals



## February Highlights

For the third time, staff gave a class and tour through the Knowledge Commons D.C. organization. The class sold out with over 30 people signing up. Staff gave a presentation on biosolids reuse and our plans for increased urban use. The participants were engaged and asked good questions. Several participants have subsequently inquired about receiving compost for organizations with whom they are associated. Photos of the event are available here: [goo.gl/EIZM6y](https://goo.gl/EIZM6y).



Staff worked with External Affairs and an outside graphics firm to develop a branding logo for our Class A biosolids products. After developing a long list of ideas, staff chose three names for the final round, and from those three settled on a name and tagline:



The team chose this logo and tagline because it emphasizes the benefit (plant growth) and opens the discussion about greater project benefits such as reduced carbon footprint, green energy, and carbon sequestration. Staff is working to develop a specialized mix for use in the DC Water green infrastructure projects.

# Map of Blue Plains Biosolids Applications and Agricultural \$'s for January 2015

