

April, 2016

# 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.

### 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**



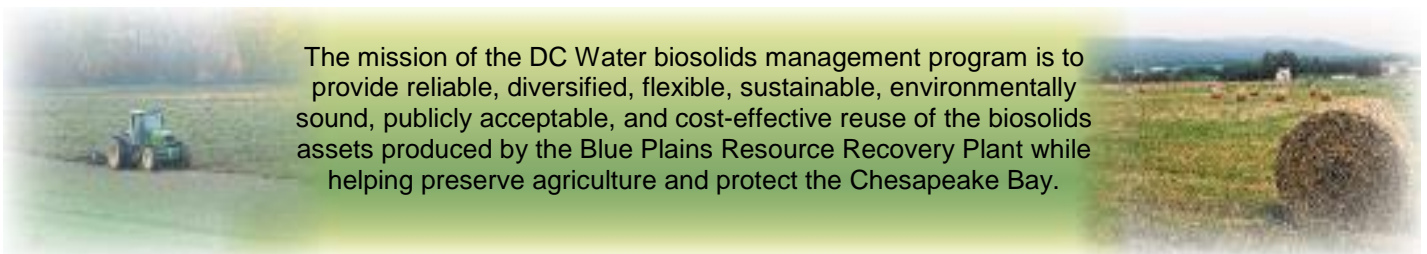
DC Water will be the first in North America to use thermal hydrolysis for wastewater treatment. When completed, this facility will be the largest plant of its kind in the world.

**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

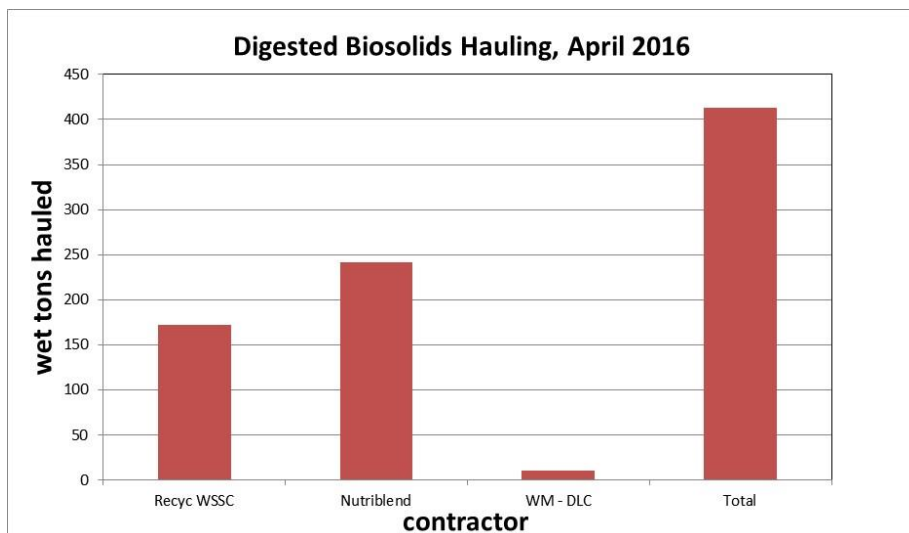
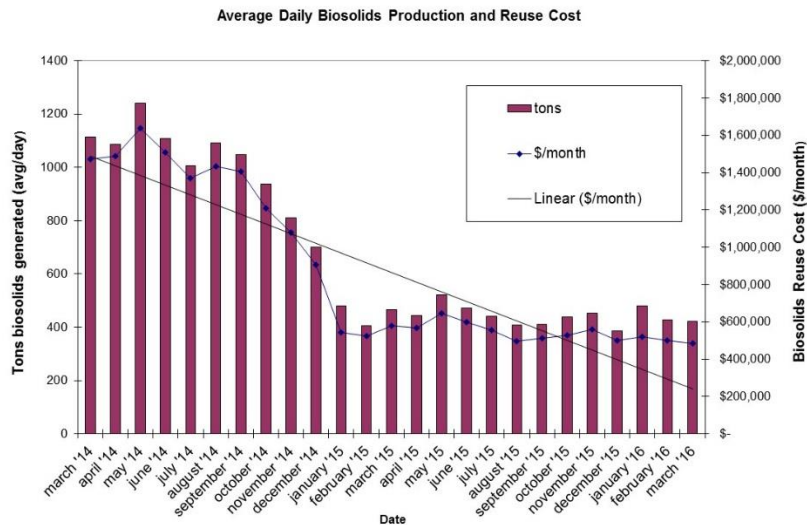
Resource Recovery Division  
 5000 Overlook Avenue SW  
 Washington, DC 20032  
 202-787-4329; 202-787-4226 (fax)  
[cpeot@dcwater.com](mailto:cpeot@dcwater.com)



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.

## April 2016 Resource Recovery Report

In April, biosolids hauling averaged 423 wet tons per day (wtpd). The graph below shows the total hauling by contractor for the month of April. The average percent solids for the digested material was 32.0%. In April, staff continued sending biosolids to a Waste Management landfill in VA for use as daily cover. This is a pilot program designed to demonstrate to the state that this is a suitable material for daily cover. It will run for 6 months at a price that is less than either of our other contracts. This will give DC Water a vital winter time option, if extended, that can take all our material in winter months if so desired. At the end of April the Cumberland County storage pad had approximately 0 tons (~25,000 tons capacity), Cedarville lagoon had approximately 0 tons of Blue Plains biosolids (~30,000 tons capacity), Goochland pad had 0 tons, and Fauquier lagoon had 0 tons (~15,000 tons capacity).



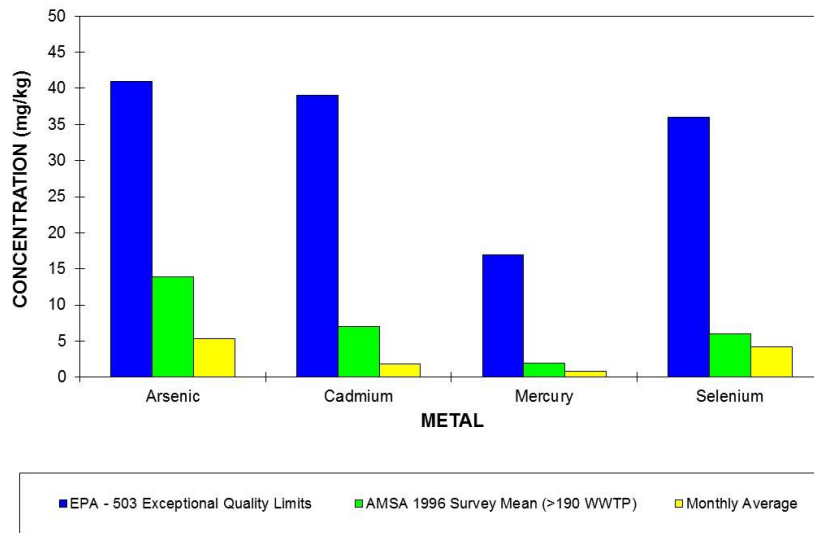
Please note the drop in biosolids management costs (second graph below, right vertical axis) due to the reduction in solids production since digesters came on

line, and also due to the drop in fuel costs. In April, diesel prices averaged \$2.32/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost in April for the three contracts was \$38.12/wet ton.

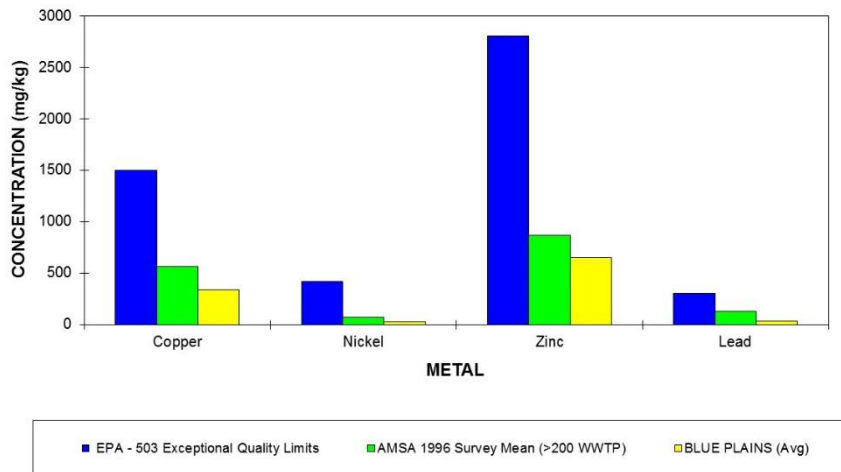
### Product Quality

The graph below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of March 2016. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits and the national average.

**BLUE PLAINS BIOSOLIDS METALS COMPARISON  
MARCH 2016**



**BLUE PLAINS BIOSOLIDS METALS COMPARISON  
MARCH 2016**



## Environmental Benefits

The quantity land applied in March coming directly from the plant and from storage facilities equaled 24,362 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 1739 metric tons CO<sub>2</sub> equivalent avoided emissions. This is equivalent to taking 13,542,808 car miles off the road in the month of February (assumes 20 mpg, 19.4 lb CO<sub>2</sub> equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since, January 2006 is 145,207 metric tons CO<sub>2</sub> equivalent.

The quantity land applied in March coming directly from the plant and from storage facilities equaled \_\_\_\_\_ tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is \_\_\_\_\_ metric tons CO<sub>2</sub> equivalent avoided emissions. This is equivalent to taking \_\_\_\_\_ car miles off the road in the month of March (assumes 20 mpg, 19.4 lb CO<sub>2</sub> equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since January 2006 is \_\_\_\_\_ metric tons CO<sub>2</sub> equivalent.

## Biosolids Applications and Agricultural \$'s for March 2016

