




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.

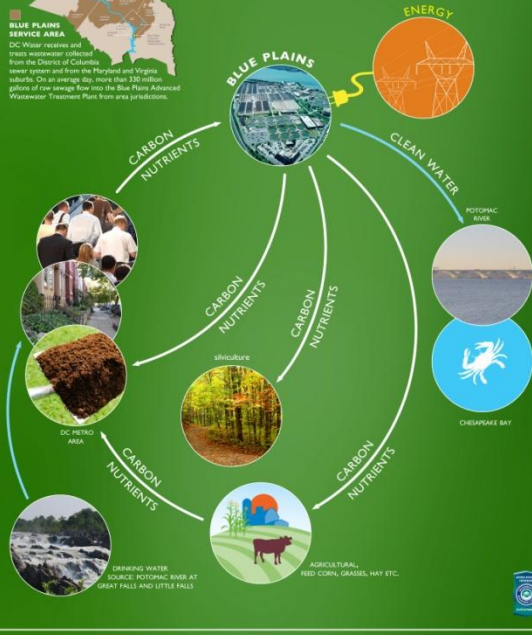
URBAN RESTORATION

Grow trees and reduce runoff.




BLUE PLAINS SERVICE AREA
DC Water receives and treats wastewater collected from the District of Columbia sewer system and from the Maryland and Virginia suburbs. On an average day, more than 300 million gallons of raw sewage flow into the Blue Plains Advanced Wastewater Treatment Plant from area jurisdictions.

BLUE PLAINS
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 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.

dcwater.com/biosolids

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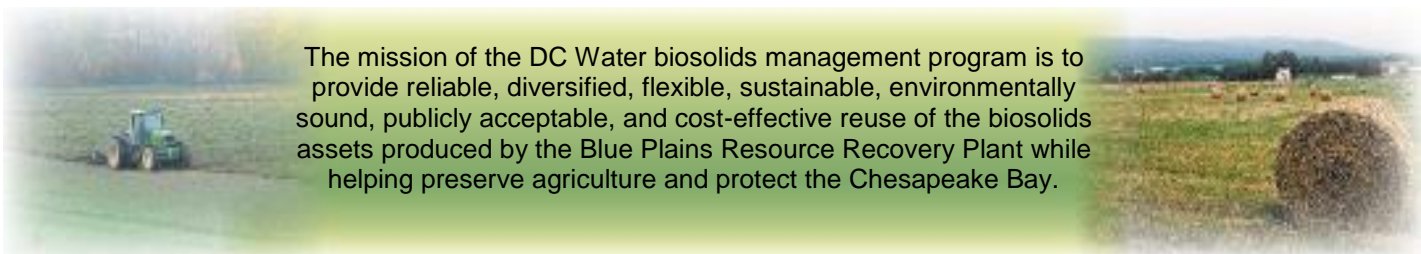

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DC Water

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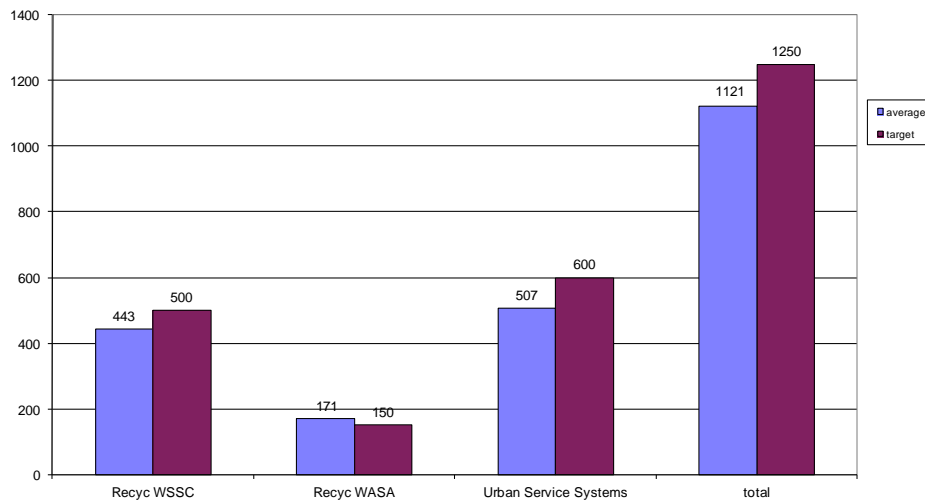


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

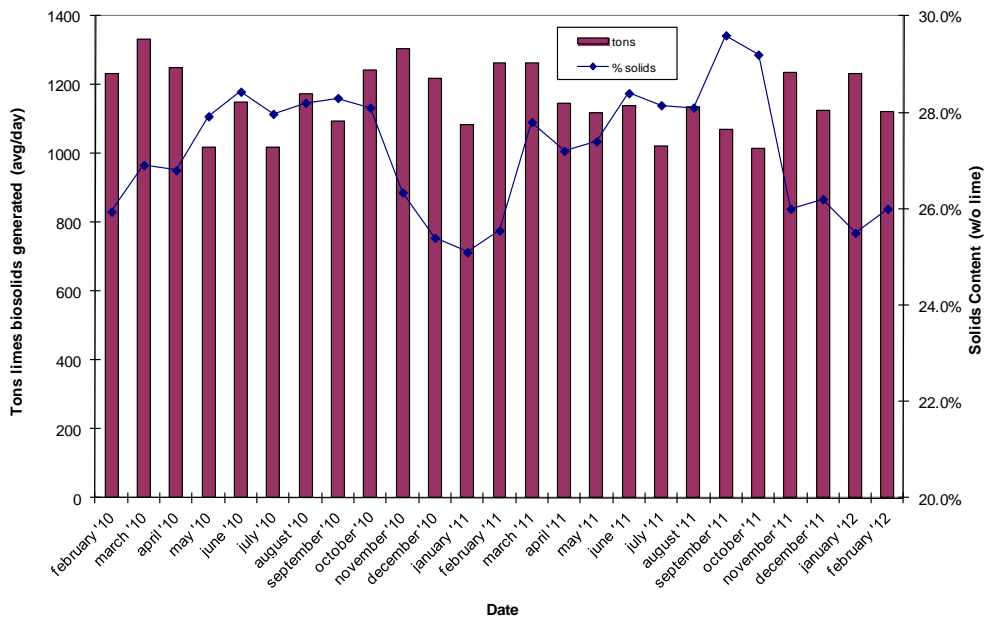
February 2012 Biosolids Division Report

In February, biosolids hauling averaged 1121 wet tons per day. The average solids content was 26.0%. The average lime dose was 18.7%. The graph below shows the hauling by contractor for the month of February. In February, DC Water again shipped biosolids to the McGill Compost Facility in Waverly, VA. This is done through the Urban Service Systems contract. In February a total of 1674 tons went to compost production. At the end of February the Cumberland County storage pad had 4238 tons (~25,000 tons capacity) and the Cedarville lagoon (~30,000 tons capacity) had 14002 tons.

Average Daily Hauling by Contractor for February 2012

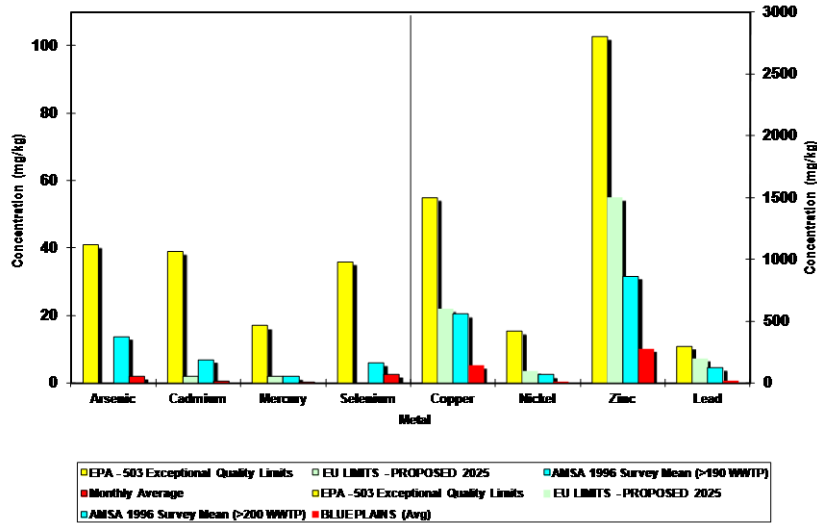


Average Daily Biosolids Production and Solids Content



The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of January 2012. 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.

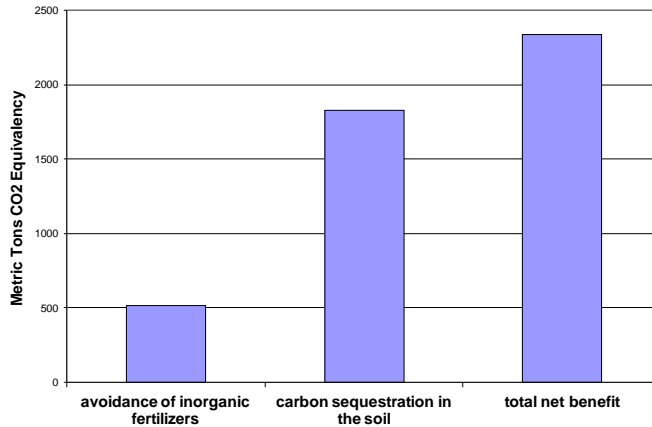
**BLUE PLAINS BIOSOLIDS METALS COMPARISON
DECEMBER 2011**



Environmental Benefits

The quantity land applied coming directly from the plant and from storage facilities equaled 42,069 tons. In addition, 1640 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 2338 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 4,763,135 car miles off the road in the month of January (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since February, 2007 is 94,157 metric tons CO₂ equivalent.

**DCWASA Biosolids Recycling Program
Greenhouse Gas Balance Benefits
January 2012 Totals**



February Highlights

DOE Fuel Cell Meeting

Staff met with representatives of the US Department of Energy to discuss advances in fuel cell technology. DOE has placed a fuel cell at a WWTP in Orange County, CA, which delivers electricity for use at the plant and a side stream product of hydrogen. DOE is interested in promoting the use of fuel cells at WWTP's in an effort to produce green power in the form of electricity and hydrogen. The auto industry has a goal to produce hydrogen fueled vehicles in the next 10 years, and DOE is attempting to demonstrate that hydrogen fueling stations can be established in urban areas, using WWTP digester gas as a feedstock. Staff is continuing discussions. This would not replace the existing turbines in the digester project, but could serve us if we expand the digesters in Phase II.

Food Waste Meetings

Staff met with two food waste companies, both of which see synergies with our digestion project. One company promotes the use of in-sink food grinders, with the purpose of sending more organics to the WWTP for gas generation. The other company collects food waste and brings it to a centralized facility for processing into a slurry. They would then like to feed it into a digester at a WWTP. Preliminary discussions indicate that if they collect and process 150 tons per day of food waste and introduce it to our digesters, it would produce an additional 2 MW of power for DC Water. Of course, capacity is an issue for DC Water to consider, as we will have days when we have peaks and do not have excess capacity. Staff will continue discussions of this concept.

Map of Blue Plains Biosolids Applications and Agricultural \$'s for January 2012

