

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 understorey.

RECLAMATION

Restoring mines 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

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.

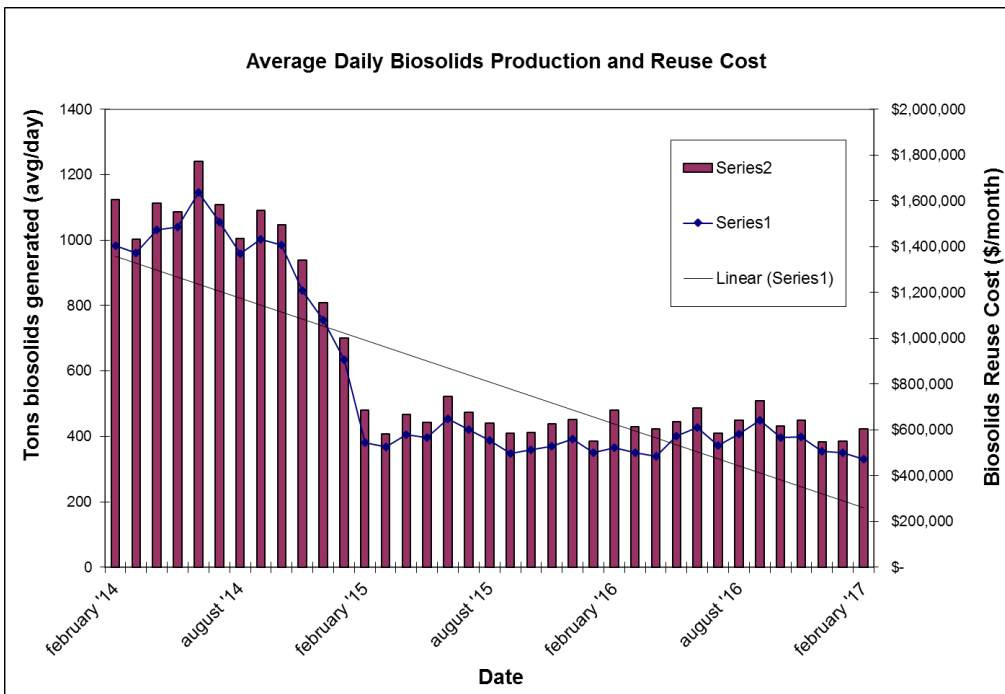
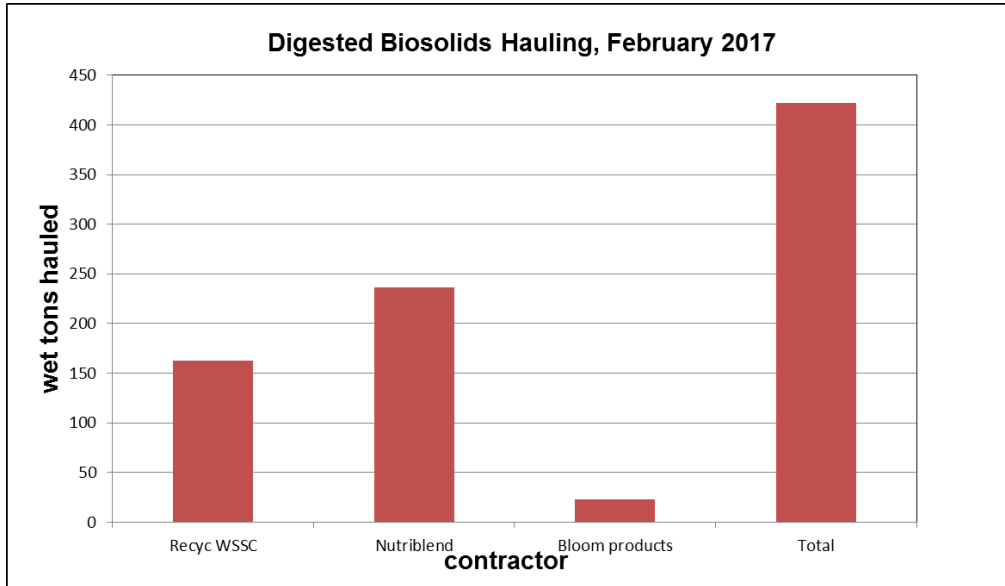
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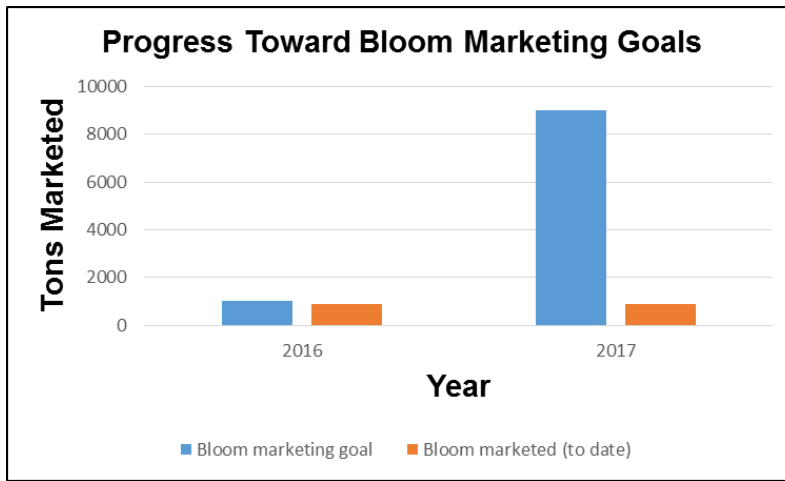
The mission of the DC Water Resource Recovery Program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable and cost-effective reuse of the Biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and protect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



February 2016 Resource Recovery Report

In February, biosolids hauling averaged 422 wet tons per day (wtpd). The graph below shows the total hauling by contractor for the month of February. The average percent solids for the digested material was 29.3%.

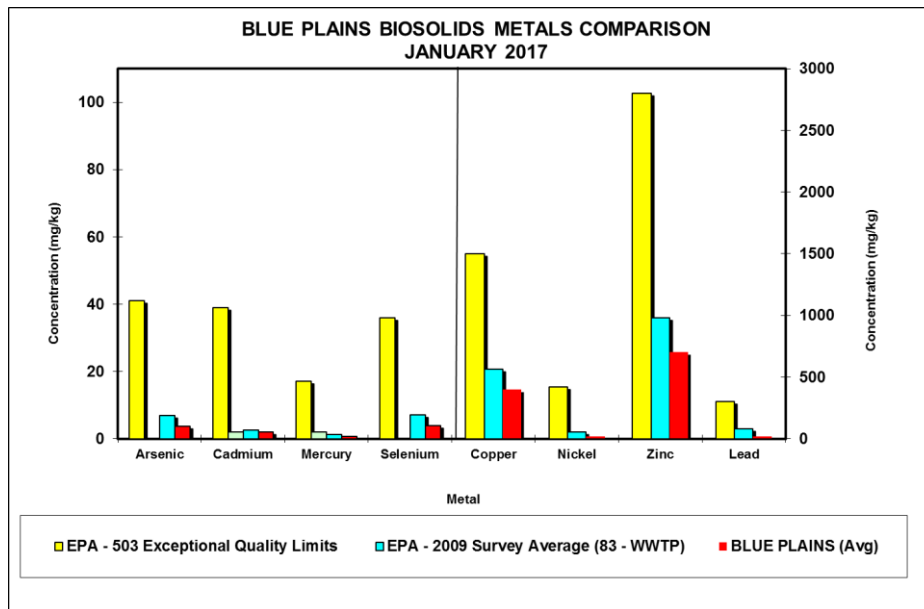


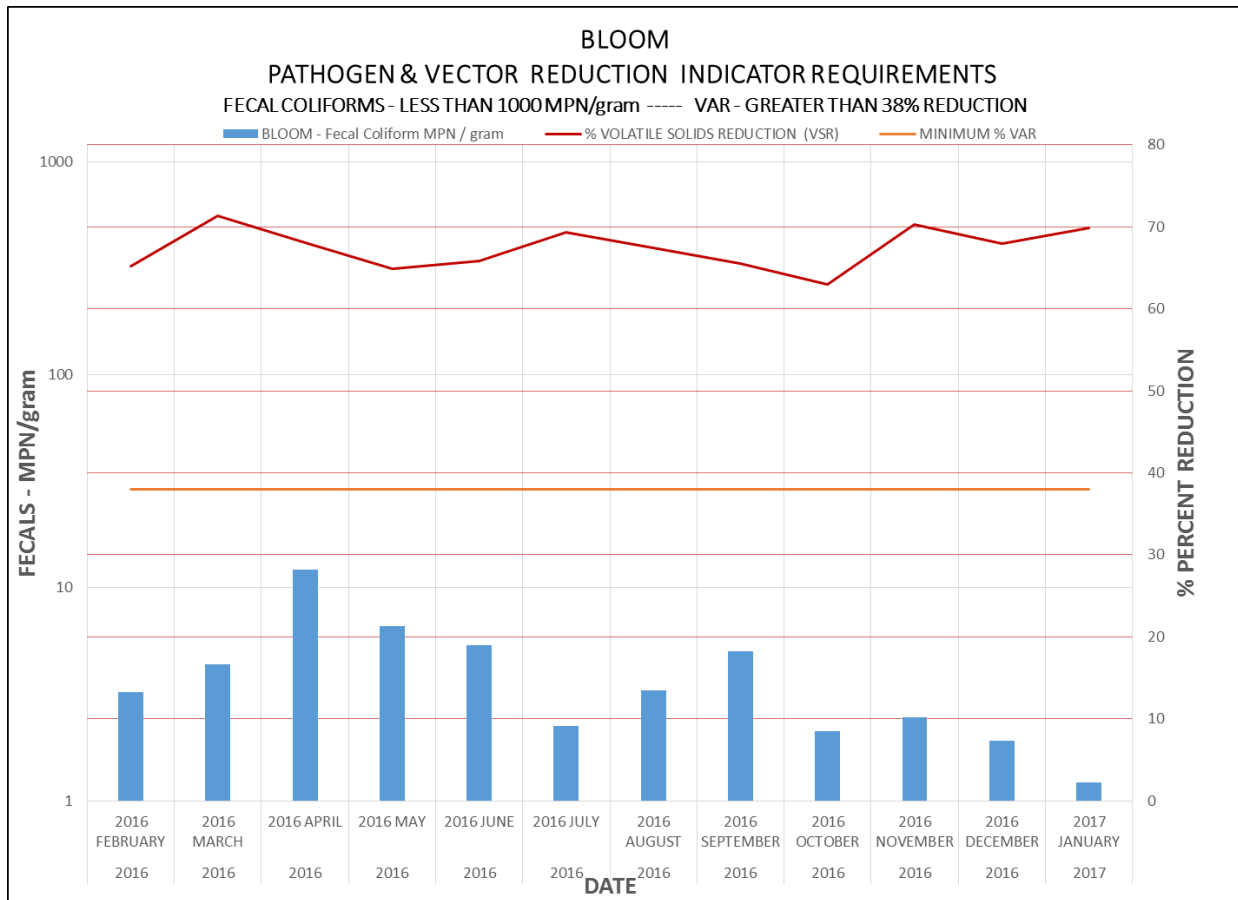


In February, diesel prices averaged \$2.77/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost (taking into account the marketed material) was \$40.54 wet ton.

Product Quality

The graph below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of January 2017. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits and the national average.

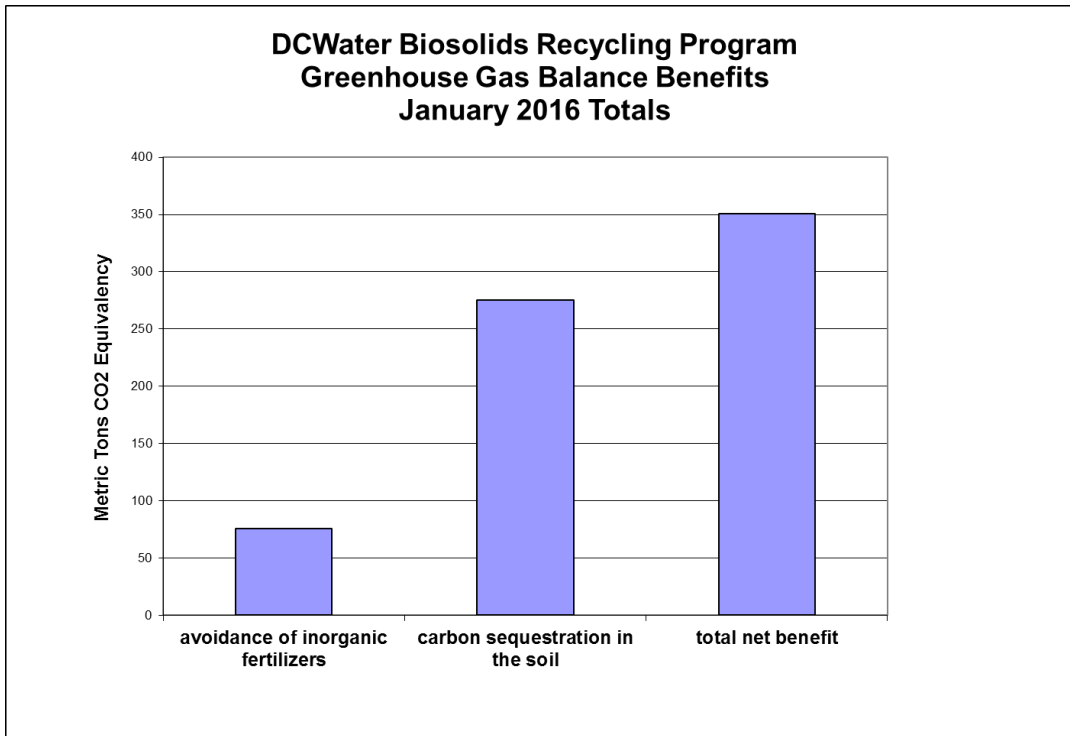




The graph above shows both Vector Attraction Reduction (VAR) and Fecal Coliform results in the final Bloom product, both of which are required to maintain the Class A Exceptional Quality (EQ) status of the Bloom product. Volatile solids are organic compounds that may be odorous and attract nuisance vectors (i.e. flies or rodents). DC Water digesters reduce VS by 65-70%, well above the required 38% minimum. In addition, this graph shows fecal coliforms (FC) levels in DC Water's final Bloom product. Fecal coliforms are indicators of disease causing organism (pathogens), and must be below 1000 MPN/g to meet Class A standards. Bloom FC levels are 2 or 3 orders of magnitude less than the maximum allowable level.

Environmental Benefits

The quantity land applied in January coming directly from the plant and from storage facilities equaled 5333 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 351 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 714,650 car miles off the road in the month of December (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since, January 2006 is 152,328 metric tons CO₂ equivalent.



Highlights

Staff tabled and presented for the fourth consecutive year at the Rooting DC annual one-day forum for urban gardeners. It was the 10th anniversary of the event, and turnout was estimated at well over 1,000 people. Most of the District's food-growing organizations—school and community gardens, garden clubs, urban agriculture non-profits, tree advocates, for-profit gardening consulting firms, journalists, District government agencies—were represented. Staff gave away 80 bags of cured Bloom and marketing materials. Over 30 people signed up for tours that staff will be giving especially for Rooting DC participants later in March. A full-page ad for Bloom was again featured in the program pamphlet that went out to all attendees. Staff made valuable contacts with journalists, government agencies and potential partners.



VA DEQ Distribution and Marketing Permit Update

Staff worked closely with VA DEQ on the draft Bloom distribution and Marketing permit, and it is nearly ready for re-submission. Since this will be the first such permit for a product of this kind in VA, staff worked closely with VAMWA and legal counsel to ensure that what we were asking for in the permit was both supported by the regulations and beneficial to other generators in VA. Through a series of meetings and review processes, staff feels everyone's interests are represented in the revised application, which will go to VA DEQ personnel for review this week.

Biosolids Applications and Agricultural \$'s for January 2016

