

# 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

**BLUE PLAINS**

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 330 million gallons of raw sewage flow into the Blue Plains Advanced Wastewater Treatment Plant from area jurisdictions.

**ENERGY**

**CLEAN WATER**

POTOMAC RIVER

CHESAPEAKE BAY

CARBON NUTRIENTS

silviculture

DC METRO AREA

DRINKING WATER SOURCE: POTOMAC RIVER AT GREAT FALLS AND LITTLE FALLS

AGRICULTURAL FEED: CORN, GRASSES, HAY ETC.

[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

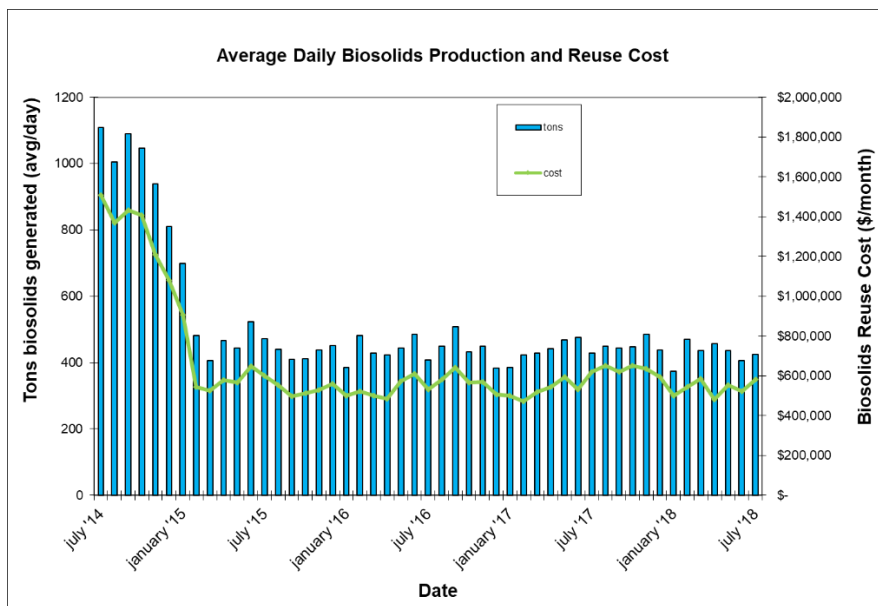
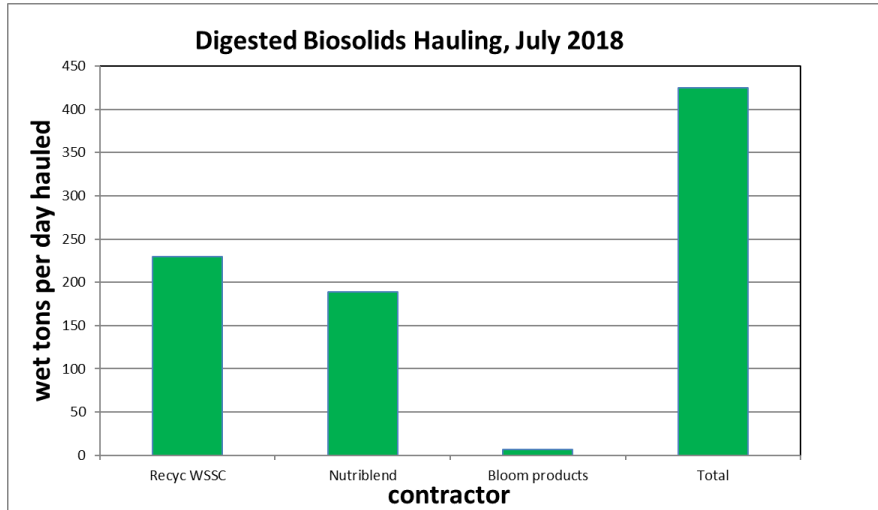
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The mission of the DC Water Resource Recovery Program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publically acceptable and cost-effective reuse of the Biosolids assets produced by the Blue Plains Resource Recovery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



## RESOURCE RECOVERY

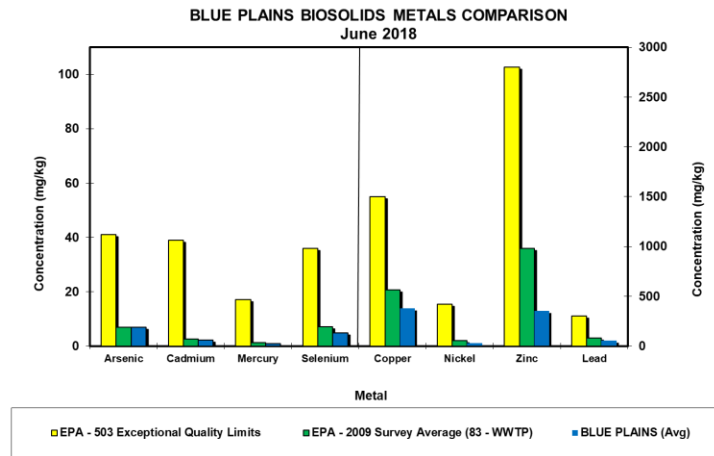
In July, biosolids hauling averaged 425 wet tons per day (wtpd). The average percent solids for the Class A material was 33.2%. The graph below shows average daily biosolids produced and the associated monthly cost for reuse (transportation and application cost) for a three-year period ending July 2017. In July, diesel prices averaged \$3.40/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (considering the marketed material) was \$43.50 per wet ton.



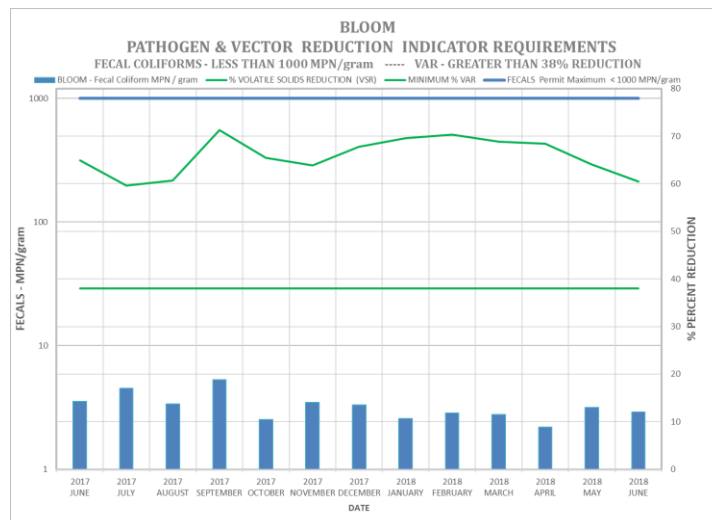
The average quantities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantities marketed as Bloom are shown on the graph above. In July, 216 wet tons of Bloom were distributed to 7 customers.

### Product Quality

All biosolids produced during the month of July met Class A Exceptional Quality (EQ) requirements required by EPA. The graph below shows the EPA regulated heavy metals average concentrations in the Class A biosolids. The concentrations are considerably below the regulated exceptional quality limits (EPA-503 Exceptional Quality Limits) and the national average (EPA-2009 Survey Average).

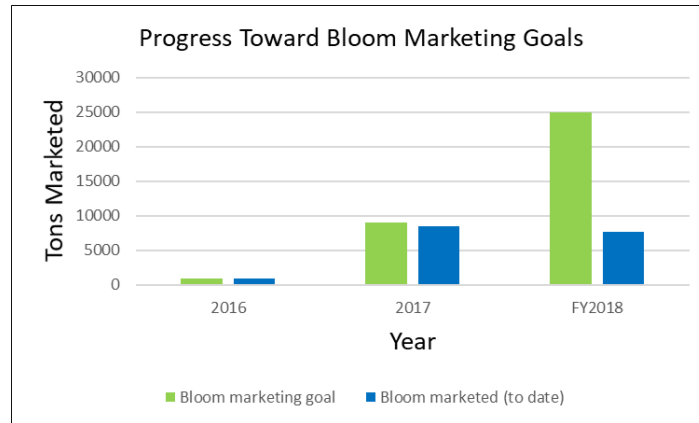


The graph below shows both Vector Attraction Reduction (VAR) and Fecal Coliform (FC) results in the Class A product, both of which are required to maintain the Class A Exceptional Quality (EQ) status. Vector Attraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that June be odorous and attract nuisance vectors such as flies and rodent. DC Water anaerobic digesters reduced VS by over 65 percent, well above the required 38 percent minimum. In addition, the graph shows fecal coliforms levels in the Class A product. Fecal coliforms are indicators of disease causing organism (pathogens), and must be below 1,000 MPN/g to meet Class A standards. The FC levels in the Class A product are two orders of magnitude less than the maximum allowable level.



## Bloom Marketing

Bloom sales as of August 1<sup>st</sup> total 7702 tons for the calendar year. This represents 31% of the goal 25,000 tons. Goals were set last year for this year, and with the upcoming fall sales season, we are striving to meet this aggressive goal.



## Renewable Energy Credits (RECs) Revenue

The Resource Recovery team sold another batch of Tier 1 Renewable Energy Credits (RECs) into the MD market. 7000 RECs sold at \$6.75/REC, for a total of \$47,250 of revenue. Including this sale, a total of \$404,191 of RECs revenue to date have been generated in FY18. These RECs are all from the green energy generated by the Blue Plains CHP turbines. Resource Recovery is also registering our CHP for the credits associated with the reuse of waste heat. These will be made available for sale in DC once the team completes the registration.

# Bloom Reuse and Value Map

This map shows where Bloom was reused on agricultural land and sold into the market as a soil amendment product. We now possess our Distribution and Marketing permit for the state of VA, and are beginning to make deliveries to VA.

