

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

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.

DC Water

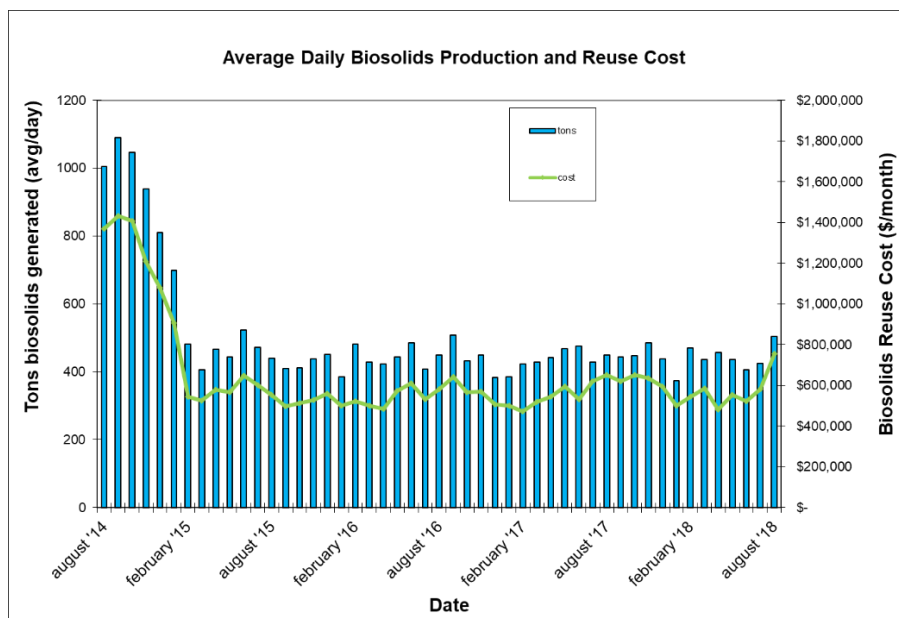
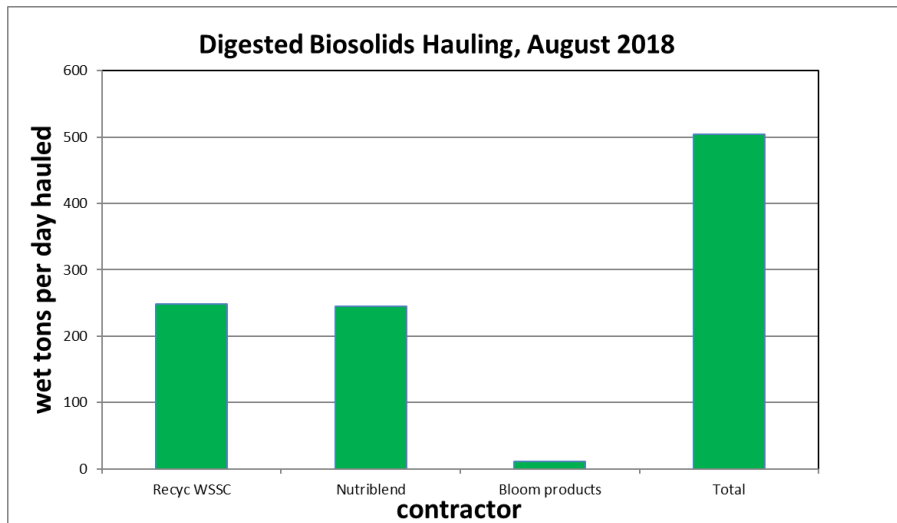
Resource Recovery Division
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The mission of the DC Water Resource Recovery Program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publically acceptable and cost-effective reuse of the Biosolids assets produced by the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



RESOURCE RECOVERY

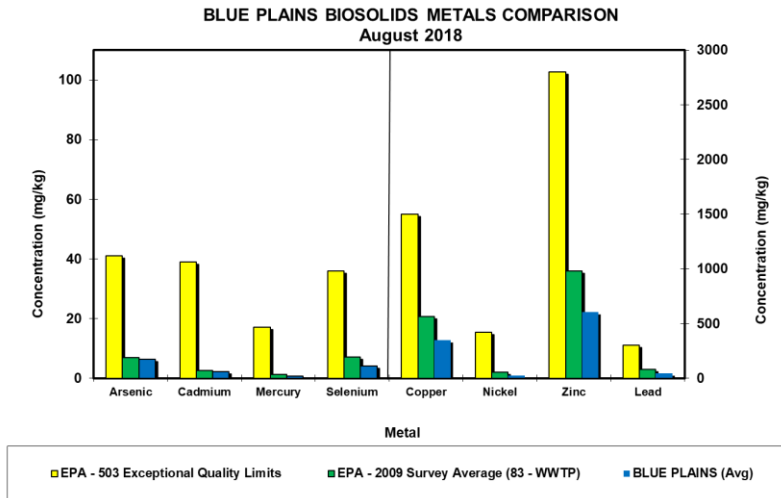
In August, biosolids hauling averaged 504 wet tons per day (wtpd). The average percent solids for the Class A material was 33.8%. The graph below shows average daily biosolids produced and the associated monthly cost for reuse (transportation and application cost) for a three-year period ending August 2017. In August, diesel prices averaged \$3.39/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (considering the marketed material) was \$43.80 per wet ton.



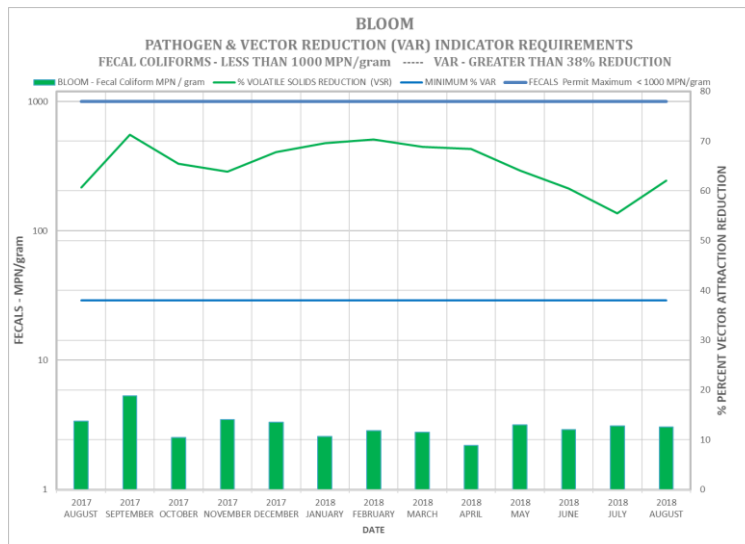
The average quantities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantities marketed as Bloom are shown on the graph above. In August, 340 wet tons of Bloom were distributed to 11 customers.

Product Quality

All biosolids produced during the month of August 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).

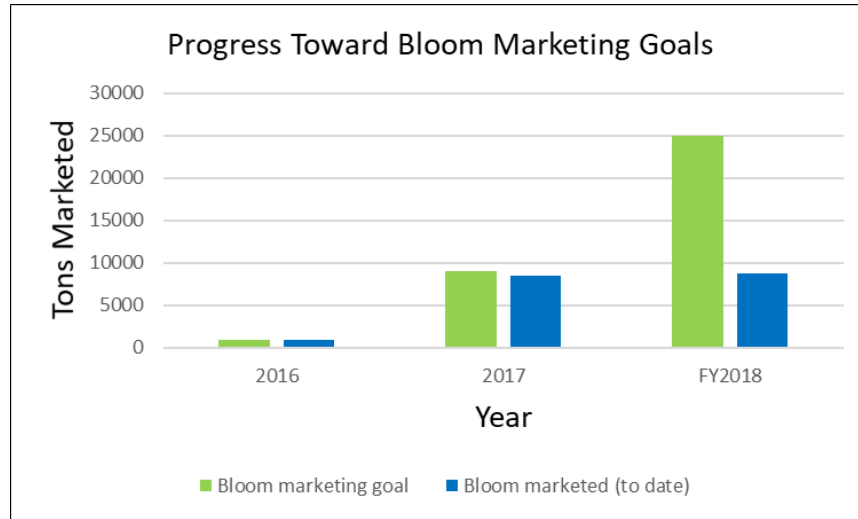


The graph below shows both Vector Attraction Reduction (VAR) and Fecal Coliform (FC) results in the Class A product, both of which are required to maintain the Class A Exceptional Quality (EQ) status. Vector Attraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that July 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 September 1st total 8773 tons for the calendar year. This represents 35% of the goal 25,000 tons. Goals were set last year for this year, and with the September sales, we are striving to meet this aggressive goal. We will likely fall short, but have learned a lot, and have some marketing reinforcement coming for FY19.



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.

