

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.

DC Water

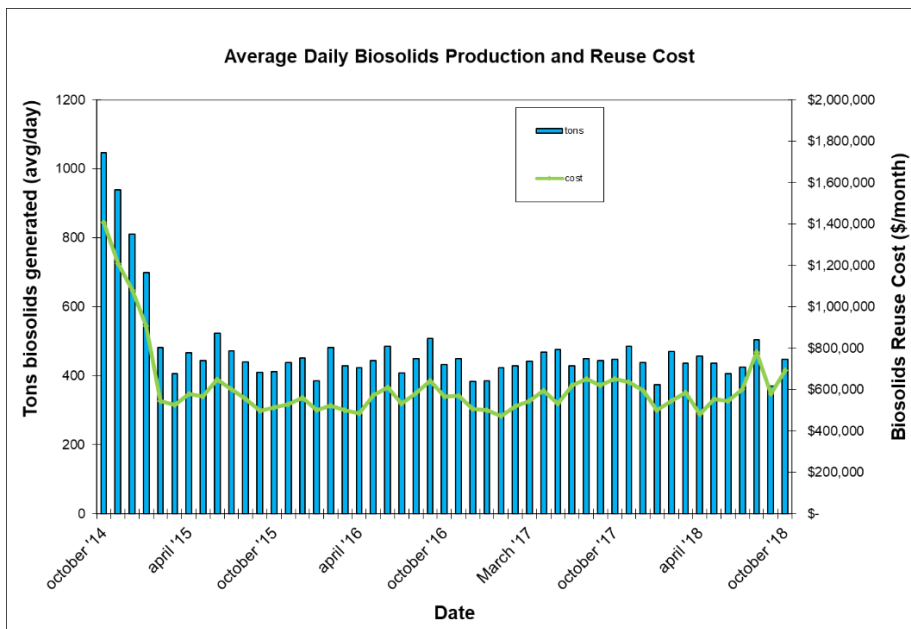
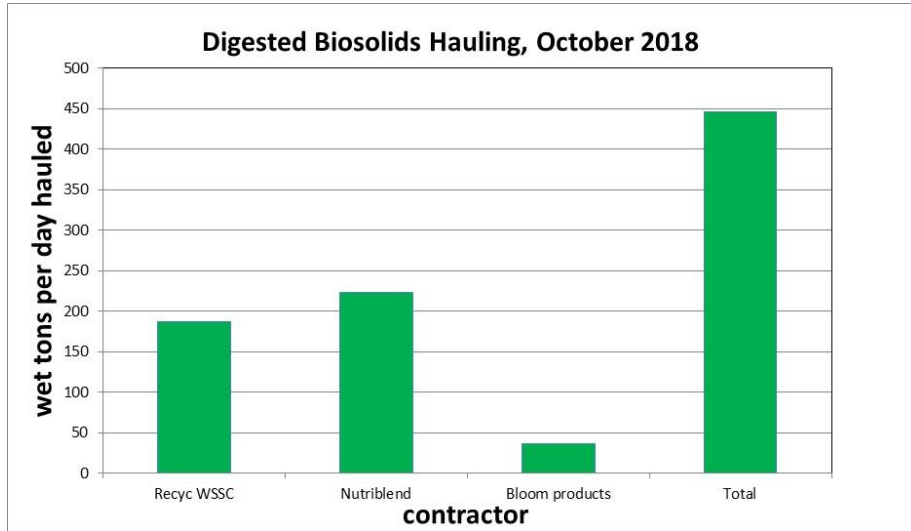
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The mission of the DC Water Resource Recovery Program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publically acceptable and cost-effective reuse of the Biosolids assets produced by the Blue Plains Resource Recovery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



RESOURCE RECOVERY

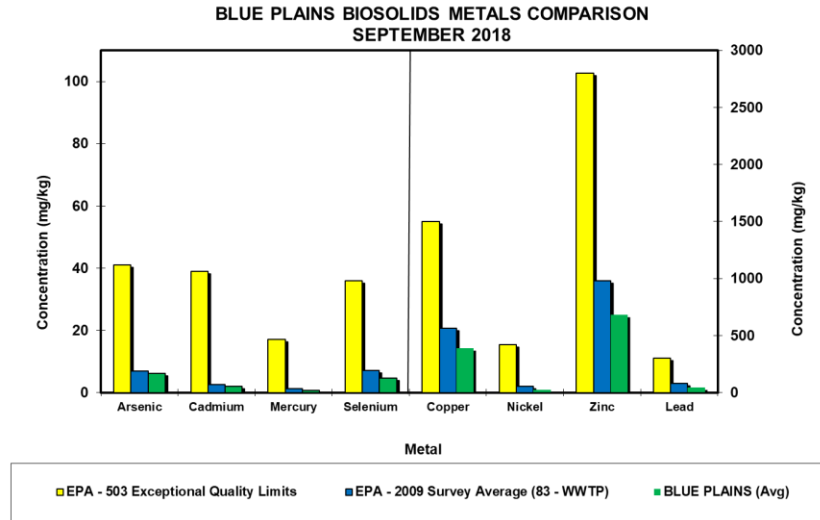
In October, biosolids hauling averaged 447 wet tons per day (wtpd). The average percent solids for the Class A material was 34.5%. The graph below shows average daily biosolids produced and the associated monthly cost for reuse (transportation and application cost) for a three-year period ending October 2017. In October, diesel prices averaged \$3.52/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (considering the marketed material) was \$43.36 per wet ton.



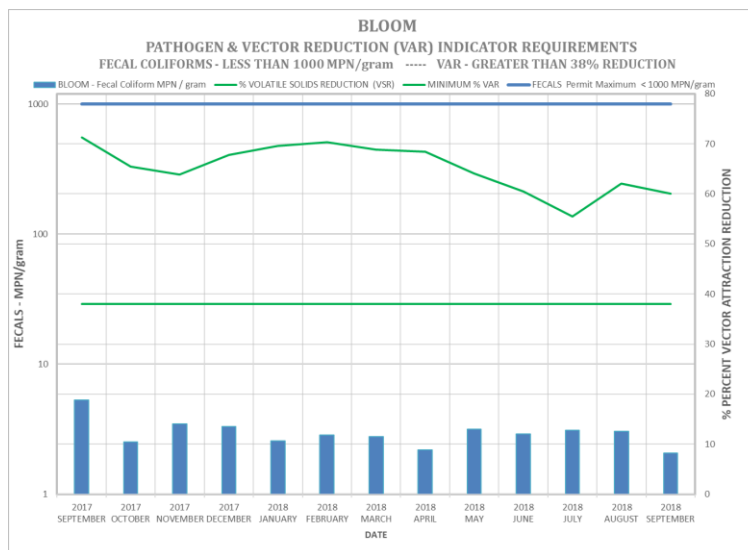
The average quantities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantities marketed as Bloom are shown on the graph above. In October, 1133 wet tons of Bloom were distributed to 18 customers.

Product Quality

All biosolids produced during the month of September 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).

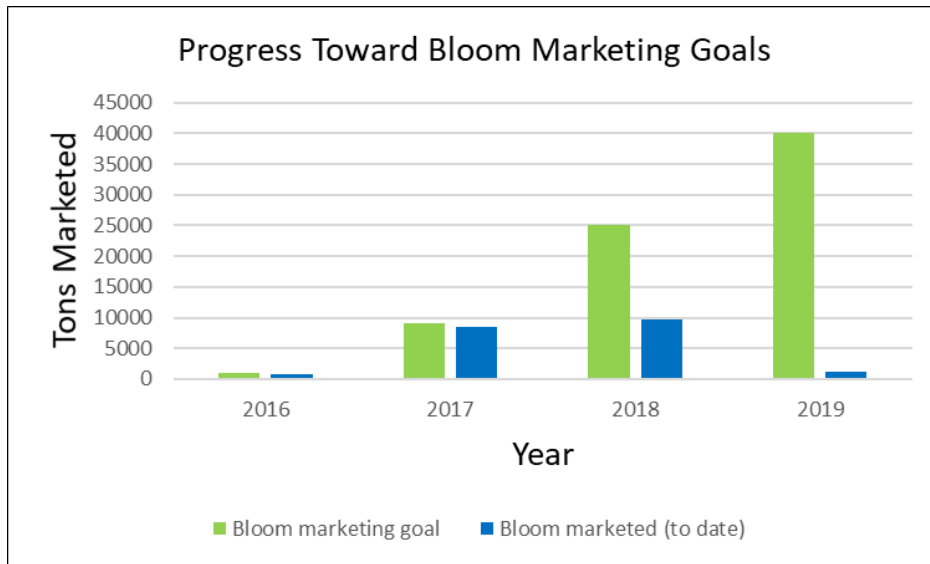


The graph below shows both Vector Attraction Reduction (VAR) and Fecal Coliform (FC) results in the Class A product, both of which are required to maintain the Class A Exceptional Quality (EQ) status. Vector Attraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that are 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.



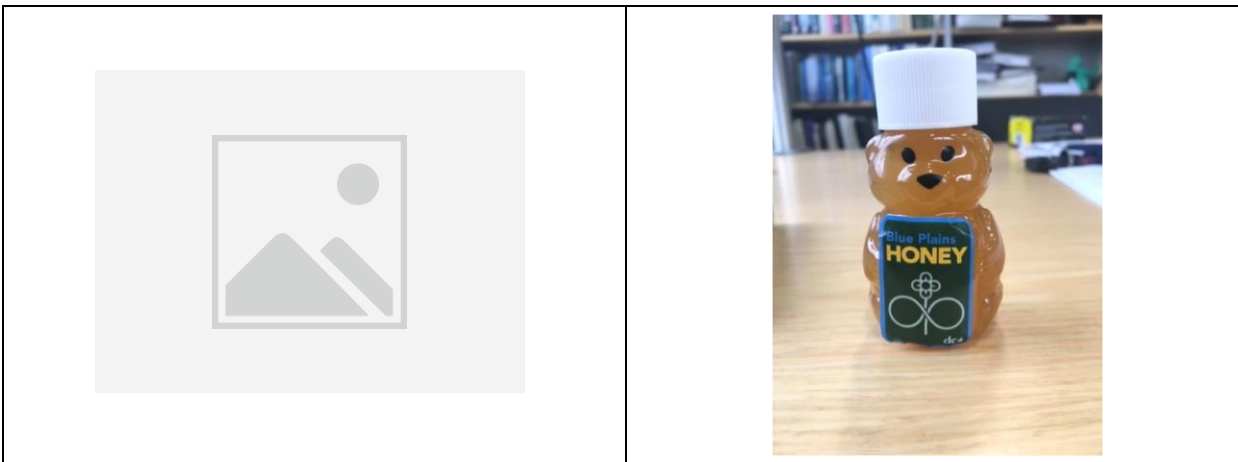
Bloom Marketing

Bloom sales as of November 1st total 1138 tons for the fiscal year. This represents 3% of the goal 40,000 tons. Goals were set last year for this year, and we and our marketing partner Blue Drop strove to meet this aggressive goal, but fell short. As of October 1st, Blue Drop hired a soil amendment sales specialist, Doug Miller, who knows the market in the region. In addition, we have an agreement for commission based sales in Virginia and are working on an agreement with another firm that specializes in soil amendment marketing.



Resource Recovery Highlights

Bloom honey, entered in the DC 2018 state fair, garnered a judges choice award for “Best Tasting Honey”, proving that Blue Plains is the sweetest spot in DC. Beekeeper Bill Brower, along with a few intrepid DC Water employees, tended the hives all year and harvested the honey this fall. Small bear bottles were made available for all DWT employees at the recent all-hands meeting as a small token of appreciation for their kindness toward the bees.



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. The numbers represent the value of the product applied in each county, which accounts for the nitrogen value in the biosolids.

