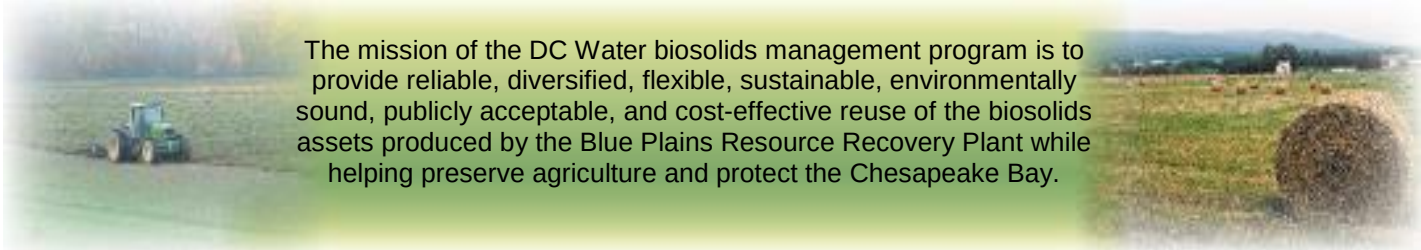
July, 2015

Biosolids Resource Recovery Monthly Report

DC Water

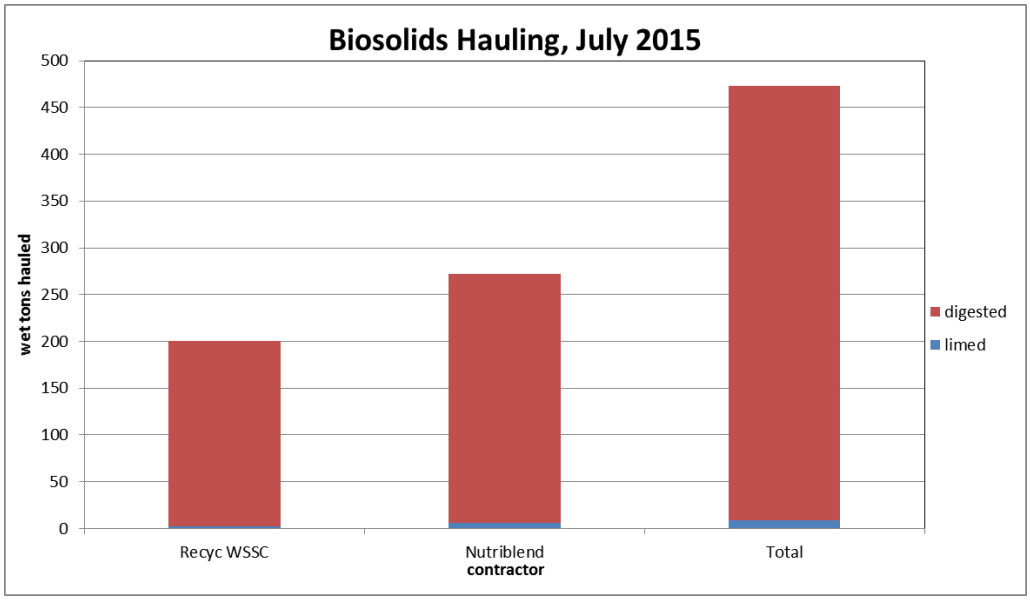
Resource Recovery Division
5000 Overlook Avenue SW
Washington, DC 20032
202-787-4329; 202-787-4226 (fax)
cpeot@dcwater.com

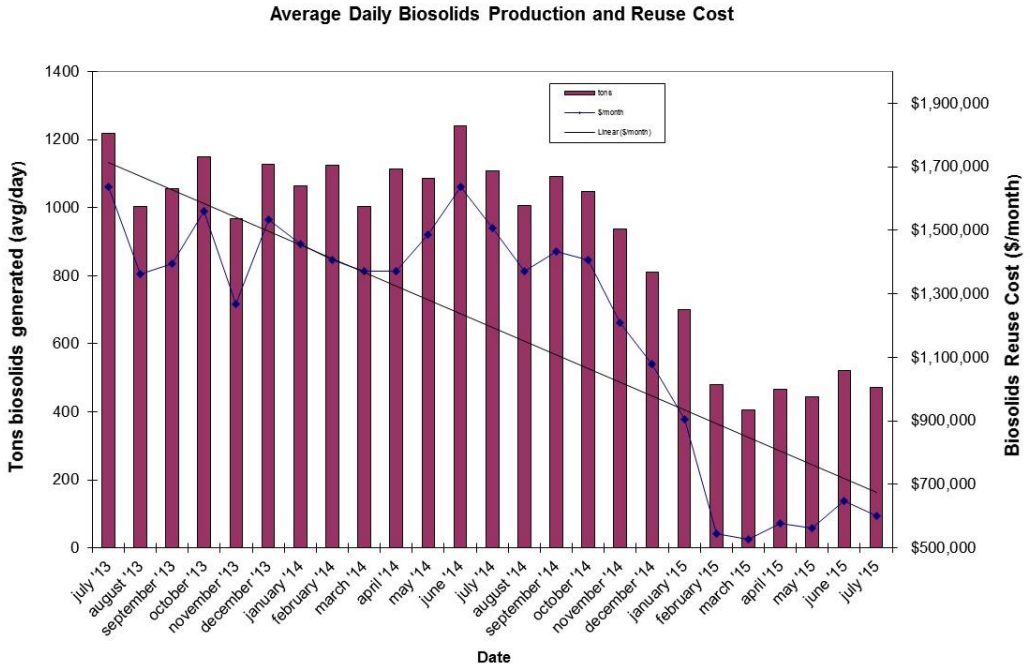


The mission of the DC Water biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective reuse of the biosolids assets produced by the Blue Plains Resource Recovery Plant while helping preserve agriculture and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

July 2015 Resource Recovery Report

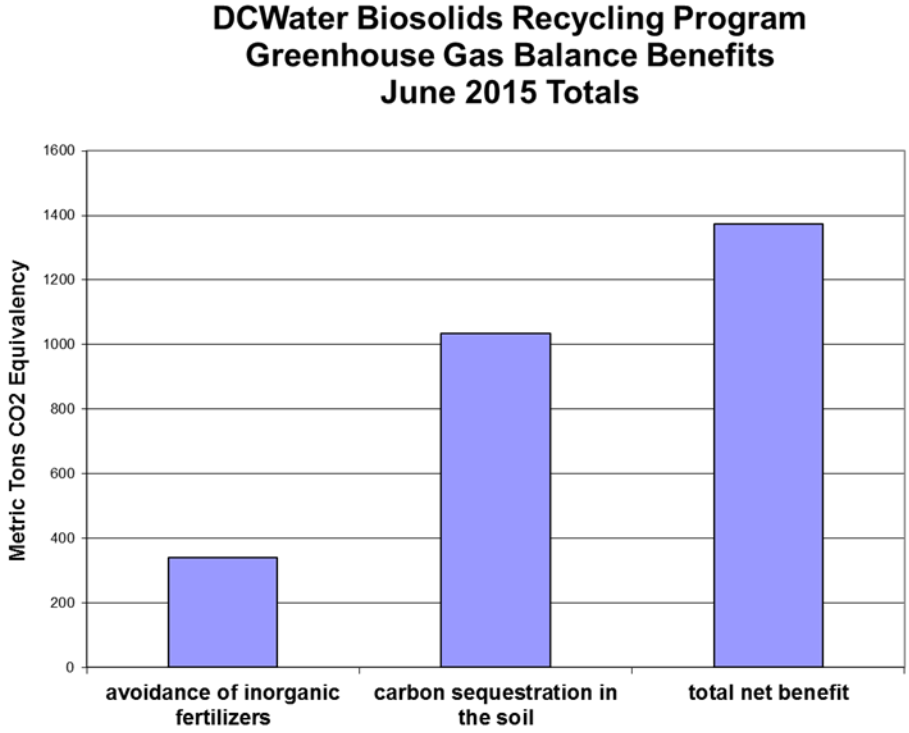
In July, biosolids hauling averaged 473 wet tons per day (wtpd). Of this total, 0 wtpd were lime stabilized Class B, and 473 wtpd were digested. The graph below shows the total hauling by contractor for the month of July. The average percent solids for the digested material was 32.3%. At the end of July the Cumberland County storage pad had approximately 200 tons (~25,000 tons capacity), Cedarville lagoon had approximately 0 tons of Blue Plains biosolids (~30,000 tons capacity), Goochland pad had 1000 tons, and Fauquier lagoon had 2000 tons (~15,000 tons capacity).





Environmental Benefits

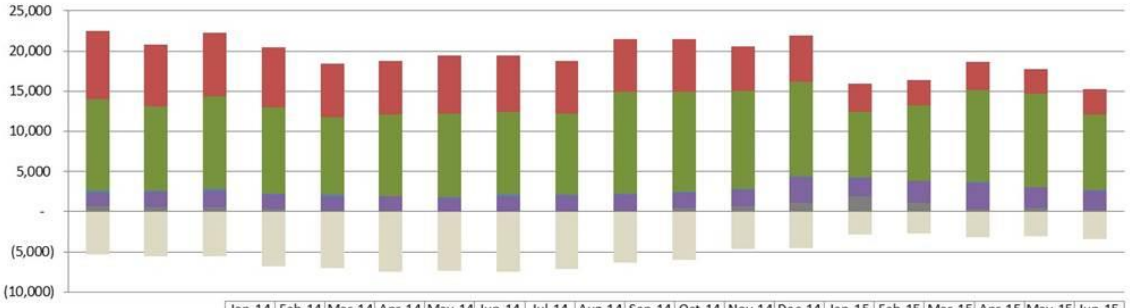
The quantity land applied in June coming directly from the plant and from storage facilities equaled 19,314 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 1372 metric tons CO_2 equivalent avoided emissions. This is equivalent to taking 2,795,547 car miles off the road in the month of June (assumes 20 mpg, 19.4 lb CO_2 equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 143,703 metric tons CO_2 equivalent



Highlights

Staff has developed a carbon footprint model that will allow for reporting on a monthly basis. Please see below the graph showing the DC Water carbon footprint for each of the past 18 months. As can be seen, since the beginning of this year, there has been a dramatic drop in carbon footprint due to the implementation of the digesters, and a reduction in biosolids hauling. Next month, the graph will show another substantial drop (July), as we saw a full month of CHP operation, reducing the power (coal) drawn from the grid at Blue Plains. This tool will allow for estimate of emissions with future process upgrades.

DC Water Monthly GHG Emissions Estimates, 2014-June 2015
(Metric Tons CO2e)



	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15
Biosolids Processing & Land App	8,425	7,739	7,894	7,449	6,616	6,670	7,225	6,994	6,576	6,598	6,626	5,586	5,796	3,501	3,107	3,516	3,048	3,184
Electricity	11,450	10,448	11,603	10,706	9,654	10,173	10,356	10,348	10,024	12,693	12,449	12,226	11,755	8,107	9,392	11,359	11,619	9,412
Vehicle (fuel usage)	177	155	144	126	154	82	157	149	135	127	89	86	98	98	78	95	71	75
Process Emissions	1,763	1,868	2,078	1,877	1,835	1,797	1,660	1,928	1,986	1,977	1,883	2,079	3,173	2,340	2,727	3,280	2,614	2,424
Natural Gas	631	607	560	294	109	58	27	35	36	119	481	650	1,149	1,856	1,061	360	388	173
Carbon Credits	(5,353)	(5,556)	(5,545)	(6,835)	(6,975)	(7,426)	(7,422)	(7,477)	(7,155)	(6,352)	(6,056)	(4,608)	(4,583)	(2,844)	(2,690)	(3,180)	(3,082)	(3,424)

Staff co-wrote a proposal for and will co-PI the awarded project sponsored by Water Environment Research Foundation that will look at products we can develop with our Class A biosolids. DC Water will participate in this project that will coincide well with our goals and our current research projects to develop mixes for sale in the horticulture and urban restoration markets. DC Water is currently developing mixes for use in urban agriculture, for tree planting, and for green infrastructure projects.

Biosolids Reuse Map for June of 2015