June/July, 2010

Biosolids Division Monthly Report

Submitted by:
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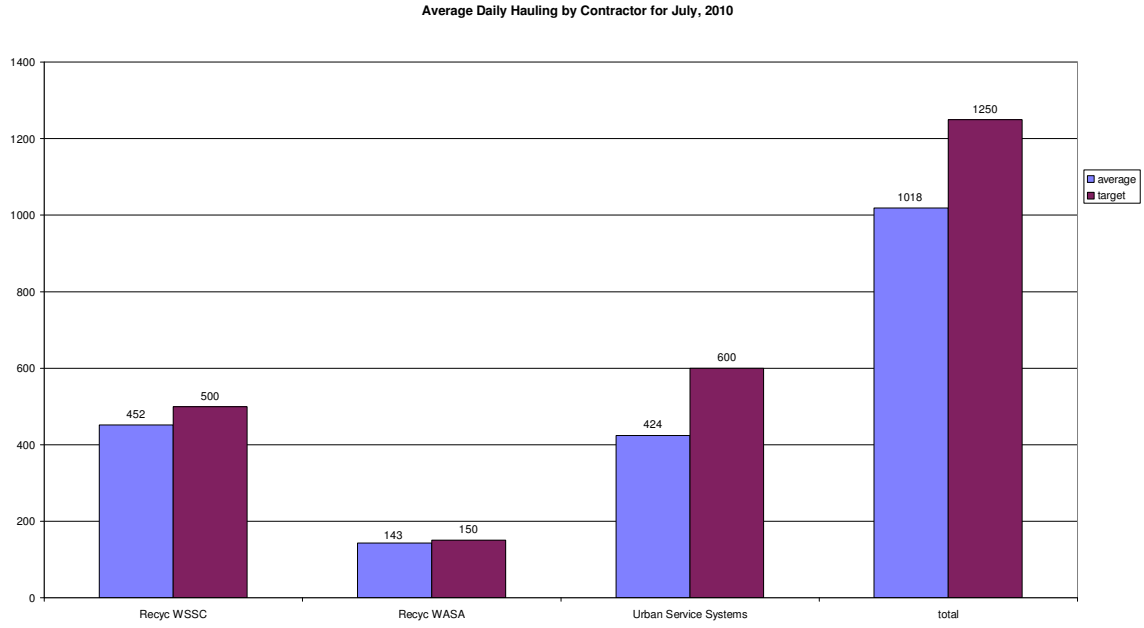
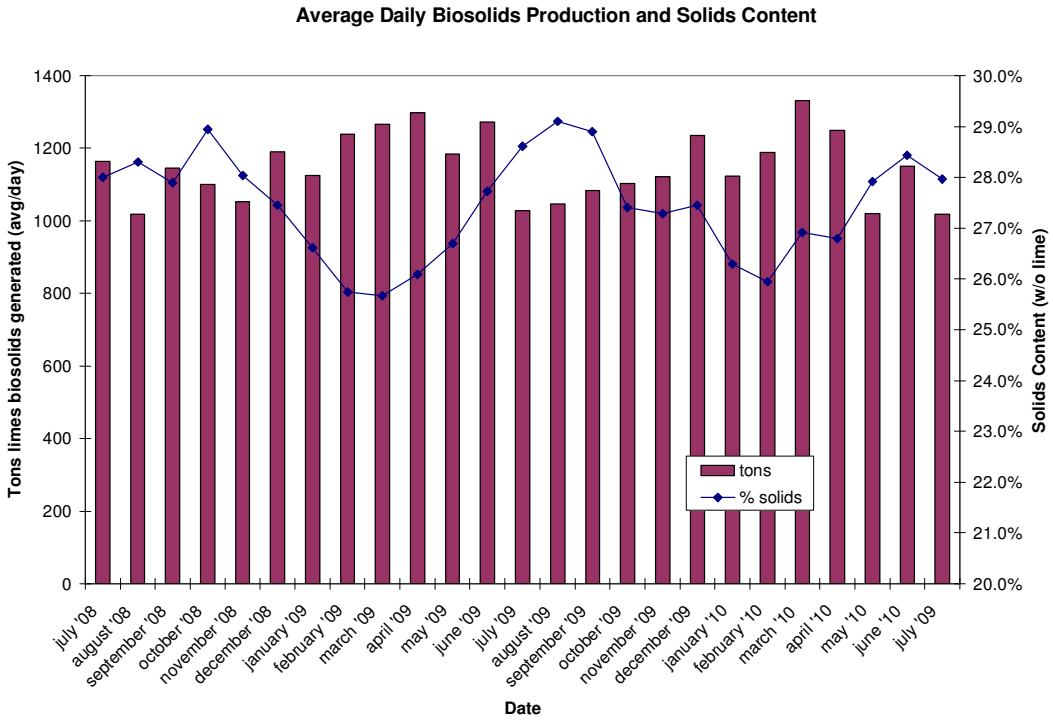
The mission of the District of Columbia Water and Sewer Authority biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective management of biosolids produced by the Blue Plains Advanced Wastewater Treatment Plant while helping preserve agriculture and protect the Chesapeake Bay.

June/July 2010 Biosolids Division Report

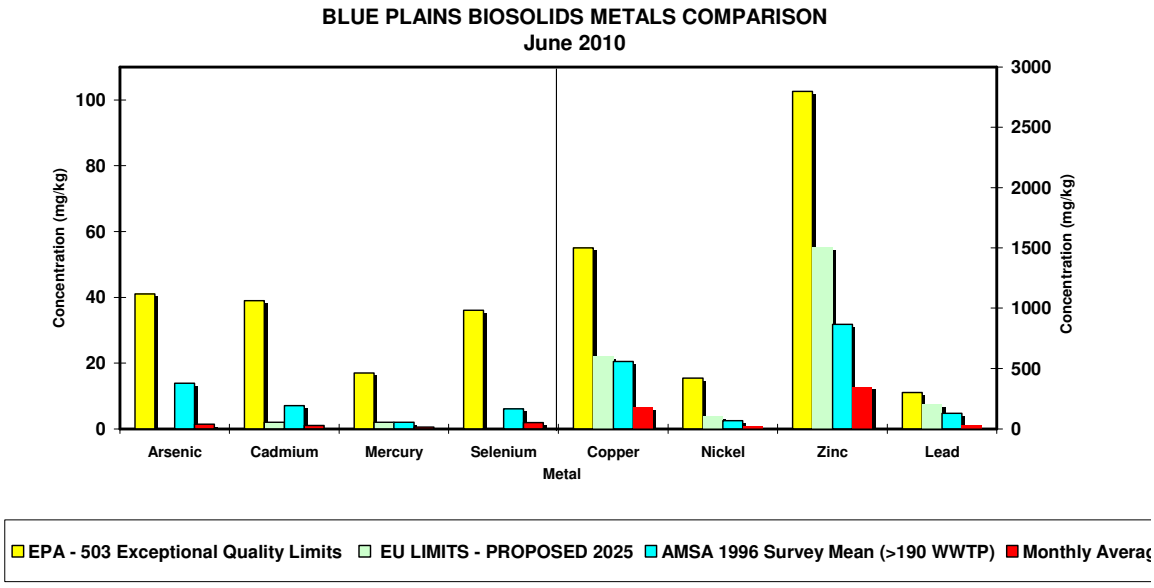
In July, biosolids hauling averaged 1018 wet tons per day. The graph below shows the hauling by contractor for the month of July. The second graph shows average tons recycled and solids content for the last 24 months. The average solids percentage for July was 27.98%, and average lime dose was 17.3%.

In July WASA again shipped biosolids to the McGill Compost Facility in Waverly, VA. This is done through the Urban Service Systems contract. In July a total of 921 tons went to compost production. Storage totals as of the end of July include no (0) tons in Cumberland County, VA and no (0) tons in Cedarville Lagoon.



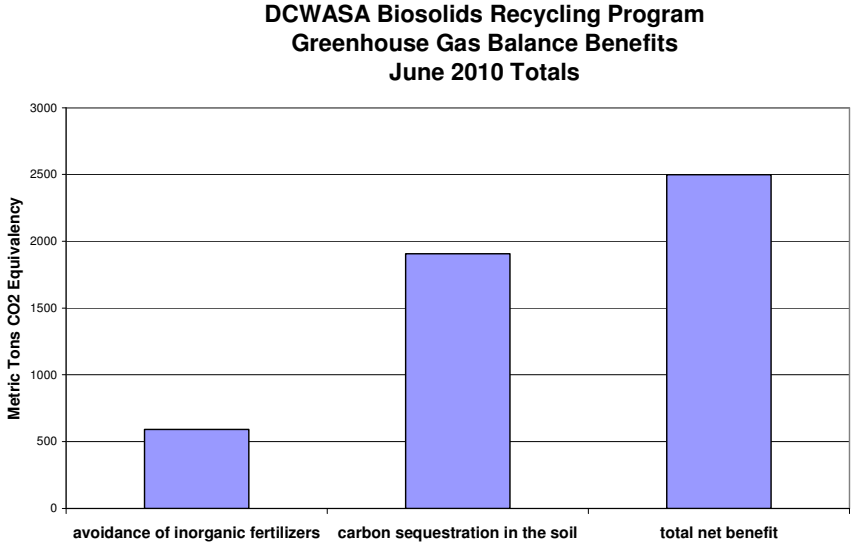


The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of June 2010. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the AMSA average levels surveyed in 1996, and even the proposed 2025 European Union (EU) limits. The EU limits are considerably more conservative than the USEPA limits, and Blue Plains biosolids metals content is lower than the EU standards as well.



Environmental Benefits

No biosolids went to landfills in June. 304 tons of biosolids that could not be placed in the fields due to inclement weather went to storage, while 7494 tons came out of storage in June. The tonnage coming out of storage plus the tonnage coming directly from the plant equals 40,264 tons of biosolids land applied in June. 710 tons went to composting. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 2498 metric tons metric tons CO_2 equivalent avoided emissions. This is equivalent to taking 5,665,183 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 January, 2007 is 59,948 metric tons CO_2 equivalent.



June Highlights

Staff met in June with a representative of the Anacostia Watershed Society (AWS) to discuss green roofs and the use of the DC Water biosolids compost as a green roof mix. The compost is used on site at Blue Plains currently, made by McGill composting in Waverly Virginia. Staff is preparing a proposal to and in partnership with the AWS for a green roof demo project, for review by the General Manager's office.

Staff came to an agreement with the Virginia Department of Environmental Quality (DEQ) on timely communication of complaints and issues. The Biosolids Team has a goal this year to respond to all complaints within 24 hours. However, it is unclear if we are hearing all the complaints. Staff communicates with the contractors and inspectors, but DEQ has in the past not communicated complaints to the generators. It has been incumbent upon the generator to seek out the information, making it difficult to respond quickly (unless a daily call is placed). DEQ staff agreed to forward complaints to our inspectors and onto us, and we agreed to do the same. Staff currently receives very few complaints (3 in the last year) and does not expect to be inundated with complaints from the DEQ database.

Staff has worked with one of our year-round interns, Ampun Janpengpen, to implement an odor alert system for the biosolids product. Past research and observation has shown that slight process changes can have a significant impact on some aspects of the biosolids product quality (odor). While we have made changes over the past 8 years that have yielded measurable improvements in odors, we still occasionally get odor complaints in the field. In an effort to further improve product quality and identify

problems, Ampun has installed a device to detect sulfur and ammonia based odors in several spots of the solids handling train. These detectors send data to a computer, which calls staff cell phones when a high odor event occurs, This allows for staff to identify and segregate odorous material prior to transport, to ensure that it goes to an appropriate field or, if none is available, to composting, or as a last resort to the landfill. This is the first system of its kind in use at a WWTP.

Map of Blue Plains Biosolids Applications and Agricultural $'s for June 2010