

June, 2008

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# Biosolids Division Monthly Report

Submitted by:

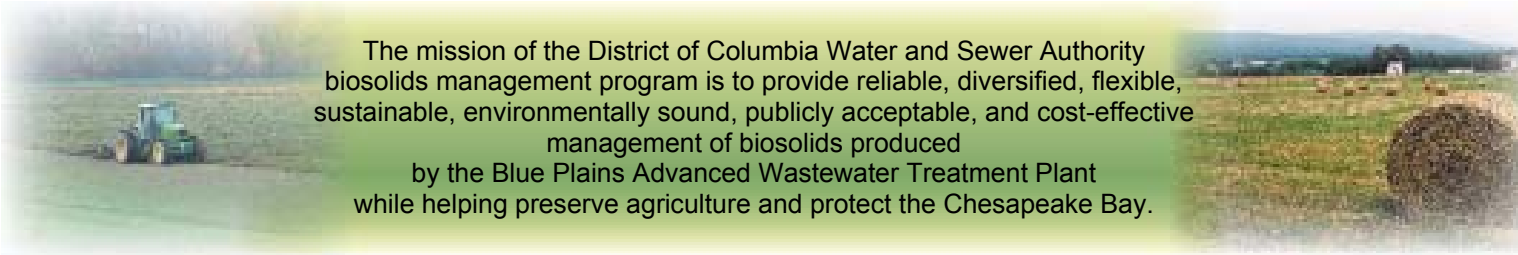
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## District of Columbia Water and Sewer Authority

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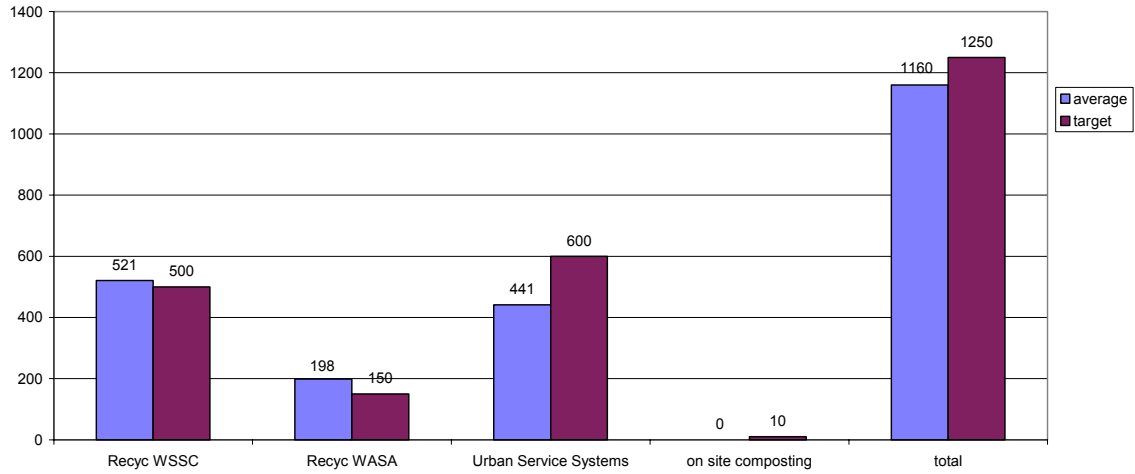


The mission of the District of Columbia Water and Sewer Authority biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective management of biosolids produced by the Blue Plains Advanced Wastewater Treatment Plant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

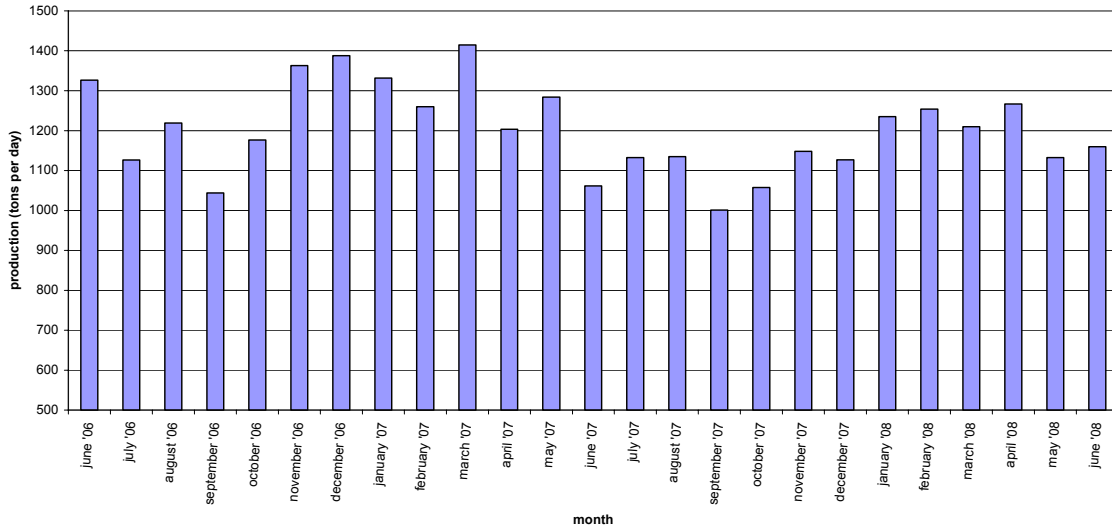
## June, 2008

In June, biosolids hauling averaged 1160 wet tons per day. The graph below shows the hauling by contractor for the month of June. Average % solids was 28.0%, and average lime dose was 20.6%. A second graph shows average tons recycled per day for the last 24 months.

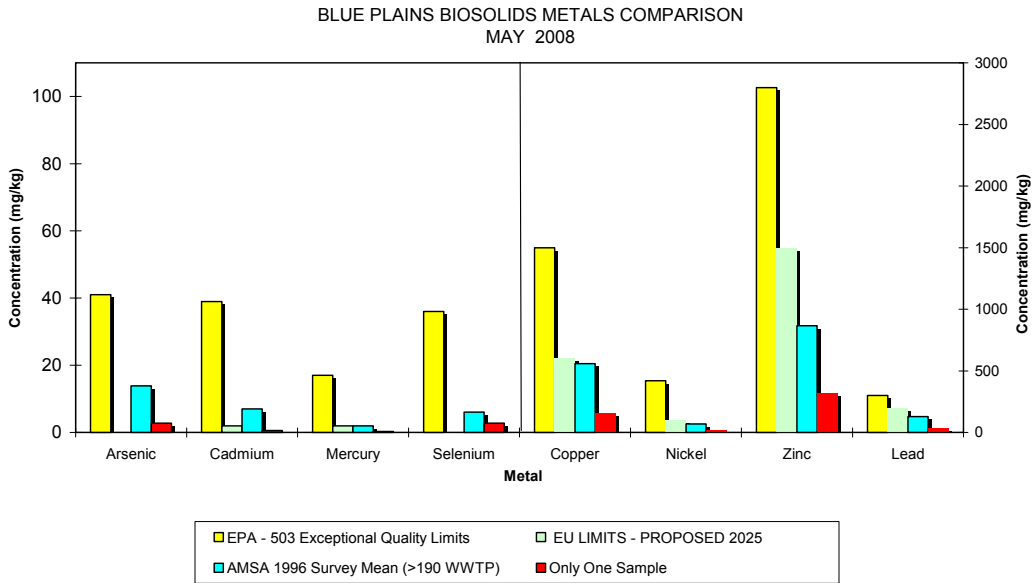
Average Daily Hauling by Contractor for June, 2008



Average Daily Biosolids Production



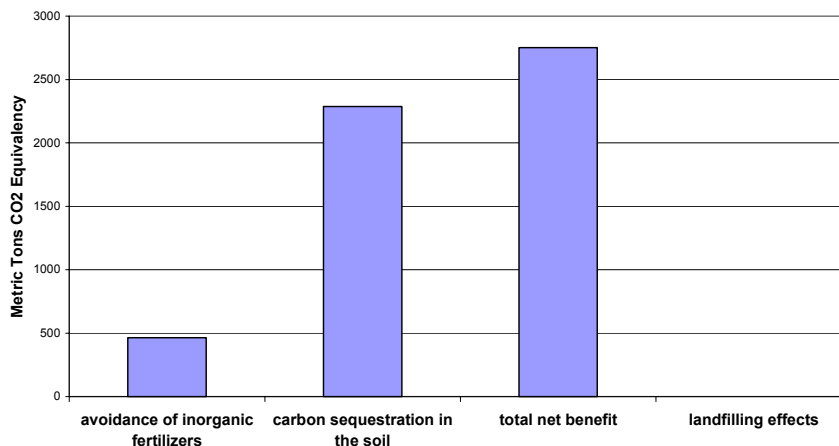
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of May 2008. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the AMSA average levels surveyed in 1996, and even the proposed 2025 European Union (EU) limits.



### Environmental Benefits

In May of 2008 staff sent 26,065 wet tons of biosolids from the plant. In addition, 9797 wet tons of material came out of storage in May. No tonnage went to landfills in May. The graph below shows the benefits as compared to landfilling all the biosolids in a non-energy recovering landfill. Taking into account the fuel required to transport biosolids to the field, the net benefit is 2751 metric tons CO<sub>2</sub> equivalent avoided emissions. The graph shows the benefit (carbon credit) of the sequestration, the energy savings due to avoiding conventional fertilizer use, and the total of the two. This is equivalent to taking 7,172,416 car miles off the road in the month of May (assumes 20 mpg, 19.4 lb CO<sub>2</sub> equivalent emissions/gallon gas – EPA estimate).

**DCWASA Biosolids Recycling Program  
Greenhouse Gas Balance Benefits  
May 2008 Hauling Totals**



## HIGHLIGHTS

Since the last report, staff attended and made presentations at the MWCOG micro-constituent meeting. This event was a two day meeting designed to bring together expertise to discuss the state of knowledge concerning emerging pollutants and micro-constituents. Staff presented an overview of the issue as it concerns biosolids land application, focusing on the research projects funded through the Blue Plains program, including two and USDA/U of MD looking at the fate of triclosan and triclocarban (anti-microbial) in WWTP's and the fate and transport of polybrominated diphenyl ether (PBDE – a fire retardant) from land applied biosolids.

Staff visited Keystone Biofuels in Harrisburg, PA, a biodiesel manufacturing plant. The production of biodiesel produces a residual of glycerin in relatively large quantities. Glycerin can be used (with some process modifications) as a substitute (for methanol) carbon source in the BNR process. Staff discussed availability of glycerin and the preliminary results of research looking at dosing rates and stoichiometry for using glycerin as a substitute for methanol. If feasible, this could represent a substantial savings for Blue Plains.

Staff met with two firms that have a desire to use Blue Plains biosolids as a fuel source for production of green energy. In each case, the firms were interested in raw and digested material. Staff is interested in diversifying reuse options, but in both cases told the representative that the digester project is not to be derailed and that we would consider their technologies for a small portion of our material at which time that the economics are favorable in comparison to current reuse options.

Staff presented several papers at technical sessions and workshops at the Water Environment Federation (WEF) Sustainability conference, held at the National Harbor in DC. Many papers were presented by DCWASA interns, performing graduate work at universities in the area.

Staff participated in a Virginia Department of Environmental Quality (DEQ) Biosolids Expert Panel meeting this past month. Staff arranged for a presentation by Dr. Steve Wing, University of North Carolina, for the purposes of discussing the WERF Rapid Response Protocol (RRP). The WERF RRP is designed to be a tool for local jurisdictions to gather information when citizens complain of health issues related to the use of biosolids. The tool gathers consistent information so that trends can be examined and studied, and problems (if any) can be addressed. Dr. Wing served as Principal Investigator for the project, and staff served on the WERF project sub-committee (review panel). Virginia DEQ is considering implementing such a protocol.

# Map of Blue Plains Biosolids Applications and Agricultural \$'s for May 2008

