September, 2007

Biosolids Division Monthly Report

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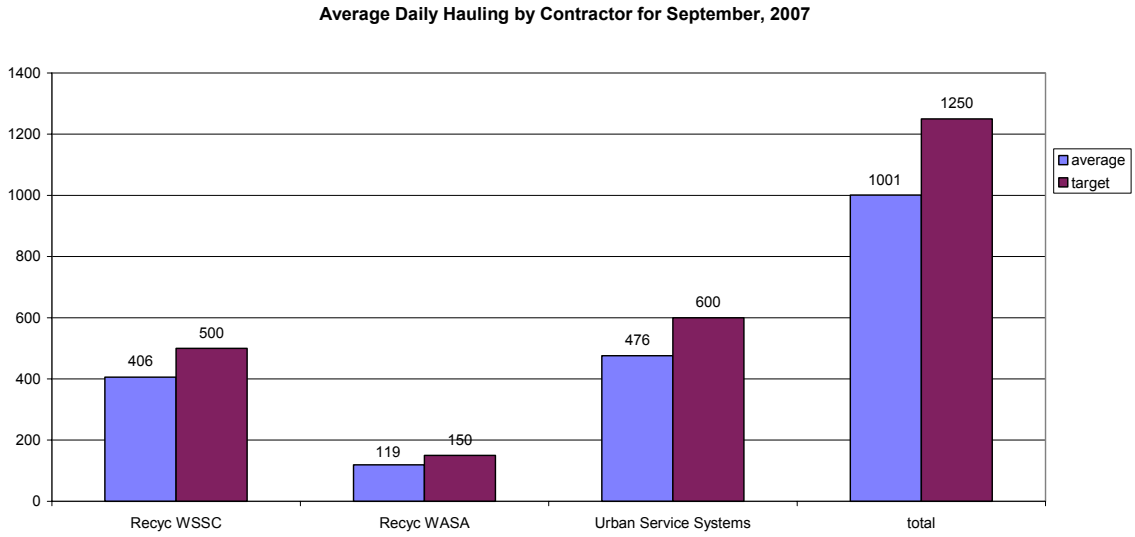
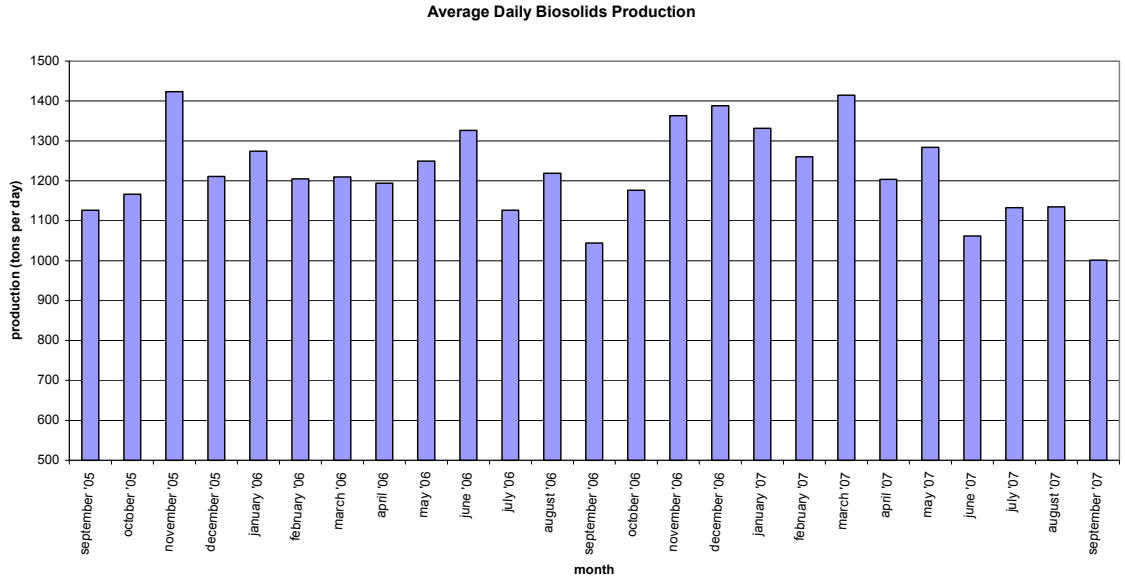
The mission of the District of Columbia Water and Sewer Authority biosolids management program is to provide reliable, diversified, flexible, sustainable, environmentally sound, publicly acceptable, and cost-effective management of biosolids produced by the Blue Plains Advanced Wastewater Treatment Plant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

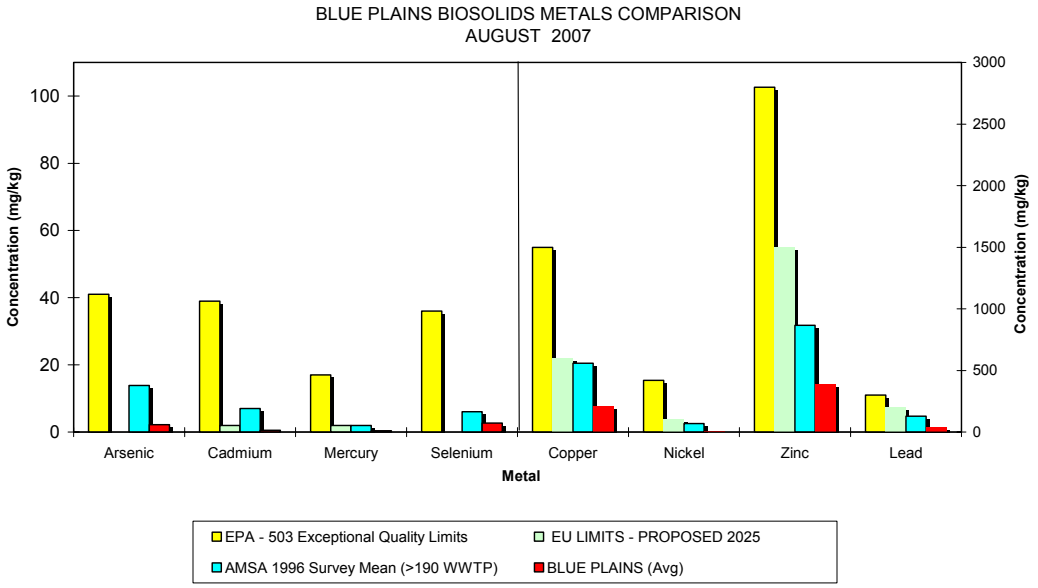
September 2007 Blue Plains Biosolids Report

In September, biosolids hauling averaged 1001 wet tons per day. The graph below shows the hauling by contractor for the month of September. A second graph shows the average daily production per month for the previous 24-month period. The average % solids for the month was 27.9% and average daily lime delivery was 56.5 tons per day. Average lime dose for the month was 20.2% on a dry weight basis.



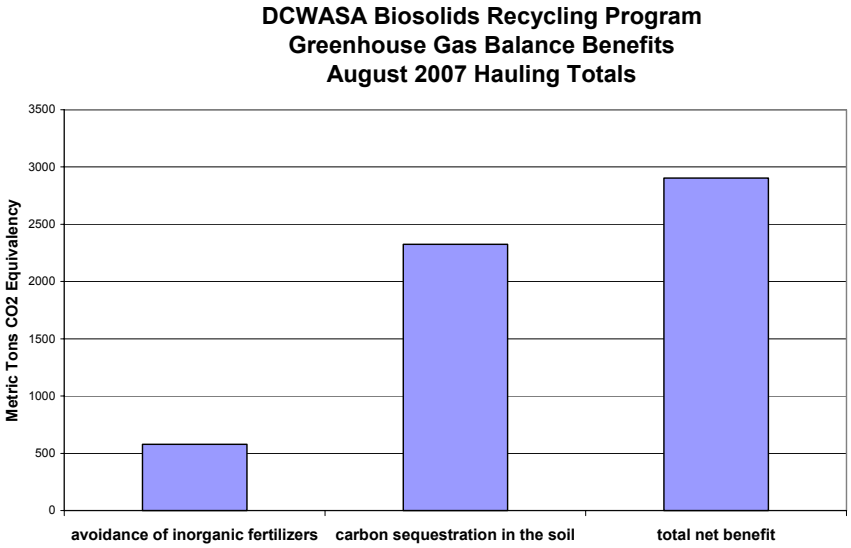


The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of August 2007. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the AMSA average levels surveyed in 1996, and even the proposed 2025 European Union (EU) limits.



Environmental Benefits

In August of 2007 staff sent 36,778 wet tons of biosolids for reuse. This includes tonnage coming straight out of Blue Plains and material coming out of storage (1,640 tons). No material went to landfills in August. 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 2902 metric tons CO_2 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 6,582,517 car miles off the road in the month of August (assumes 20 mpg, 19.4 lb CO2 emissions/gallon gas – EPA estimate).



HIGHLIGHTS

Staff traveled to Chelan, Washington at the request of the Northwest biosolids Management Association (NBMA) to present findings to date from WERF study 04-CTS-3T, Increases in Fecal Coliform Densities after Dewatering of Anaerobically Digested Biosolids. DCWASA staff members contribute to the project as co-principal investigator and project advisor. The project has revealed that certain combinations of digestion and dewatering technologies can show sudden increases in fecal coliform densities, and with it the associated reduced sulfur odors associated with anaerobic microbial activity. The objectives of this project are to examine the phenomenon, assess it's prevalence in the industry, determine if there are corresponding rises in pathogenic organisms, and propose solutions for the odors and pathogen control (if necessary).

Staff participated in the second interim audit of the Biosolids Management Program Environmental Management System (EMS). An independent third party auditor conducted the audit over the course of three days on site and observing field and inspection activities. Staff has received a draft report and is sending comments back. The preliminary report indicates no major non-conformances, a few minor non-conformances, and several opportunities for improvement. Staff will forward the final report to the executive staff when available.

Staff would like to congratulate Prawat Sahakij, University of Maryland student and DCWASA intern (of several years) on the successful completion of his PhD dissertation defense. Prawat worked on biosolids related issues – his thesis is entitled "Multiobjective Optimization Models for Distributing Biosolids to Reuse Fields" and explored how best to make decisions about reuse sites with concern to cost, odors, and other plant process parameters. Congratulations Dr. Sahakij!

Map of Blue Plains Biosolids Applications and Agricultural $'s for August 2007