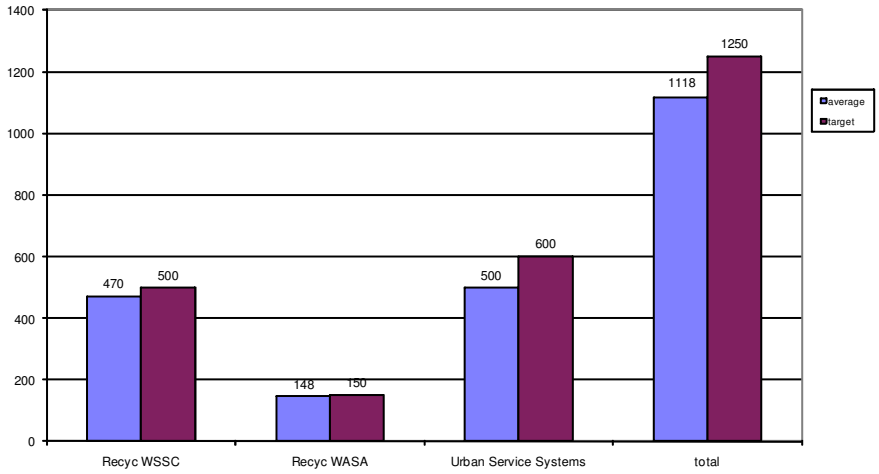
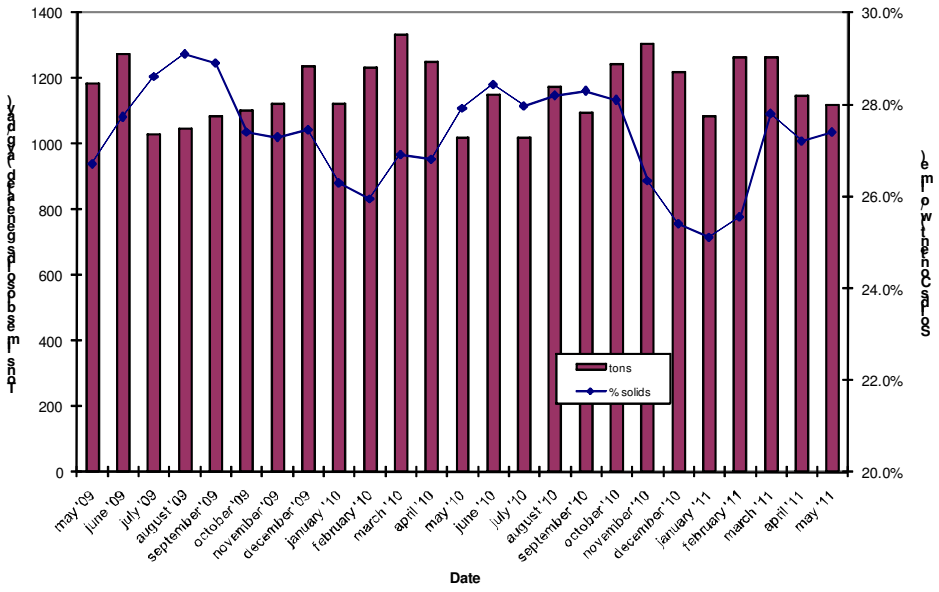
May 2011 Biosolids Division Report

In May, biosolids hauling averaged 1118 wet tons per day. The average solids content was 27.4%. The average lime dose was 22%. The graph below shows the hauling by contractor for the month of May. In May, DC Water again shipped biosolids to the McGill Compost Facility in Waverly, VA. This is done through the Urban Service Systems contract. In May a total of 644 tons went to compost production. At the end of May, the Cumberland County storage pad had 6011 tons (~25,000 tons capacity) and the Cedarville lagoon had 1500 tons (~30,000 tons capacity).

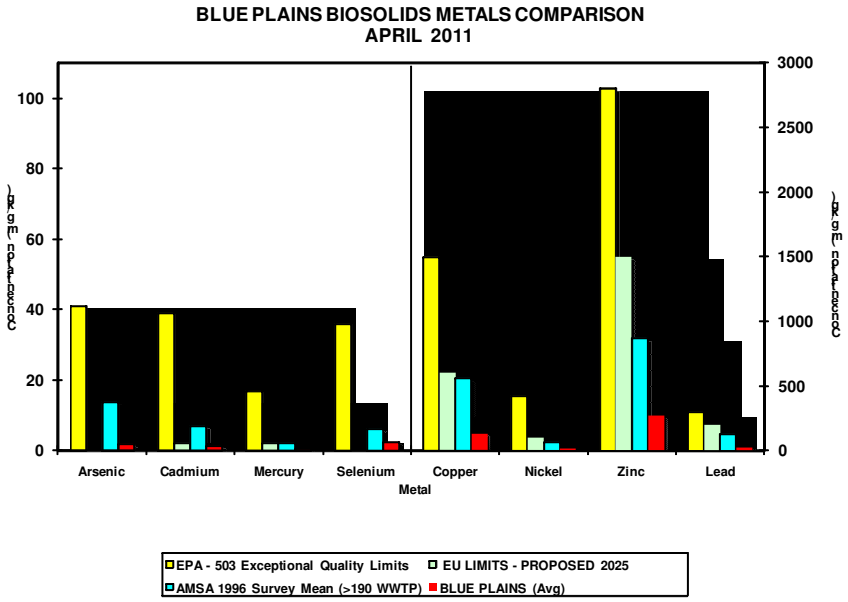
Average Daily Hauling by Contractor for May 2011



Average Daily Biosolids Production and Solids Content

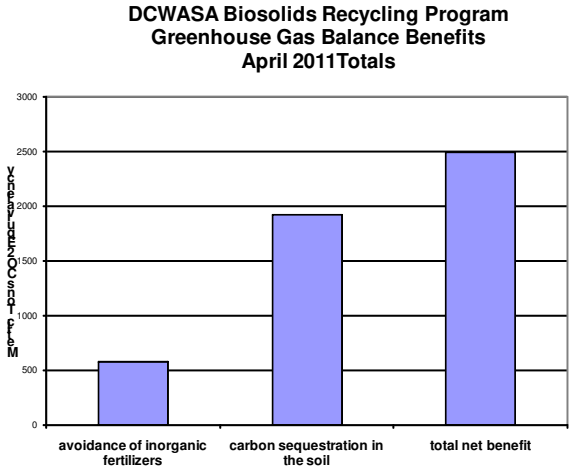


The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of April 2011. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) limits. The EU limits are more conservative than the USEPA limits, and Blue Plains biosolids metals content is lower than the EU standards as well.



Environmental Benefits

Zero tons of biosolids went to landfills in April (this data one month behind). The quantity land applied coming directly from the plant and from storage facilities equaled 42,392 tons. In addition, 722 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 2493 metric tons CO_2 equivalent avoided emissions. This is equivalent to taking 5,078,862 car miles off the road in the month of April (assumes 20 mpg, 19.4 lb CO_2 equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since May, 2007 is 74,434 metric tons CO_2 equivalent.



May Highlights

Staff helped celebrate the groundbreaking for the Enhanced Nutrient Removal and Digester projects this past month. The projects mark a great step forward in resource recovery for DC Water and the District. The two projects will recover nutrients (pollutants when discharged to the bay) and convert half the organics to energy (13 MW, enough to run a third of the plant) and produce an EPA Class A product with the remaining half. This product will be suitable for reuse in an urban environment for tree planting, LID and restoration projects, green roofs, gardens, etc. In an effort to demonstrate this concept, staff bagged 300 native trees (5 species) and gave them away to attendees. Staff used the Blue Plains biosolids compost in the potting mix and gave away all 300 trees.

Demo garden

Staff coordinated with the Facilities gardening crew to plant this year's Blue Plains compost demonstration garden. This year the garden is in moveable raised beds, made to be portable in the event that the space they occupy is needed for something else. Gardeners this year planted corn, tomatoes, cucumbers, peppers, herbs, squash, and other vegetables for use at upcoming events and board meetings.

NJWEA and WEF Residuals conferences

Staff presented a paper at the New Jersey Water Environment Association annual meeting in Atlantic City this past month. The paper described the status of the digester project, the process by which DC Water chose the technology, and the anticipated financial and environmental benefits.

Staff members also attended the Water Environment Federation Residuals conference this past month as well, co-authoring several papers presented at the conference. Staff also serves as the vice-chair of the WEF Residuals Committee, and attended all subcommittee meeting. Staff oversaw the formation of a new carbon sub-committee, whose task it is to bring to light all aspects of carbon accounting in the projects we do at nutrient and energy recovery facilities (formerly known as wastewater treatment facilities).

Map of Blue Plains Biosolids Applications and Agricultural $'s for April 2011