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# City of Raleigh Biosolids



Volume 8, Issue 1

First Quarter 2012

## Special Points of Interest:

- Notice of Public Meeting & 2012 Annual Stakeholders Meeting
- Going Green with the Biosolids Newsletters
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## Inside this issue:

2011 Biosolids Production and Distribution Charts	2
Annual Biosolids Program Summary	3
Contact information	4
EMS Re-verification Audit Results	4



## Public Meeting and 2012 Annual Stakeholders Meeting Wednesday, April 25, 2012 at 7:00 p.m. at NRWWT

The Neuse River Wastewater Treatment Plant (NRWWTP), located in southeast Raleigh, provides wastewater treatment to Raleigh and the surrounding communities of Garner, Rolesville, Wake Forest, Wendell, Knightdale and Zebulon. The 60 MGD plant produces 35 – 40 dry tons of biosolids per day.

During 2002, several deficiencies were identified involving the NRWWTP and its biosolids program. These included historic over-application of biosolids to some farm fields at the Site and contributed to the exceedances of groundwater standards for nitrate beyond the Site's compliance boundary. In the latter half of 2002, the City of Raleigh Public Utilities Department (CORPUD) was assessed and paid a civil penalty and voluntarily suspended biosolids application at the Site. Subsequently, the Division of Water Quality (DWQ) modified the Permit to prohibit further land application of biosolids at the Site unless and until the Permit was modified by DWQ to allow resumption of biosolids application.

In the ensuing years, CORPUD performed a comprehensive site assessment and supplemental site assessment in order to better understand the extent of groundwater condition at the Site and to support the development of an appropriate Corrective Action Plan (CAP). The CAP now being implemented by CORPUD pursuant to a variance issued by the North Carolina Environmental Management Commission in January of 2010 involves active remediation of groundwater on a portion of the Site and monitored natural attenuation for the remainder of the Site. Also, CORPUD agreed to accept a debit in its NPDES (discharge) permit for the NRWWTP to offset the modeled amount of nitrate reaching the Neuse River via groundwater. Additionally, CORPUD agreed to create wetlands to treat elevated nitrate levels in three streams at the Site, and to construct offsite buffer mitigation project to further offset nitrogen loading to surface water in the Neuse River Basin.

CORPUD also undertook a very thorough review of the NRWWTP operations, including its biosolids management program, and has made substantial capital improvements and operational changes to improve plant performance, especially with respect to biosolids management. CORPUD completed a Biosolids Master Plan and is currently updating this plan. CORPUD participat-

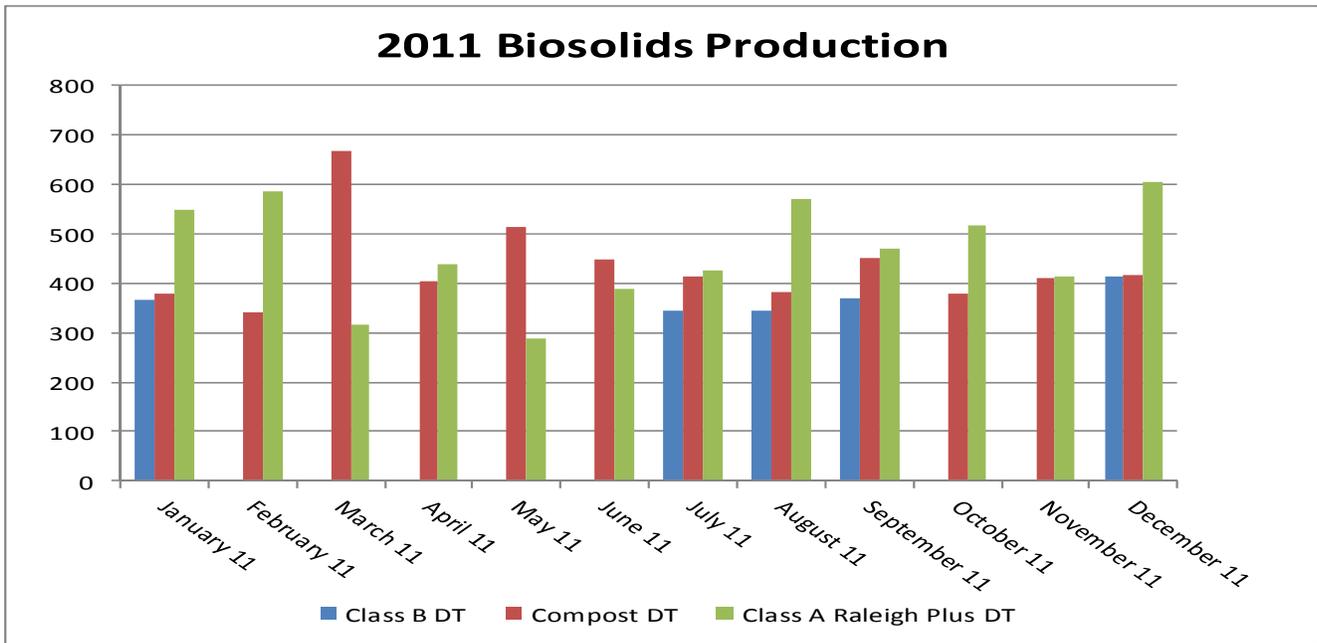
ed in the National Biosolids Partnership (NBP), which requires the development and implementation an Environmental Management System (EMS) for biosolids. In December of 2006, CORPUD became the fourteenth agency in the nation to have its EMS program verified through NBP's independent third party audit process.

As a result of CORPUD's biosolids EMS, it now operates a nationally recognized, model biosolids program. It is especially important to note that CORPUD has eliminated the pressure on its land application program at the Site by diversifying its biosolids products and distribution. Prior to the development of the EMS, land application on the NRWWTP site was the only method used for disposal and Class B biosolids was the only product produced. Today, the program produces and distributes Class A biosolids to area agricultural and institutional lands, transports dewatered sludge to a commercial composting facility for use in a Class A compost/mulch product, and land applies Class B biosolids on private farm land. A contingency landfill contract is in place as an emergency alternative should any of the other outlets become unavailable.

CORPUD is now seeking to resume biosolids application on approximately 400 acres of designated fields at the Site. Eagle Resources, on behalf of CORPUD, has done significant additional hydrogeological analysis of the Site, including extensive additional data collection and a thorough upgrading and recalibration of the hydrogeologic model for the Site. Eagle Resources has demonstrated that the resumption of land application on approximately 400 acres of permitted fields will have no impact on 2L exceedances at or beyond the Site compliance boundary even at rates that exceed the permitted amount. If DWQ modifies the Permit to allow resumption of biosolids as requested, CORPUD will use conservative application rates and closely monitor the impacts.

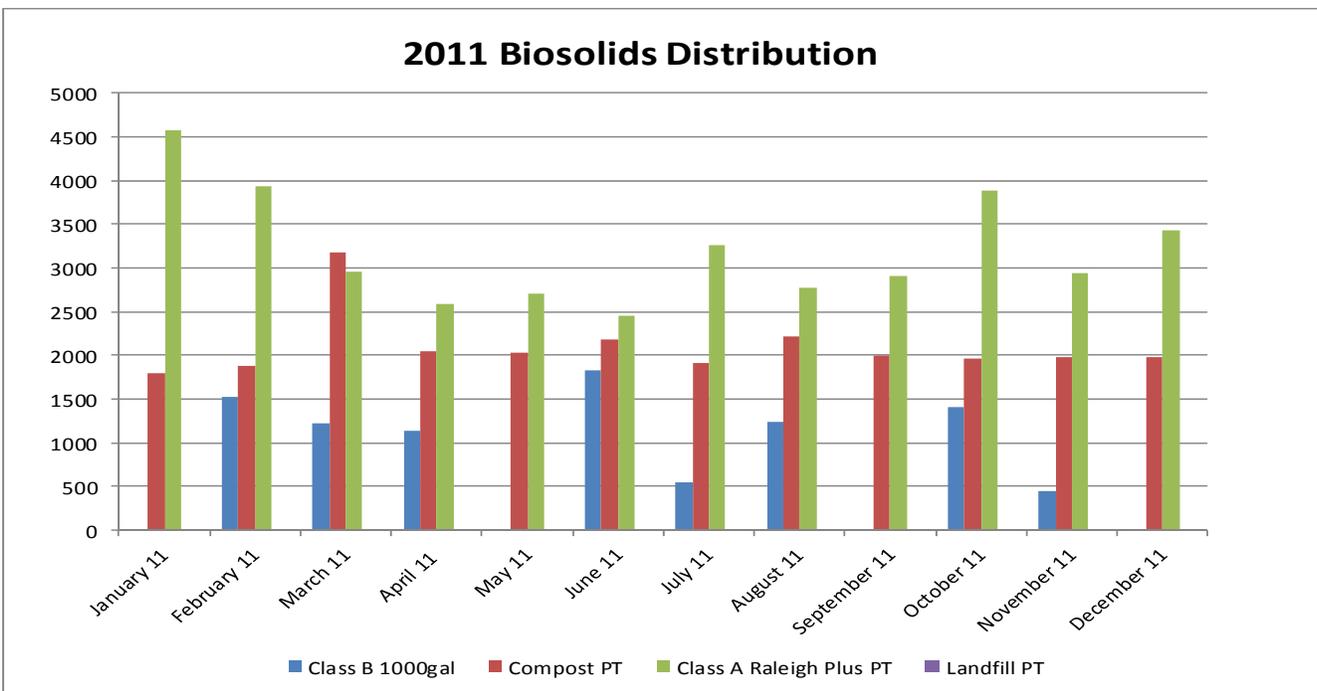
The staff of the NRWWTP would like to invite you to a public meeting held in conjunction with the EMS annual stakeholders meeting to further discuss the City's plans for a permit modification to allow resumption of biosolids application at the site. The meeting will be held on Wednesday, April 25, 2012 at 7:00 p.m. in the training facility at the Neuse River Wastewater Treatment Plant. Please make plans to attend.

## Biosolids Production & Distribution



The chart above demonstrates the amount of biosolids produced by the NRWTP for the calendar year 2011. The majority of the product produced is a Class A fertilizer product, which is the highest quality of biosolids that can be produced. \*DT = dry tons

The chart below demonstrates the amount of biosolids distributed from the NRWTP for calendar year 2011. All the biosolids produced at the NRWTP are beneficially reused and distributed, leaving no significant storage of biosolids on-site. Also, no biosolids products were sent to the landfill. \*PT = product tons



## Annual Program Summary

The biosolids program at the Neuse River Wastewater Treatment Plant (NRWWTP) is continuing to improve through the use of an EMS approach to managing the program. Some of the highlights of this year's program include:

**Regulatory Compliance:** The NRWWTP biosolids management program had zero regulatory non-compliances in 2011. There were no NPDES permit violations for the NRWWTP. The NRWWTP received the Platinum Award from the National Association Clean Water Agencies (NACWA) for eight consecutive years without a permit violation. An EPA audit in 2011 found no negative findings or comments within the treatment plant operations.

**Environmental Performance:** 100% of the biosolids produced at the NRWWTP were beneficially reused with no biosolids products sent to the landfill. Demand for biosolids products continues to be greater than production. Sanitary sewer overflows have reduced from approximately 95 to approximately 35 in the past 8 years.

**Quality Management Practices:** All Class A products produced were consistently below 25% of the ceiling concentrations for exceptional quality biosolids per the Federal 503 regulations for biosolids. Management system planning and discussion has improved inter-Division communication, improving efficiency and making more resources available. Expanded use of the Management of Change procedure has improved planning and communication of changes. The internal audit process is being used to find deep causes of operating problems.

**Relations with Interested Parties:** The annual stakeholders meeting was held in December 2011. A Facebook page (City of Raleigh Biosolids Program) for the biosolids program was developed as an additional outlet to disseminate information about the program. Recognition for the management system has increased Wastewater Division credibility to a point where it is being used as an example for management system development throughout the Department. Actuators have been installed on louvers in the blower room and sound blankets have been installed on blowers to reduce noise in response to public requests.

**Continual Improvement:** The Corrective and Preventive Action (CAPA) process continues to be a vital tool for identifying and fixing weaknesses in the system as well as identifying opportunities for improvement to the system. The EMS completed a successful re-verification audit and obtained recertification status for the Biosolids EMS.

**Contractor Performance:** There were zero regulatory violations for the contractors working in our biosolids management system but there were two management system non-conformances relating to contractors not attending the annual stakeholders meeting. Those non-conformances were addressed and closed.

**Goals and Objectives:** In 2011 there were four voluntary goals set for the biosolids management system and ten objectives or targets. 50% of goals and objectives were met. Two of the objectives/targets were not met but were in process by year-end and will be continued over to the following year. The remaining three of the objectives were not completed and also will be continued over to 2012. Those in process will take some time to be fully integrated and implemented. The re-verification audit identified areas of improvement needed for goals and objectives for 2012. Due to this finding the 2012 goals and objectives are currently being revised and revamped to be more useful to the continual improvement of the program.



PUBLIC UTILITIES  
DEPARTMENT

**Public Meeting  
and 2012 Annual  
EMS Stakeholders  
Meeting**

**Wednesday  
April 25, 2012  
7:00 p.m.**

**NRWWTP  
Training Facility  
8500 Battle Bridge Rd.  
Raleigh, NC 27610  
(919) 662-5700**

If you would like to be "green" and save a few trees by receiving this newsletter and other program information electronically, please forward your email address to [Marti.gibson@raleighnc.gov](mailto:Marti.gibson@raleighnc.gov). We will be happy to email you future newsletters and program information.



Like us on Facebook!  
Visit us at City of Raleigh Biosolids Program to find updates and happenings involving the biosolids program

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We're on the web!  
[www.raleighnc.gov](http://www.raleighnc.gov)



## EMS Re-verification Audit

The City of Raleigh's Neuse River Wastewater Treatment Plant has received recertification for its biosolids environmental management system (EMS). To meet the requirements of the National Biosolids Partnership, the City's biosolids environmental management system has to be re-verified every five years to maintain the distinction of being certified. The re-verification was completed by an independent third-party auditor and was conducted over a five-day period in February. For a copy of the full report please visit [www.raleighnc.gov](http://www.raleighnc.gov) and search biosolids or contact Marti Gibson at [Marti.gibson@raleighnc.gov](mailto:Marti.gibson@raleighnc.gov).

## NRWWTP Staff and Contacts

Due to Departmental restructuring, we have combined the two divisions (Wastewater Treatment and Reuse) into one. Tim Woody is serving as the Superintendent of these two Divisions and TJ Lynch is now serving as an Assistant Public Utilities Director. Both Divisions will serve more as a single group and will work closely to achieve common goals.

- The Wastewater Treatment Division is composed of five programs: Administration, Laboratory, Plant Operations, Plant Maintenance and Remote Facilities (pump stations, odor control and air release valves).
- The Reuse Division has four programs - Administration, Land Management, Spray Irrigation (Wrenn Road) and Pretreatment.

There are approximately 106 employees working at this facility, which is a 24-hour-per-day/seven-days-a-week operation.

### If you have questions or concerns, please feel free to contact us:

- John Carman, public utilities director, (919) 996-4540 or [Carman@raleighnc.gov](mailto:Carman@raleighnc.gov)
- Kenny Waldroup, asst. public utilities director, (919) 996-4540 or [Kenneth.Waldroup@raleighnc.gov](mailto:Kenneth.Waldroup@raleighnc.gov)
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- T J Lynch, asst. public utilities director, (919) 996-4540 or [TJ.Lynch@raleighnc.gov](mailto:TJ.Lynch@raleighnc.gov)