

WELCOME TO OUR  
NEWSLETTER  
DEVELOPED TO KEEP  
YOU INFORMED AND  
IN TOUCH

# City of Raleigh

# Biosolids Newsletter



## Special Points of Interest:

- Class B Liquid Land Application at Neuse River Resource Recovery Facility (NRRRF)
- Class A Distribution
  - \*New distribution permit #WQ0011583-Raleigh Plus
- 2016 Farming
- Biofuel Processing Update
- 2016 Southern Farm Show
- Going Green with the Biosolids Newsletters

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 [Jeremy.Blackmon@raleighnc.gov](mailto:Jeremy.Blackmon@raleighnc.gov). We will be happy to email you future newsletters and program information.



Volume 2, Issue 4

August 2016

## Class B Liquid Land Application at NRRRF

Class B Liquid Application was slowed by wet weather in 2016, but staff was still able to apply two batches of Class B Biosolids from our Covered Aerobic Digesters (CADs) which varied in Plant Available Nitrogen (PAN). NRRRF staff hauled 563 tanker loads, which resulted in the application of 3,461,946 gallons over 472 acres of land. Of the 472 acres applied to, 75 acres were offsite permitted fields. The crops applied include fescue hay, coastal-bermuda hay, corn, grain sorghum, and sunflowers. We are proud to say land management staff have worked hard during this year including long hours



hauling 3-4 tanker loads per hour. There is much hay land to cover in the months ahead. We are currently harvesting hay crops and will start harvesting corn in early September.

## Class A Distribution

Raleigh Plus deliveries have been moderately challenging in 2016 because of the rainfall throughout the region. As of June 30th, the NRRRF was able to distribute 22,710 tons of Raleigh Plus to 63 different farmers in 24 counties, some of which has been applied at the Neuse River Resource Recovery Facility. Water Treatment Plant Residuals from E.M.J. Water Treatment Plant (EMJWTP) is a Class A Biosolid and is available at no charge to any farmer, gardener, or landscaper. The residual averages 1.5 lbs. of N, 0.3 lbs. of P<sub>2</sub>O<sub>5</sub>, 0.15 lbs. of K<sub>2</sub>O and 1.4 lbs. of S per ton. So far in 2016, the City distributed 8,500 tons to 9 different farmers in 10 counties.



In the future, we're hopeful that *RALEIGH BLEND* will be available, which will be a mixture of Raleigh Plus and

WTP Residuals. *RALEIGH BLEND* will contain beneficial nutrients such as sulfur, manganese, iron, and calcium, and should only be applied as a soil neutralizer.

For more information, contact Barrett Denning, Residual Distribution Coordinator for the City of Raleigh's Resource Recovery Division at 919-996-3700 or 919-369-2100.

# 2015 - 2016 Farming



The NRRRF 2016-2017 farming season started off with below average yields. Land Management staff harvested 50 acres of wheat, yielding an average of 18 bushels per acre. 43 acres of oat hay were cut and baled for a total of 161 round bales. Grain sorghum and soybeans were also planted throughout the facility and will be ready for harvest this fall. The corn crop, which consists of 26 acres that were planted on Class B permitted land, will be ready for harvest in the upcoming weeks. The 185 acres of fescue hay has produced 635 round bales of quality hay as of June 30th. We look forward to harvesting sunflowers, soybeans, and grain sorghum this fall.

## Biofuel Processing Update



The biofuel processor will be up and running as harvest begins in late summer. The intent of this equipment is not only to produce onsite biodiesel, but to demonstrate the processor at other locations for educational purposes. The City of Raleigh's NRRRF looks forward to the increased production of biofuel for use in their farming equipment. NRRRF staff are expecting a 3,000 bushel harvest for their sunflowers this year, with soybean harvest to follow. Soybeans will also be pressed and turned into biodiesel as early as next spring! Be sure to stay up-to-date on harvests and biofuel processing on the City of Raleigh Biosolids Program Facebook page.

## 2016 Southern Farm Show

The annual Southern Farm Show was held February 3rd-5th at the North Carolina State Fairgrounds. The Public Utilities booth was located in the Exhibition Building, space #3707. City of Raleigh staff were onsite to discuss and answer any questions regarding the City's biosolids products. Handouts on Raleigh Plus and EMJWTP Residuals were available for those interested in biosolids products. Several farmers and interested parties stopped by and learned about wastewater treatment and biosolids applications in our region. Please email [biosolids@raleighnc.gov](mailto:biosolids@raleighnc.gov) for any comments or questions.



# Wastewater Environmental Management System (WEMS)

## What is a WEMS?

The Resource Recovery Division's WEMS (Wastewater Environmental Management System) utilizes an environmental policy and a system of checks and balances to provide a sustainable wastewater program for customers while protecting the environment and maintaining public health at a fair and reasonable cost.

The WEMS team establishes annual goals in order to measure success and create opportunities for improvement. Some of the highlights of this year's WEMS program include:

## 2016 Regulatory Compliance:

NRRRF received Platinum award from the National Association of Clean Water Agencies (NACWA) for 13 consecutive years without a permit violation

Recertification was continued in late January 2016 for ISO 14001:2004 in addition to recertification for National Biosolids Partnership (NBP) EMS. Additionally, Smith Creek and Little Creek Wastewater Treatment Plants have been rolled into the EMS program.

## 2016 Targets & Objectives

- Improve and monitor reuse water quality (on target).
- Reduce total nitrogen discharge in the effluent at NRRRF (on target).
- Initiate ISO 17025 laboratory certification (on target).
- Continue to produce exceptional quality Class A biosolids (complete; monitoring occurring on a monthly basis)
- Optimize new biological phosphorous removal at NRRRF (not on target due to contractor delay in Phase 3 construction upgrades).
- Manage key elements of Industrial Pretreatment program with pretreatment software (this item is now being handled by our TAG Team)
- Distribute Little Creek's biosolids under NRRRF outlets (on target)
- Improve efficiency of biosolids handling by reducing volume and hauling requirements (this item will be continued into 2017).
- Improve laboratory staff development and competency by cross training (complete)
- Increase level of preventive maintenance (on target)
- Improve remote facilities hazardous weather readiness & response planning (on target)
- Develop Equipment Operating Procedures (EOIs) for plant equipment at Little Creek and Smith Creek WWTPs (on target)
- Increase the amount of basin profile sampling for Smith Creek WWTP (on target)
- Maintain 100% regulatory compliance (on target)

The Targets & Objectives program continues to be a key process in the continual improvement of the Wastewater Environmental Management System.

For more information about our WEMS program, contact Emily Fentress at (919) 996-3700 or via email at [emily.fentress@raleighnc.gov](mailto:emily.fentress@raleighnc.gov)



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City of Raleigh  
NRRRF  
P.O. Box 590  
Raleigh, NC 27602

Phone: 919-996-3700  
Fax: 919-996-1858  
E-mail:

[jeremy.blackmon@raleighnc.gov](mailto:jeremy.blackmon@raleighnc.gov)

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



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## More Ways to Contact Us

Do you have a question or just want some general information about something happening around the plant but don't know who to contact? We've made it easier for you to submit your comments, concerns or questions with the development of three new email addresses.

For biosolids information: [Biosolids@raleighnc.gov](mailto:Biosolids@raleighnc.gov)

For wastewater information: [Wastewater.Treatment@raleighnc.gov](mailto:Wastewater.Treatment@raleighnc.gov)

For reuse water information: [Water.Reuse@raleighnc.gov](mailto:Water.Reuse@raleighnc.gov)

## NRRRF Staff and Contacts

Resource Recovery Division is composed of the following programs: Administration, Laboratory, Plant Operations, Plant Maintenance, Remote Facilities (pump stations, odor control and air release valves), Land Management, 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:

- Robert Massengill, Public Utilities Director, 919-996-4540 or [Robert.Massengill@raleighnc.gov](mailto:Robert.Massengill@raleighnc.gov)
- Jeremy Blackmon, Residual Distribution Coordinator, 919-996-3700 or [Jeremy.Blackmon@raleighnc.gov](mailto:Jeremy.Blackmon@raleighnc.gov)
- Emily Fentress, Process Control Training Officer, 919-996-3700 or [Emily.Fentress@raleighnc.gov](mailto:Emily.Fentress@raleighnc.gov)
- Tim Woody, Resource Recovery Superintendent, 919-996-3700 or [Timothy.Woody@raleighnc.gov](mailto:Timothy.Woody@raleighnc.gov)
- T J Lynch, Assistant Public Utilities Director, 919-996-4540 or [TJ.Lynch@raleighnc.gov](mailto:TJ.Lynch@raleighnc.gov)

Produced by the City of Raleigh  
Public Utilities Department 01/16