

July 2016

Welcome To Our  
Newsletter!

*Developed to Keep  
You Informed and In  
Touch*

**Special points of  
interest:**

- Irrigation at NRRRF
- WEMS Update 3

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issue:**

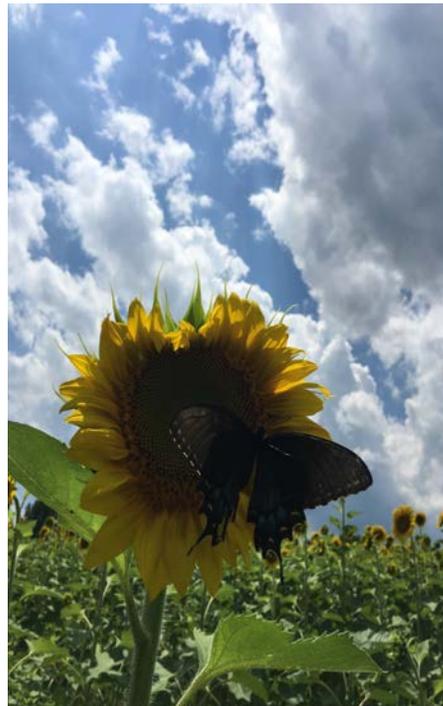
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# City of Raleigh Reuse Water



## Irrigation at NRRRF



The City of Raleigh Neuse River Resource Recovery Facility (NRRRF) irrigates approximately 400 acres at its site on Battle Bridge Road. Currently, fescue and bermuda grass, sunflowers and corn are under irrigation. All crops are used for animal feed or biofuel production.

Irrigating with reclaimed water has several benefits. It is a source of water when it is dry and also includes nutrients that assist in plant development and growth. Nutrient deferment from the Neuse River is another added benefit. When irrigation occurs with reclaimed water that water is not discharged to the river but to the fields at the NRRRF.

Visit <http://www.raleighnc.gov/home/news/content/CorNews/Articles/SRSFlowerPower.html> for more information.



# City of Raleigh Reuse Water



Cooling Tower Usage at GlaxoSmithKline

*If you would like to be “green” and save a few trees by receiving this newsletter in an electronic format, please email [marla.dalton@raleighnc.gov](mailto:marla.dalton@raleighnc.gov). We will be more than happy to email this newsletter to you in the future.*



Water Truck



NRWWTP Irrigation

## Smith Creek WWTP—Wake Forest Bulk Load Station

Beginning in June 2016, the Smith Creek Wastewater Treatment Plant bulk load station will be closed indefinitely due to water quality requirements. Please utilize the other stations located at:

- Neuse River Resource Recovery Facility—8500 Battlebridge Road, Raleigh, NC
- EM Johnson Water Treatment Plant—10301 Falls of Neuse Road, Raleigh, NC
- Little Creek Wastewater Treatment Plant—HWY 39 (behind the Mudcats Stadium), Zebulon, NC

## Reuse Water Usage

Reuse water usage has increased for the distribution system in Raleigh while maintaining a steady use rate in Zebulon. This is due to a growing customer base in Raleigh and the completion of the reuse pipe line to NCSU’s Centennial Campus. The bulk reuse systems at Neuse River RRF, Little Creek WWTP, Smith Creek WWTP, and EM Johnson WTP have not been fully utilized as we have had adequate rainfall the past two years. The bulk reuse facilities provide reuse water free of charge to the public. The only requirements are a short on line training course and a way to pick up the water at one of the above facilities. For more information on how to become a certified user or connect to the distribution system contact Marla Dalton at [marla.dalton@raleighnc.gov](mailto:marla.dalton@raleighnc.gov).

	EM J Bulk Flow	NR Bulk Reuse Total Flow	Smith Creek Bulk Reuse	L C Reuse Distribution Total	NR Irrigation FLOW Total	NR Distribution Flow Total
	gal	gal	gal	gal	gal	gal
Month	12066	12007	12077	12078	3001	16177
Jul 2015	0	0	575.00	4,494,500	0	34,018,600
Aug 2015	0	0	0.00	5,303,600	2,231,000	32,316,000
Sep 2015	0	0	150.00	1,929,600	0	28,856,000
Oct 2015	0	0	100.00	1,699,700	0	18,595,000
Nov 2015	0	0	0.00	1,045,800	0	14,572,000
Dec 2015	0	4,197	100.00	1,333,500	0	16,761,000
Jan 2016	0	0	0.00	1,545,200	0	14,821,000
Feb 2016	0	682	0.00	1,171,200	0	14,082,000
Mar 2016	0	6,017	3,300.00	1,340,700	0	26,421,000
Apr 2016	0	4,550	300.00	1,464,800	3,990,000	45,128,700
May 2016	500	0	0.00	2,257,000	1,288,000	32,372,000
Jun 2016	2,475	0	0.00	2,693,200	8,089,367	34,976,000
Minimum	0	0	0.00	1,045,800.00	0	14,082,000
Maximum	2,475	6,017	3,300.00	5,303,600.00	8,089,367	45,128,700
Total	2,975	15,446	4,525.00	26,278,800.00	15,598,367	312,919,300
Average	248	1,287	377.08	2,189,900.00	1,299,864	26,076,608

## 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.



Reuse Pipe

*Raleigh Reuse:  
Providing high  
quality water for  
non-potable uses*



## Approved Uses for Reuse Water

- Landscape irrigation of residential lawns, golf courses, parks, landscaped areas, and other public, industrial, or commercial grounds
- Dust control for street sweeping
- Roadway pretreatment
- Directional Boring
- Vehicle Washing
- Pesticide application
- Pressure washing
- Decorative ponds & fountains that do NOT have a drain to surface waters, storm drains, or catch basins. Must display permanent weatherproof signage
- General construction purposes such as soil compaction, dust control, and asphalt reclamation
- Cooling tower and boiler blowdown water
- Toilet Flushing



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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)



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, Asst. W&S Superintendent, 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 [Tim.Woody@raleighnc.gov](mailto:Tim.Woody@raleighnc.gov)
- T J Lynch, Asst. Public Utilities Director, 919-996-4540 or [TJ.Lynch@raleighnc.gov](mailto:TJ.Lynch@raleighnc.gov)

For information concerning Bulk Distribution, Utilization Permits, or Permit Applications, please feel free to contact us:  
Marla Dalton, Reuse Coordinator, 919-996-3672 or [marla.dalton@raleighnc.gov](mailto:marla.dalton@raleighnc.gov)  
Tim Woody, Resource Recovery Superintendent, 919-996-3700 or [tim.woody@raleighnc.gov](mailto:tim.woody@raleighnc.gov)