



**Welcome to Today's Webinar**  
**Environmental Benchmarking Series:**  
**Two Rivers Utilities**

August 24, 2022

10:00 am – 11:00 am EST

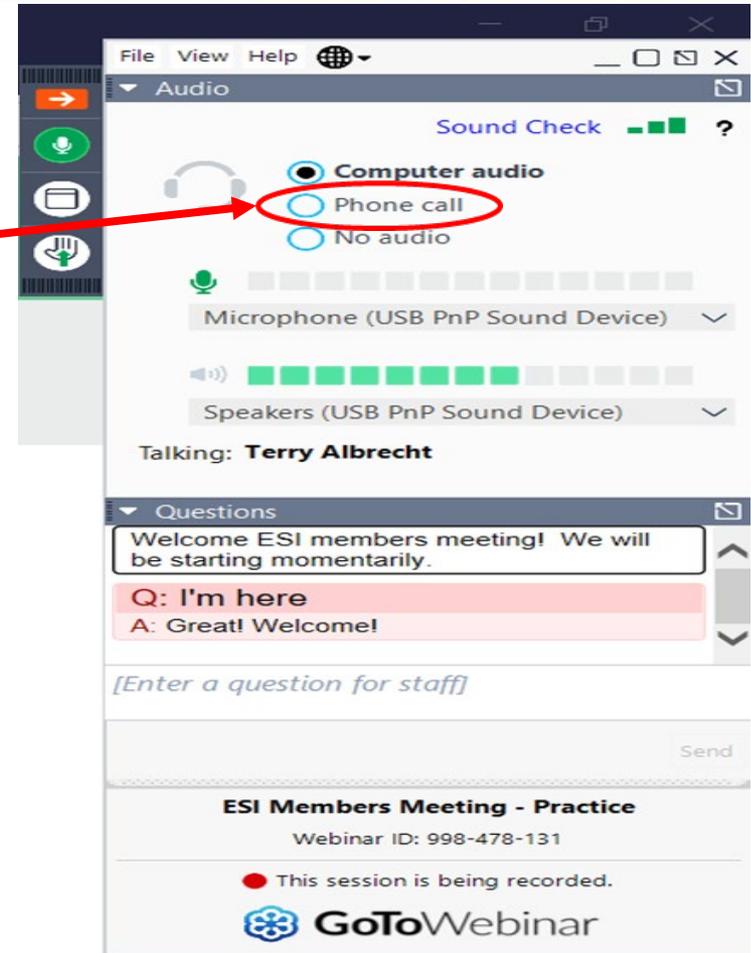


*Brought to You By:*



# Webinar Housekeeping

- If You Have Audio Trouble: Switch to phone (see number and code in Audio section of the webinar toolbox)
- Slides, Handouts and Recording will be posted to the ESI Events Website (can be accessed via [www.ncesi.org](http://www.ncesi.org))



The screenshot displays a webinar interface. At the top, there is a menu with 'File', 'View', and 'Help'. Below this is the 'Audio' section, which includes a 'Sound Check' indicator. Under 'Audio', there are three radio button options: 'Computer audio' (selected), 'Phone call' (circled in red with a red arrow pointing to it), and 'No audio'. Below these options are controls for the microphone and speakers, both labeled as 'USB PnP Sound Device'. The current speaker is identified as 'Talking: Terry Albrecht'. Below the audio section is a 'Questions' panel containing a welcome message: 'Welcome ESI members meeting! We will be starting momentarily.' It also shows a question 'Q: I'm here' and an answer 'A: Great! Welcome!'. At the bottom of the interface, it says 'ESI Members Meeting - Practice', 'Webinar ID: 998-478-131', and 'This session is being recorded.' The GoToWebinar logo is visible at the bottom right of the interface.

# Participation



## How to Ask Questions:

Use the Question Box.

The screenshot shows a GoToWebinar interface. At the top, there is a menu with 'File', 'View', and 'Help'. Below the menu is a 'Sound Check' section with a volume indicator and a question mark. Underneath, there are three radio button options: 'Computer audio' (selected), 'Phone call', and 'No audio'. Below these are two dropdown menus: 'Microphone (USB PnP Sound Device)' and 'Speakers (USB PnP Sound Device)'. A status bar indicates 'Talking: Terry Albrecht'. Below the audio settings is a 'Questions' section. It contains a text box with the message 'Welcome ESI members meeting! We will be starting momentarily.' Below that, a question 'Q: I'm here' and an answer 'A: Great! Welcome!' are displayed. A red oval highlights the text input area below the question and answer, with a red arrow pointing from the text 'Use the Question Box.' to it. At the bottom of the interface, it says 'ESi Members Meeting - Practice' with 'Webinar ID: 998-478-131'. A red dot indicates 'This session is being recorded.' and the GoToWebinar logo is at the bottom.



# Waste Reduction Partners



- Innovative partnership between NCDEQ and the Land of Sky Regional Council
- Non-regulatory
- Typically no cost
- Assist facilities improve environmental and energy management through efficiency techniques that save money
- Provides consulting services using 40 retired engineers and scientists
- Conducts on-site assessments and provides cost saving strategies and resources
- Client cost savings since the year 2000: \$137 Million
- Client energy saving since 2000: 5.66 Trillion BTUs

**For Services Contact: Terry Albrecht (828) 251-7475**

[talbrecht@wrpnc.org](mailto:talbrecht@wrpnc.org)

[www.wastereductionpartners.org](http://www.wastereductionpartners.org)



# Environmental Stewardship Initiative



- DEQ recognition program
- Promotes and encourages superior environmental performance
- Voluntary program; no cost to participate
- Going beyond compliance while conserving natural resources and resulting in economic benefits
- Approximately 200 member sites
- Networking and training benefits

For more information contact:

Marcia Allocco (919) 707-8206  
[Marcia.Allocco@ncdenr.gov](mailto:Marcia.Allocco@ncdenr.gov)

Davy Connors (919) 707-8129  
[Davis.Connors@ncdenr.gov](mailto:Davis.Connors@ncdenr.gov)

Don Burke (919) 707-8131  
[Don.Burke@ncdenr.gov](mailto:Don.Burke@ncdenr.gov)

Ron Pridgeon (919) 707-8143  
[Ron.Pridgeon@ncdenr.gov](mailto:Ron.Pridgeon@ncdenr.gov)

2020 ESI MEMBERS' REPORTED RESULTS			
REDUCTIONS	Air Emissions	498	Tons
	Greenhouse Gas Emissions*	22,320	Metric Tons CO <sub>2</sub> e
	Hazardous waste	723	Tons
	Landfilled waste	32,268	Tons
	Energy	8,203,092	MMBtu
	Water Use	1,290,141,538	Gallons
	Material Consumption	600	Tons
	Wastewater Pollutants	6,730	Tons
	Wastewater Volume	1,029,291,748	Gallons
	REUSE	Biomass Recovery**	86,620
Total Recycled Volume		341,881	Tons
<b>TOTAL COST SAVINGS \$ 7,193,816</b>			

\*Indirect not reported in energy reductions

\*\*Category created for compost/mulch related goals





# *Today's Presenter:*

**Stephanie Scheringer**

[stephanies@tworiversutilities.com](mailto:stephanies@tworiversutilities.com)

Division Manager Wastewater Treatment

City of Gastonia

Two Rivers Utilities

Ph: 704-866-6726



*More to Follow!*

## Thanks for Attending!

Watch for a survey for your feedback and check out the ESI webpage ([www.ncesi.org](http://www.ncesi.org)) webinar materials and recording link!



# Achieving Pollution Prevention, Cost Reduction & Increased Efficiency Simultaneously...?

Yes, it's Possible

Stephanie Scheringer  
Division Manager Wastewater Treatment



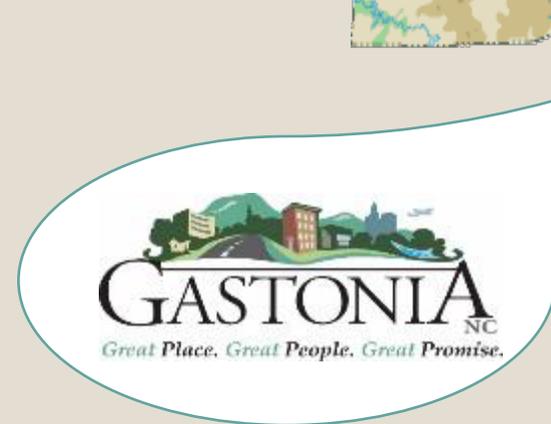
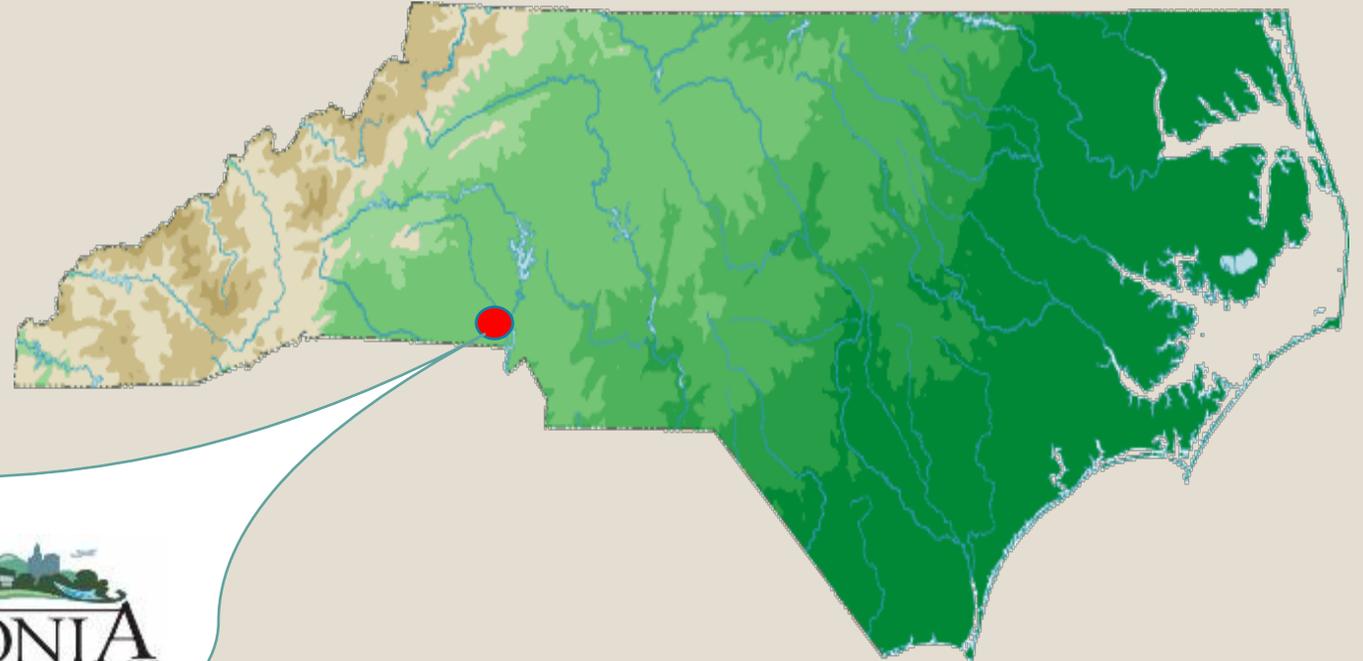
We are **TRU** to our customers!



We are **TRU** to our customers!

## Regional Water & Sewer Utility

- Water
  - 1 Treatment Plant
  - 686 Miles Line
- Sewer
  - 3 Treatment Plants
  - 650 Miles Line
- \$47.2M Budget
- 30,500+ direct customers
- Gastonia population 77,000
- Population served 107,000



# Two Rivers Utilities Service Area

## Full Consolidation

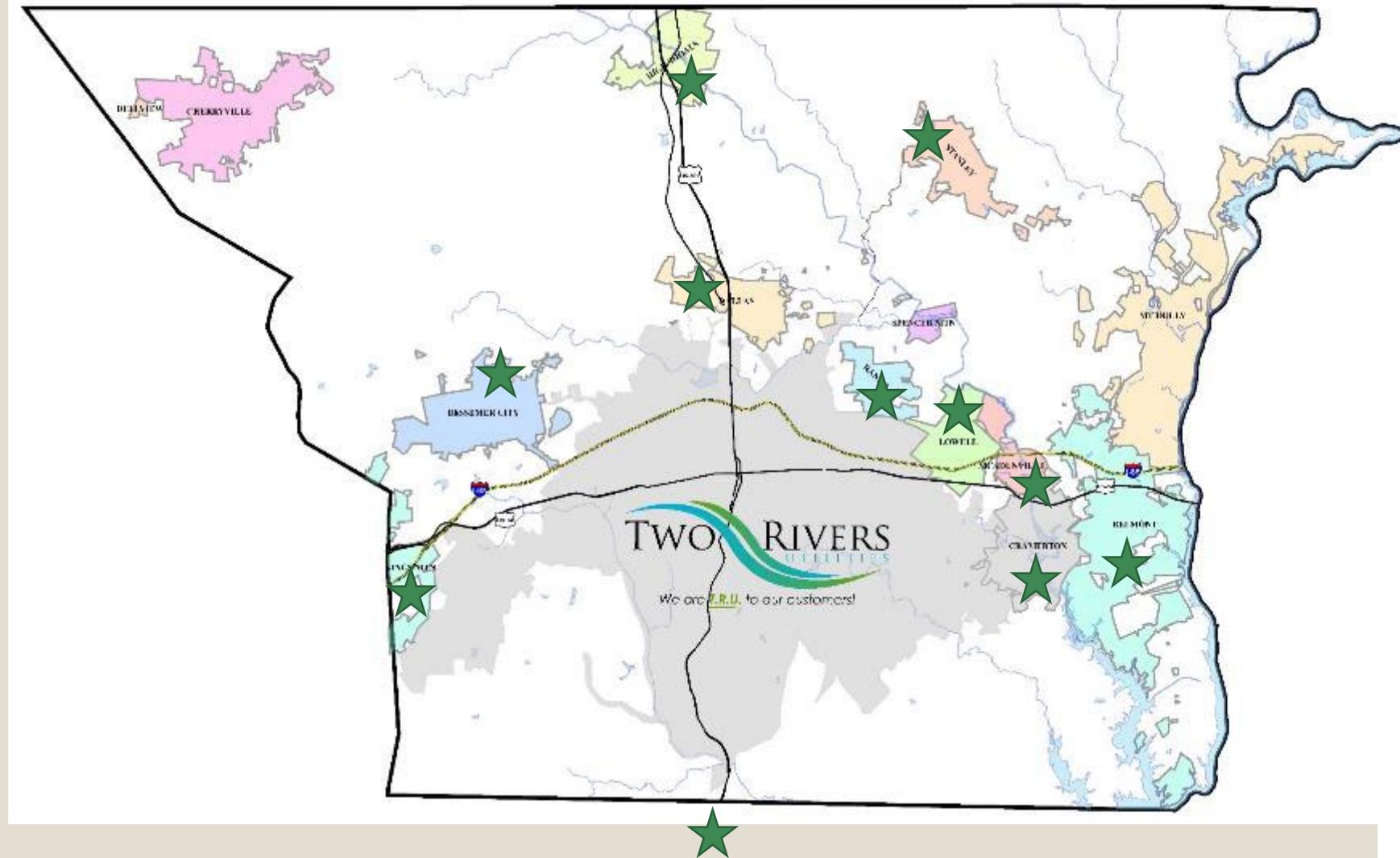
- Cramerton

## Bulk Customers

- Bessemer City
- Ranlo
- Lowell
- High Shoals
- McAdenville
- Stanley
- Kings Mountain
- Clover, SC

## Emergency connections

- Dallas & Belmont



# Why EMS & ESI?

## Environmental Management System (EMS)

- Improve compliance
- Leadership expectations
- EMS- ISO 14001 framework

## Environmental Stewardship Initiative (ESI)

- Non-regulatory
- Aligns with goal to go beyond compliance
- Training & support
- Third party validation to share with customers



# Two Rivers Utilities Environmental Management System



2001

- ISO 14001 Certification



2004

- Biosolids Resource Recovery Farm designated as ESI Rising Steward



2005

- Long Creek Wastewater Plant attained ESI Steward Designation & Water Plant-ISO 14001



2009

- Water Treatment Plant attained ESI Steward Designation



2009

- Crowders Creek Wastewater Treatment Plant attained ESI Steward Designation



2020

- The Resource Recovery Farm & Eagle Road Wastewater Plant added to the Steward designation

# EMS is The Management Tool

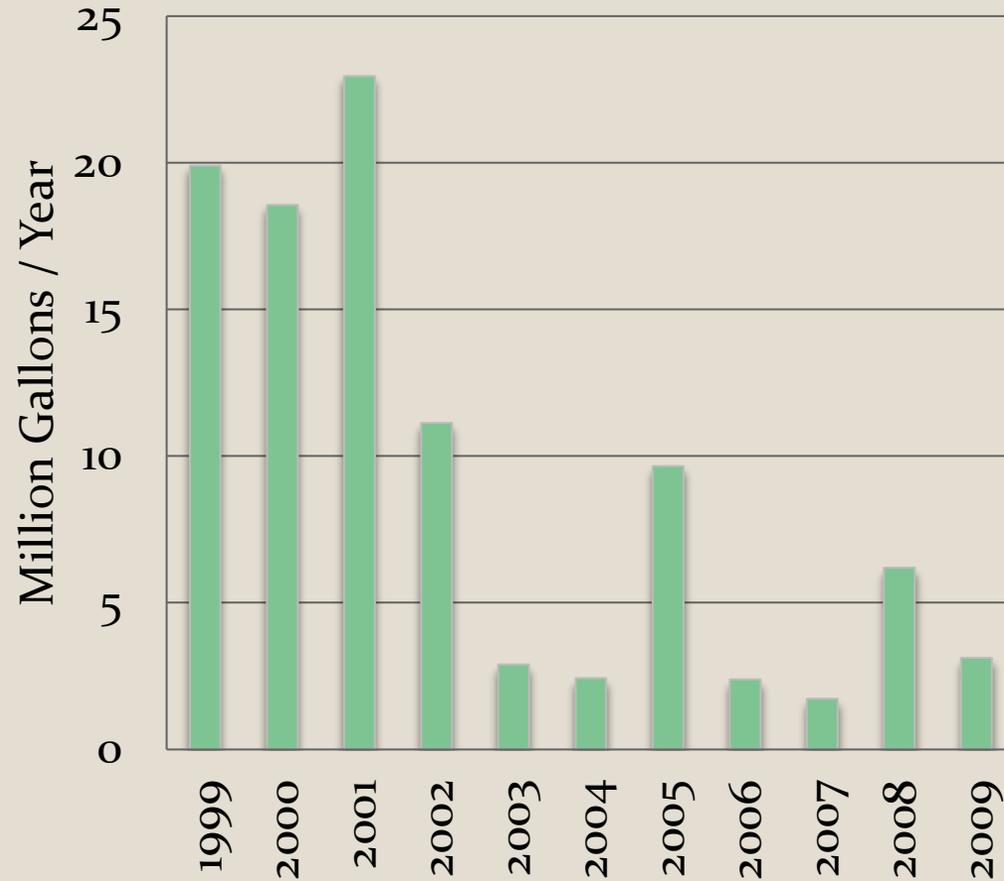
- All aspects of business activities
- Structured framework
- Staff involvement at all levels



# Assumption...

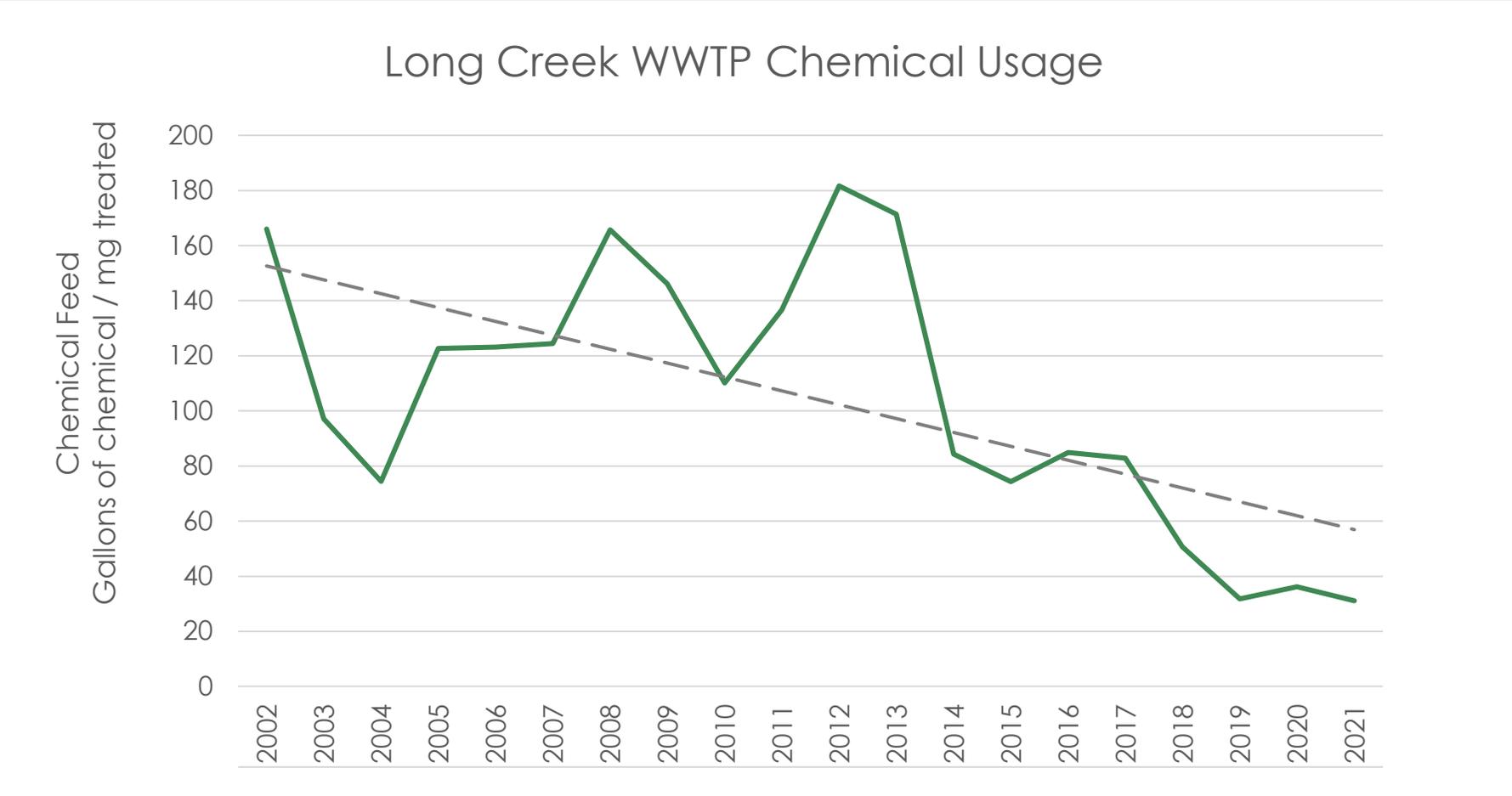


# Potable Water Reduction



Effluent water reuse pumping station

# Chemical Reduction



# Stormdrain Markings



Drains offsite to waterway



Drains to head of treatment plant

Allows for quick, efficient response to a spill

# Electrical Energy Reduction- Goal 1

Reduce consumption by 5% between 2000 and 2003

- Action Items Completed:
  - Energy Assessment
  - Minimize equipment usage
  - Replace motors, rather than rewinding
  - Repair malfunctioning photocells



# Electrical Energy Reduction- Goal 2

Reduce consumption by an additional 5% between 2003 and 2007

- Action Items Completed:
  - Continued items from Goal 1
  - Purchase premium efficiency equipment
  - Computer controls to minimize equipment stops / starts
  - Replaced main building HVAC, lighting



# Electrical Energy Reduction- Goal 2

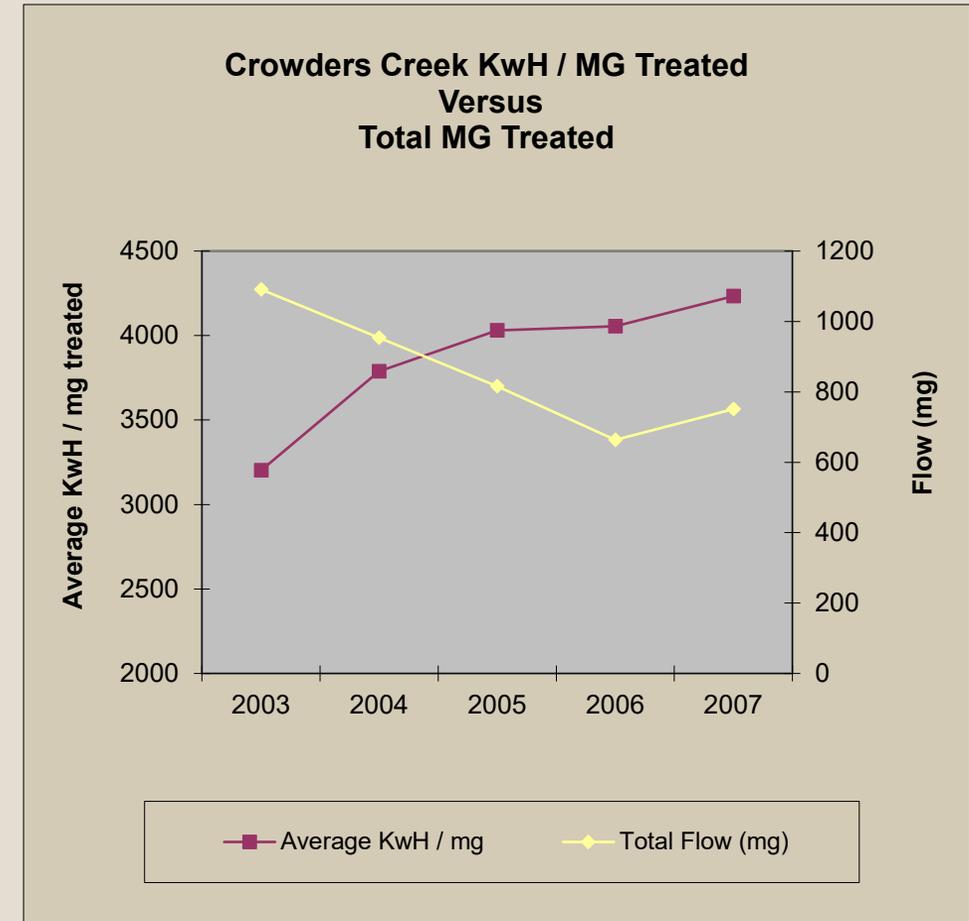
## Blower Relocation Project



- Existing 250 hp – oversized
- ESI Grant- relocate 150 hp blower
- In-house project
- Savings of 74.6 kW / H

# Decommission Area Wastewater Treatment Plants

- Treatment plants require a minimum amount of electricity to operate, regardless of the volume of wastewater coming into the plant
- After NAFTA, significant industrial exodus
  - Result: increase in electrical usage per wastewater volume treated
- By receiving the wastewater from other plants, total electrical usage remained similar
- Increase in sewer revenue



# Decommissioned Wastewater Treatment Plants



## Increase in Pollution Prevention

Reduction of Nutrient Loading to the South Fork Catawba River:

- Total Nitrogen: 34,518 lbs/year
- Total Phosphorus: 4,768 lbs/year

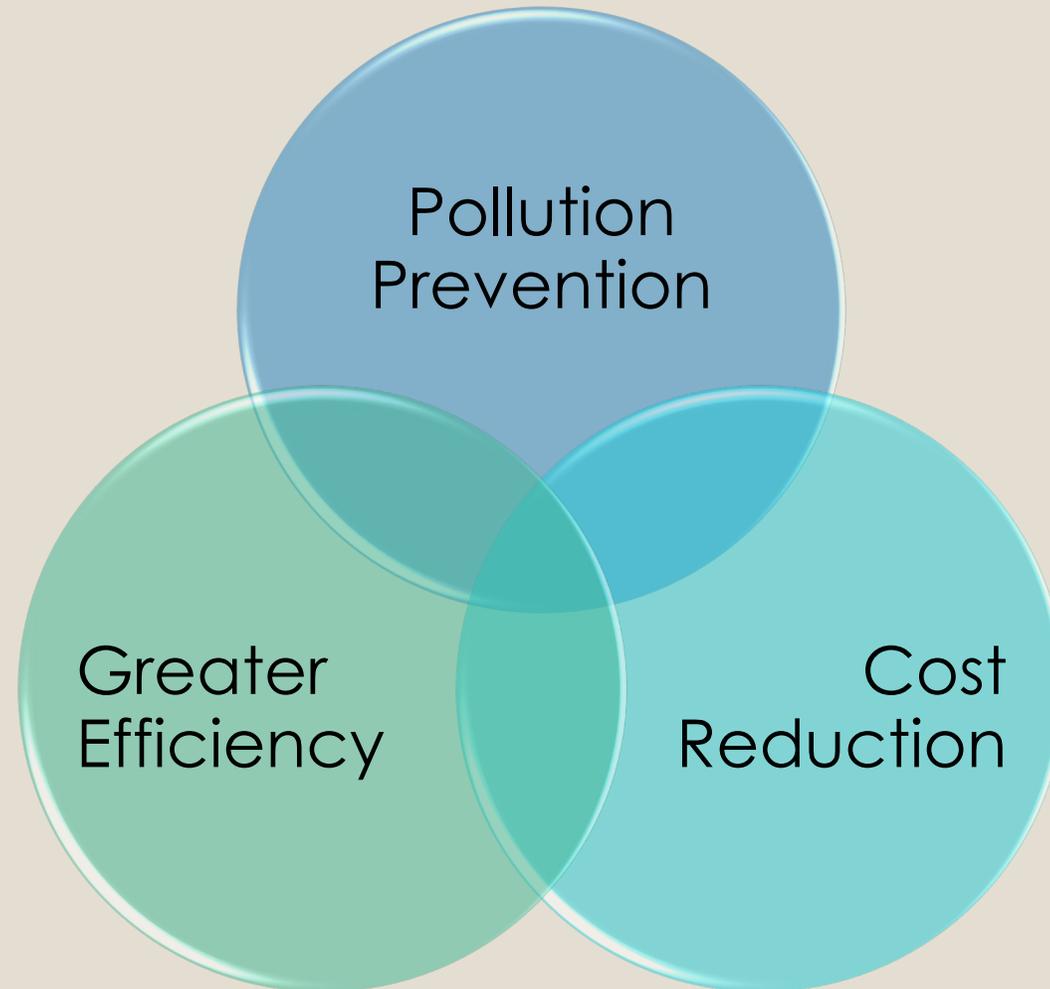
# Wildlife Program

- Staff driven
- Very little cost investment
- Work with area community groups
- Recognition by the NC Wildlife Federation through the Wildlife and Industry Together Program



Butterfly garden created by Scouts

# Alignment of Goals



# Summary



- EMS & ESI are management programs
- Going beyond compliance obligations does not have to increase capital or operating costs
- Going beyond compliance can decrease expenditures, allowing cost savings to be reinvested into facilities or operations

# Thank You

Stephanie Scheringer

Two Rivers Utilities

City of Gastonia

704-866-6726

[stephanies@cityofgastonia.com](mailto:stephanies@cityofgastonia.com)



We are TRU to our customers!

