

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Be water wise



National Environmental
Education Foundation

Knowledge to live by

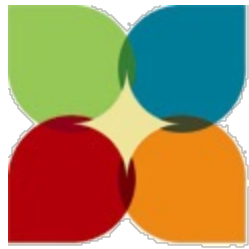


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www.eeweek.org/be_water_wise



National Environmental Education Foundation

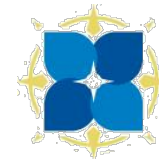
Knowledge to live by



Business & Environment



Health & Environment



Classroom Earth



National Environmental Education Week



Earth Gauge



National Public Lands Day





A unique public-private partnership leveraging resources and expertise to bring a meaningful learning experience to a K-12 audience on the topic of water conservation

Goal: raise awareness of local water issues and improve water conservation in school buildings and grounds and throughout the community through classroom-based activities

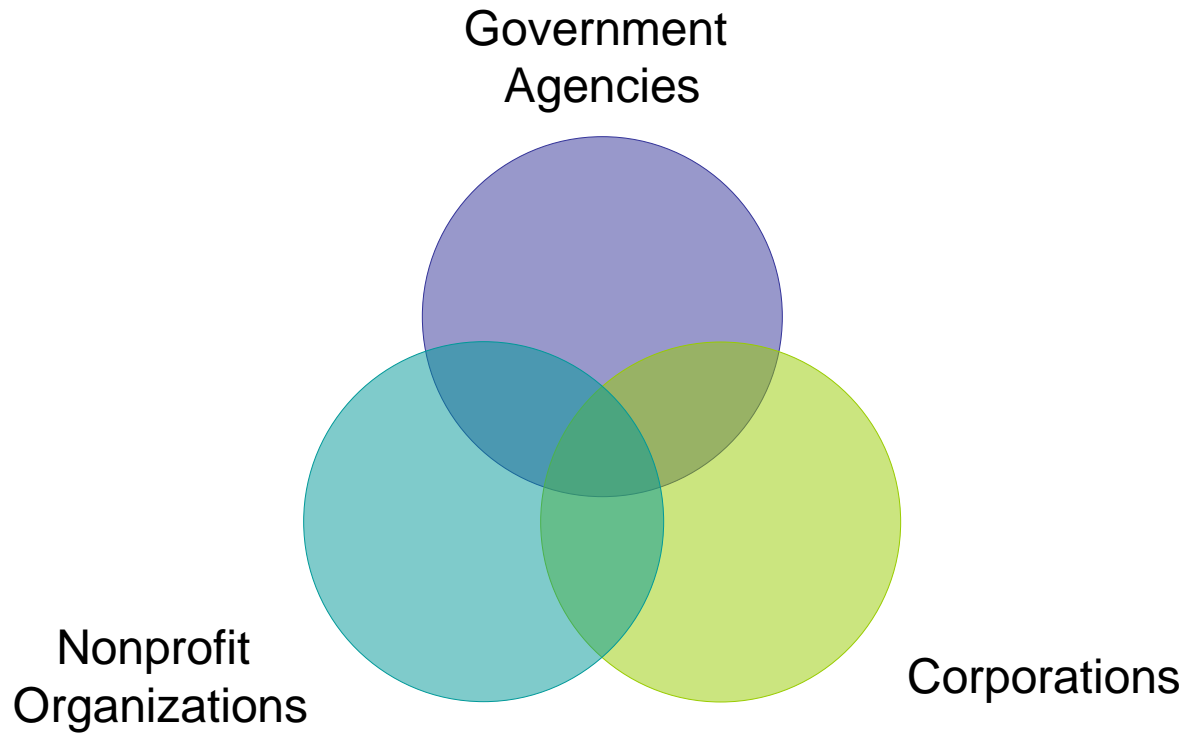


Key Program Components

- Public-private partnership
- Training for teachers and facility managers
- Technical support for water data collection
- High-quality, standards-based curricular materials
- Promotion and media outreach
- Grants to schools
- Student presentations to city officials



Key Component: *Public-private partnership*



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Key Component: *Training workshops*



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School Water Measurement Activity

Introduction

This activity is designed to help teachers, students and custodians investigate the ways water is used in and around the school building. By completing the activity, students and school staff will learn about the amount of water that is consumed throughout the school for activities including washing hands, drinking, watering landscaped areas and flushing toilets and urinals. This activity should be used to collect baseline data for your school's Be Water Wise water conservation project. As you complete the activity, consider the ways students and staff may work to improve water conservation throughout the building and on school grounds.

Materials

In addition to this activity sheet, you will need a few materials to complete the exercise. These include:

- Your school's water bills for the past 12 months (will be provided)
- A stopwatch for calculating the flow rate of faucets, water fountains and showerheads
- Several flow meter bags for each student or group of student who will be calculating the flow rates (will be provided)
- A digital camera or sketch paper and colored pencils for recording observations

Activity Sections

This activity contains four sections. Teachers may choose to divide students into groups with one group completing each section, complete the sections as a class at separate times, or divide the activity up among different classes within the school and compile the information once complete. Younger students will need more guidance as they complete the activity.

A. School Buildings

Students will answer general questions about water use in the entire building and calculate the amount of water used by each student and staff person each day. As they complete this section, it may be useful for students to interview the custodian or facility manager.

B. Indoor Water Using Devices

Students will survey and collect data on all of the water using devices throughout the school – including faucets, toilets, urinals, showerheads and lab sinks.

C. School Grounds

Students will walk around the school campus, recording observations about the water that is used outdoors to water landscaping, playgrounds or fields.

D. Outdoor Irrigation

Students will interview the custodian or facility manager responsible for outdoor irrigation on the school grounds to learn about when and how the landscaping, playgrounds and fields are watered.

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Key Component: *Technical support*



Summary Section

Previous Balance	70.89
Payments	0.00
Adjustments	0.00
Penalties	3.54
Current Charges	77.03
Amount Due	151.46

Account No. 2310066300
BILL DATE 08/15/06

Service Address
Customer Service
404.658.6500
watershed@tpaflwater.com

ACCOUNT BALANCE DUE BY: September 2, 2006

SERVICE ADDRESS:
55 Trinity Ferry RD
Atlanta GA 30303-0330

Meter NO	Prior Read	Date	Curr. Read	Date	Units
NE022830485	2933	07/10	2941	08/10	8 CCF

Your Consumption History

BILLING DETAILS

Previous Activity:

Previous Balance	70.89
Payments	0.00
Late Payment Fee	3.54
Balance Forward	74.43

Current Charges:

Water Base Charge	3.30
Water Usage Charges	18.17
Sewer Base Charge	3.30
Sewer Usage Charges	51.06
Homeland Security Surcharge	1.20

TOTAL AMOUNT DUE: 151.46

Charge Summary

PERIOD	DAYS	DAILY AVERAGE
Current	31	0.26 CCF
Last Bill	34	0.29 CCF
Year Ago	30	0.30 CCF

MESSAGE FOR THE CUSTOMER

Tear Off

Please detach and Return this bottom portion with your payment
Payment Due By: September 2, 2006

Account No. 2310066300
Total Amount Due: \$151.46
Amount Enclosed: _____

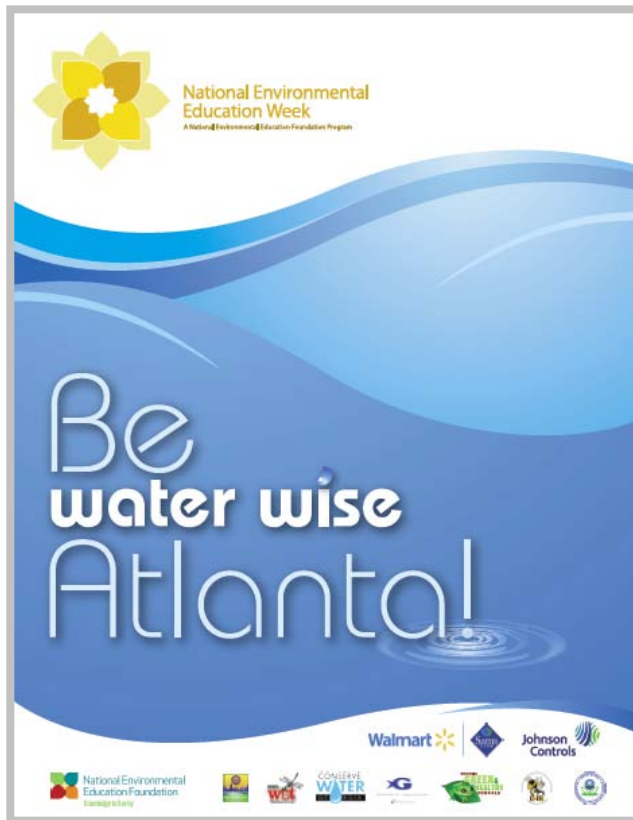
Billing Address
City of Atlanta
DEPARTMENT OF WATERSHED MANAGEMENT
P.O. BOX 105275
ATLANTA, GA 30348-5275

05523100663001017596



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Key Component: *Curricular materials*



The parent letter is titled "Be water wise Atlanta" and is addressed to "Dear Parent,". It explains that the child's school has been selected to participate in an innovative program designed to engage students in hands-on learning activities focusing on water conservation. The program is part of National Environmental Education Week (NEE Week), the nation's largest environmental education event.

Water is quickly becoming the world's most precious resource as our population grows and supplies become more limited. In Georgia, water conservation is of particular importance. Local water sources have experienced extraordinary stress due to an extended period of drought as well as rapid population growth in metro Atlanta. You are probably already familiar with the local water ordinances that regulate outdoor water use for watering lawns and washing cars, but there is more your family can do to conserve water. Every drop counts!

The National Environmental Education Foundation, a Congressionally chartered, nonpartisan, non-advocacy environmental education organization based in Washington, D.C., has partnered with the U.S. Environmental Protection Agency, the Georgia Aquarium, the Atlanta Department of Watershed Management, Conserve Water Georgia, Georgia Project W.E.L., Georgia Green and Healthy Schools and the Center for Education Integrating Science, Mathematics and Computing (CEISM/C) at Georgia Tech to offer this unique program to students and teachers at selected Atlanta Public Schools. Be Water Wise Atlanta is made possible by generous contributions from Johnson Controls, Inc. and the Walmart Foundation.

How much water does an average household use in the home?

Activity	Percentage
Shower	16.9%
Toilet	21.7%
Laundry	11.7%
Drinking	2.2%
Brushing Teeth	1.5%
Other	43.9%

Source: American Water Works Association

As part of Be Water Wise Atlanta, your child will:

- Receive grade-appropriate instruction and curriculum materials on issues of water conservation consistent to Georgia Performance Standards;
- Engage in hands-on activities that emphasize the importance of water conservation at school, at home and in the community;
- Explore water use at home and at school;
- Present school water conservation plans to local public officials.

As parents, you play an important role in this educational experience. Here are some ways your family can work together to save water and money:

- Use a kitchen timer to time each family member's showers and challenge yourselves to reduce each shower by two minutes (you'll save 10 gallons of water per shower!)
- Put food coloring in the toilet tank. If it seeps into the bowl, there is a leak. Fix a leaky toilet and you'll save up to 200 gallons of water per day.
- Encourage your child to research native plants and plant some in your yard. Native plants are well-adapted to local weather and require less watering than non-native species.
- Conserve energy! Each kilowatt hour of electricity used requires the about two gallons of water. Likewise, each gallon of water consumed requires energy to treat, transport and heat it. Saving water saves energy, and vice versa.

Use the chart on the reverse to keep track of water conservation activities for (at least) one week. Compare the family's water bill before and after taking these actions and discuss the results with your child.

For more information on these and other tips your family can use to conserve water in and around your home, visit www.ConserveWaterGeorgia.net.

continued on back

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Key Component: *Media outreach*



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Be water wise, Atlanta

Quenching the thirst for conservation with a program aimed at Atlanta's youth.
Mon, May 03 2010 at 5:21 PM EST *By Amanda Pack, Local Correspondent*



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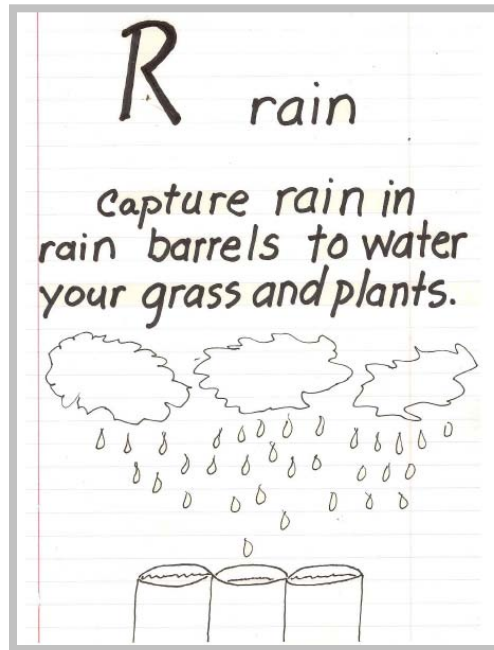
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1. 10 of the smallest homes in the world
2. The 15 most toxic places to live
3. 15 travel destinations being ruined by tourism
4. Bizarre sea slug is half plant, half animal
5. The world's 10 oldest living trees
6. 10 surprisingly easy sources of alternative energy



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Key Component: Grants



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Key Component: *Student presentations*



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“By participating in *Be Water Wise Atlanta*, my students have become more conscious of their daily water usage... and are eager to share conservation tips and other information about the project with visitors and new students.”

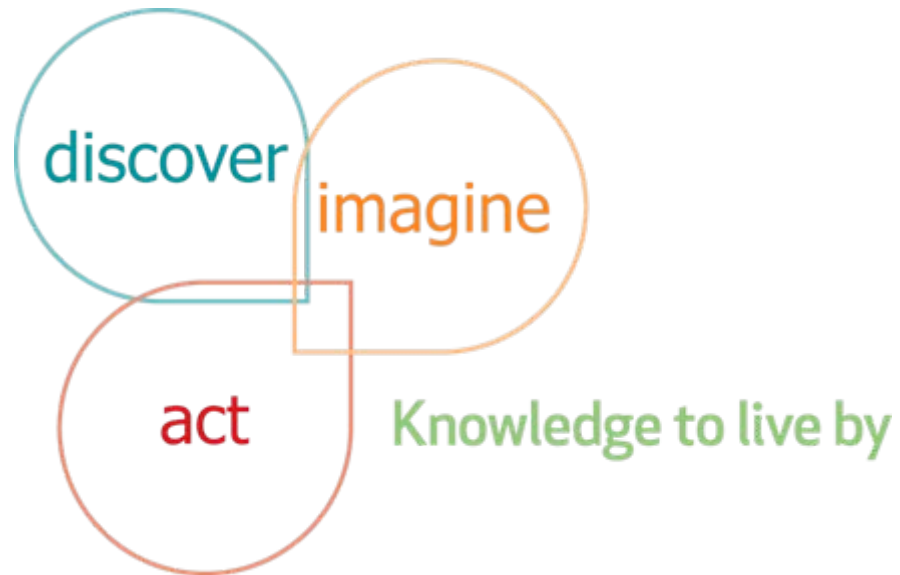
*Kina Champion, 6th Grade Math and Science Teacher
Kennedy Middle School*

“It is really amazing how involved my students have become in *Be Water Wise*. Many went home and had a ‘water talk’ with their families.”

*Klare McKee, 4th and 5th Grade Gifted Teacher
Dunwoody Elementary School*



E. Rivers Elementary School teacher Nicole Cheroff explains how to measure a faucet’s flow rate using a flow meter bag



Blue is the new green.

Save water, save energy.
Save energy, save water.



Johnson Controls, Inc.

Energy Solutions:

- Improving energy efficiency is the first and most important step toward achieving sustainability in buildings and organizations.
- Energy efficiency helps control rising energy costs, reduces environmental footprints, and increases the value and competitiveness of buildings.

Private Public Partnerships

- Creating a more sustainable future requires that businesses and governments to address water and energy conservation hand-in-hand.
- Makes conservation possible and feasible.
- Energy efficiency helps control rising energy costs, reduces environmental footprints, and increases the value and competitiveness of buildings.
- Sustainability means getting the most out of every single unit of energy, water, materials and resources used in their buildings.

BWW Partnership

- To promote and assist the K-12 education market with conservation awareness, training, and support with programs such as BWW.
- Provide training/development for utility measurement exercise for faculty, students, and staff
- Ongoing verification of energy cost/savings during project term.

Where We Started

School Training for audits included

- Obtain/review 24 Months worth of Water and Sewer Bills
- Understanding Rates and Fee Structures
 - Water and Sewer Rates
 - Reclaim Water for irrigation
 - Base Fees determine by meter size
 - Environmental fee / taxes applied on water usage or entire bill
 - Flat Rate Fees
 - Wells aren't cost free (Rust inhibitors, pumping costs, Maintenance Costs)
- Facility Populations
 - Major impact on water consumption

Where We Started

- Determine payback criteria (set goals – what is your payback period?)
- Compile list of any water using fixtures by auditing schools
- Confirm usage through random flow measurements
- Obtain Pricing
- Identify payback items/term as budget allows

Student Led Activities

A. School Buildings

Students answered general questions about water use in their school.

B. Indoor Water Using Devices

Survey and data collection

C. School Grounds

Students walked school campus and record observations

D. Outdoor Irrigation

Student interviews

Supporting Global Communities

- Public Private Partnerships:
 - Local Partnerships (BWW)
 - The Igniting Creative Energy (or ICE) Challenge
 - Blue Sky Involve
 - Conservation Leadership Corps

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Partnership with the City of Atlanta

Department of Watershed Management

2009 - 2010



Office of Water Efficiency

Melinda Langston, Director

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Setting the stage ...

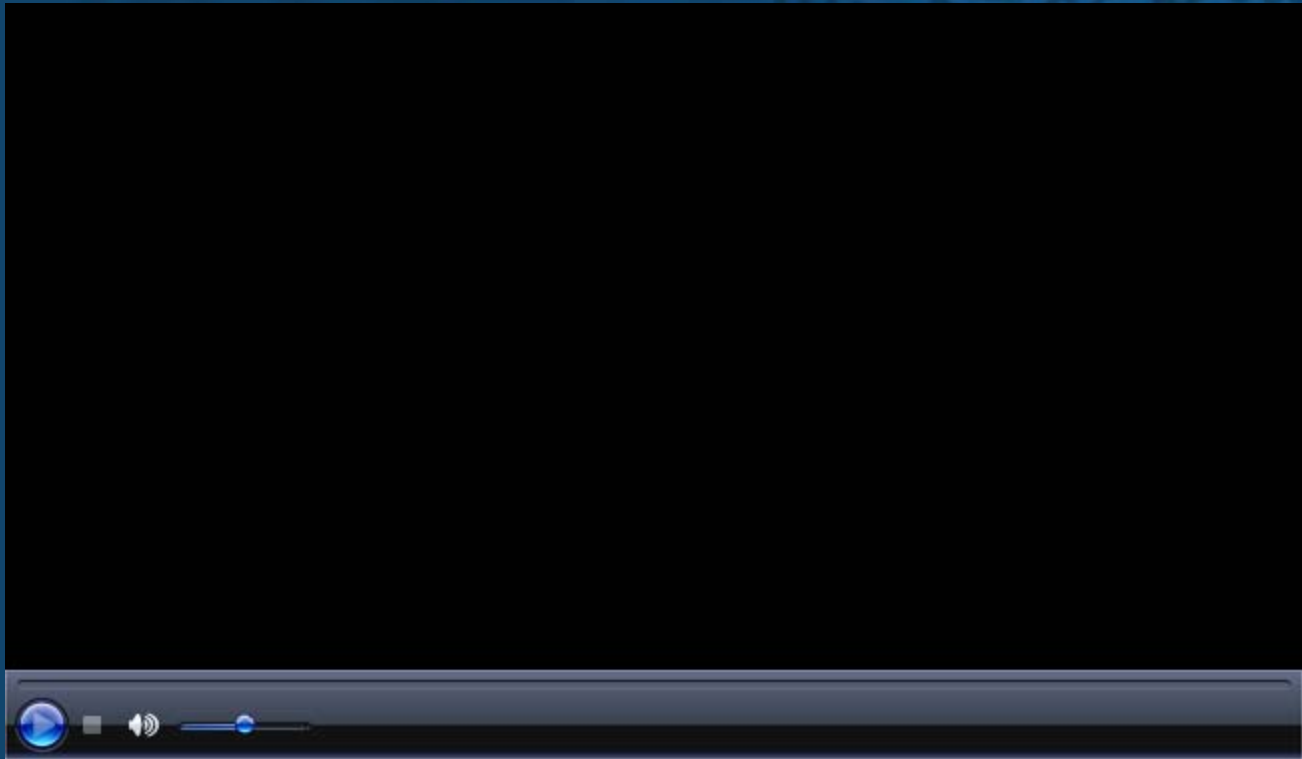


Atlanta Mayor Kasim Reed

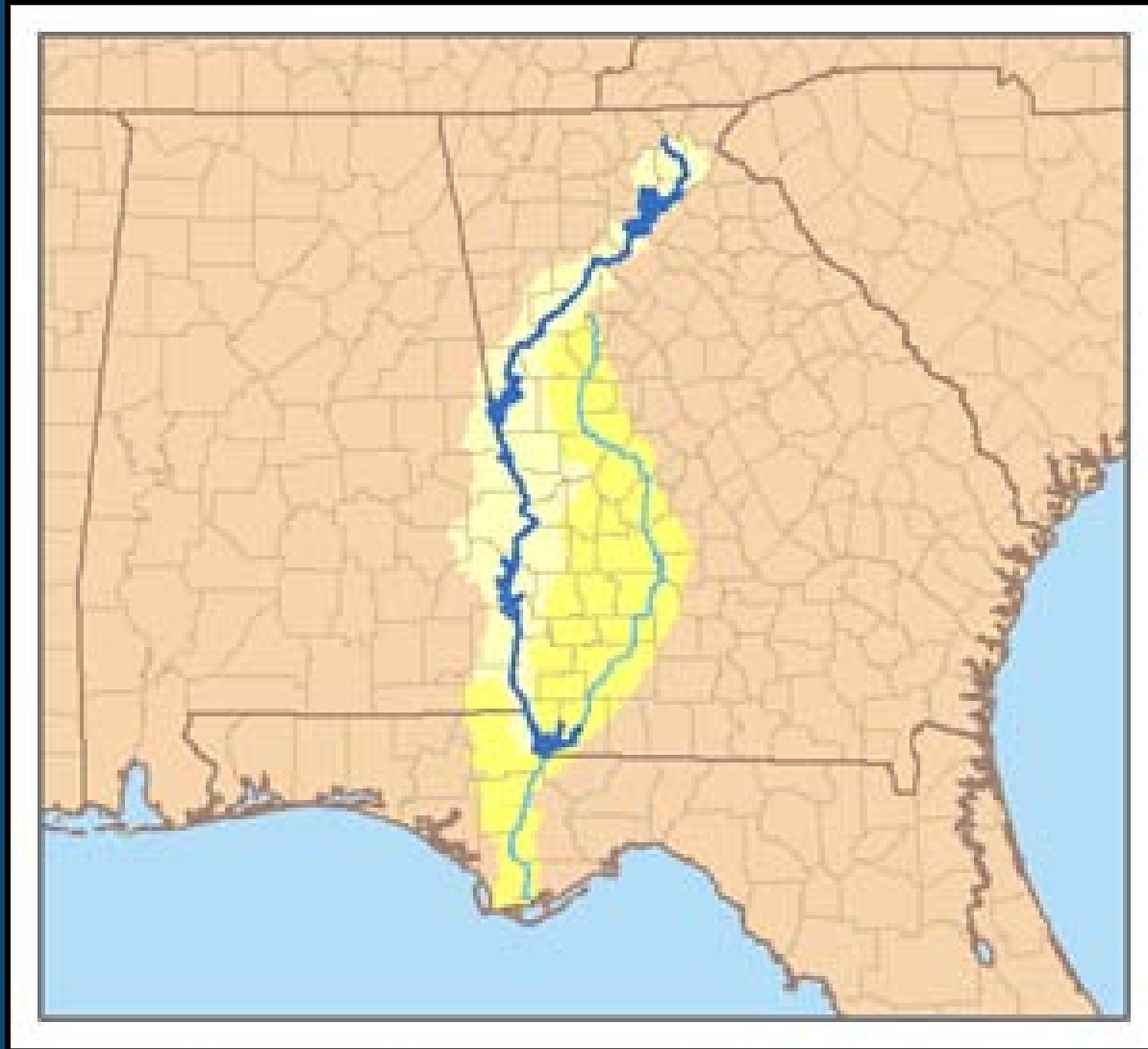
Community

Environmental

Political factors



Tri-states Water War



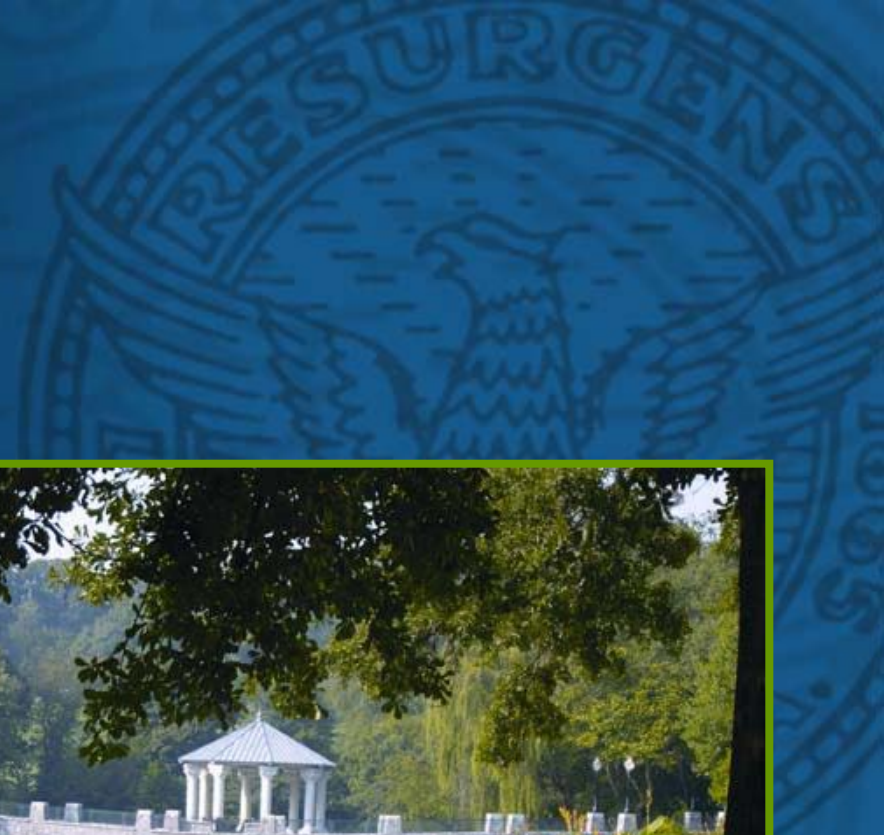
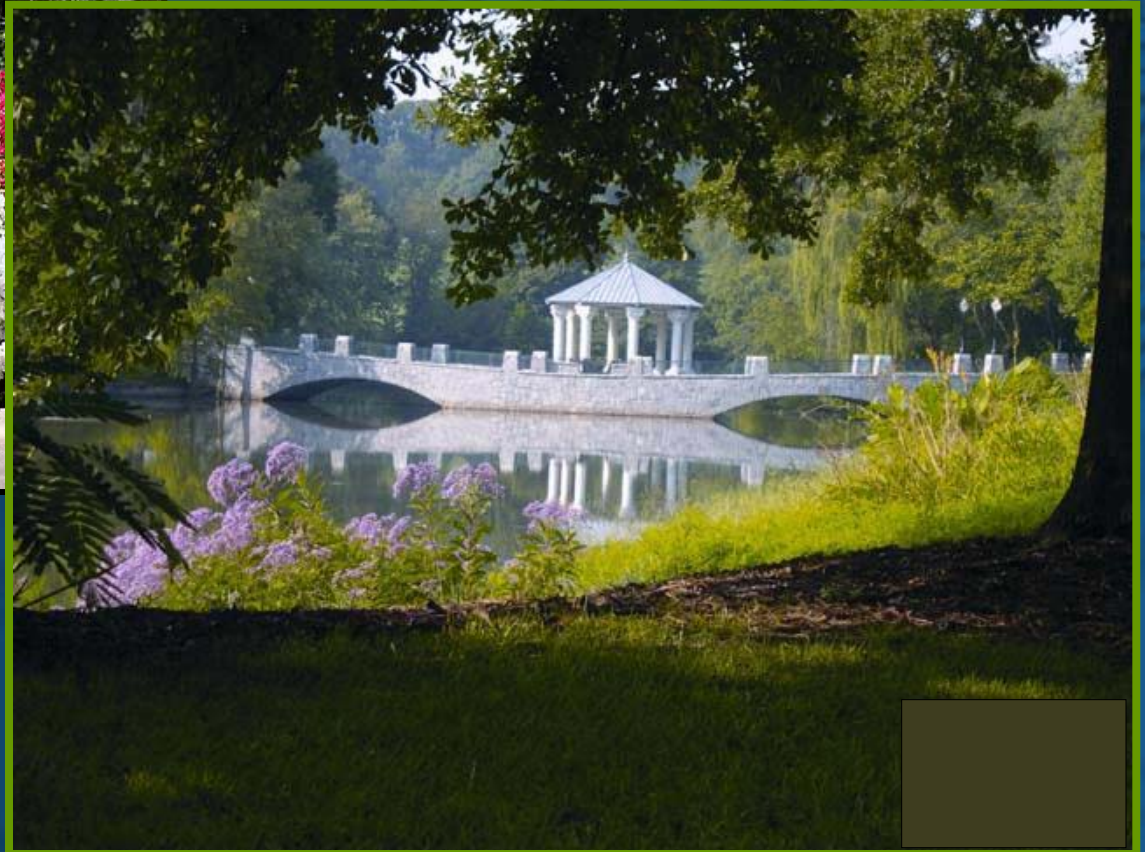
The worst drought on record

Lake Lanier



500 year flood - Sept 2009





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Atlanta Public Schools



49,000 students

78% living in poverty

Graduation rate 42%

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Benefits & Lessons learned



Specific, measurable

Sustainable lifestyle





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Conclusions-----Q & A

Presenters:

National Environmental Education Foundation

Johnson Controls

City of Atlanta Watershed Management