Watershed UGA

A living laboratory transforming campus and community through teaching, research, and service.

Tyra Byers (Laurie Fowler, Katie Brownson)
Office of Sustainability
www.watershed.uga.edu

SUSTAINABLE UGA

THE UNIVERSITY OF GEORGIA
Franklin College of Arts and Sciences

LAMAR DODD SCHOOL OF ART

FACILITIES MANAGEMENT DIVISION
University Architects
for Facilities Planning

12 colleges:
- **-Public Health**
- **-Ecology**
- **-Law**
- **-Environmental Design**
- **-Forestry**
- **-Arts & Sciences**
- **-Art**
- **-Agriculture**
- **-Journalism**
- **-Education**
- **-Family & Consumer Sciences**
- **-Engineering**

Grady College
The University of Georgia

Office of the Vice President for
PUBLIC SERVICE AND OUTREACH

DIVISION OF STUDENT AFFAIRS
UNIVERSITY HOUSING
Serving Georgia Since 1806
THE UNIVERSITY OF GEORGIA

THE UNIVERSITY OF GEORGIA
COLLEGE OF ENVIRONMENT + DESIGN
C E+D
landscape architecture
historic preservation
env. planning + design
environmental ethics

UGA | Academic Planning
Plan. Assess. Evaluate. Change.

Odum School of Ecology
The University of Georgia

1785
The Graduate School
THE UNIVERSITY OF GEORGIA

THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES

river basin CENTER

SUSTAINABLE UGA

UNIVERSITY OF GEORGIA
OSL
OFFICE OF SERVICE-LEARNING

CTL

9 ELEMENT

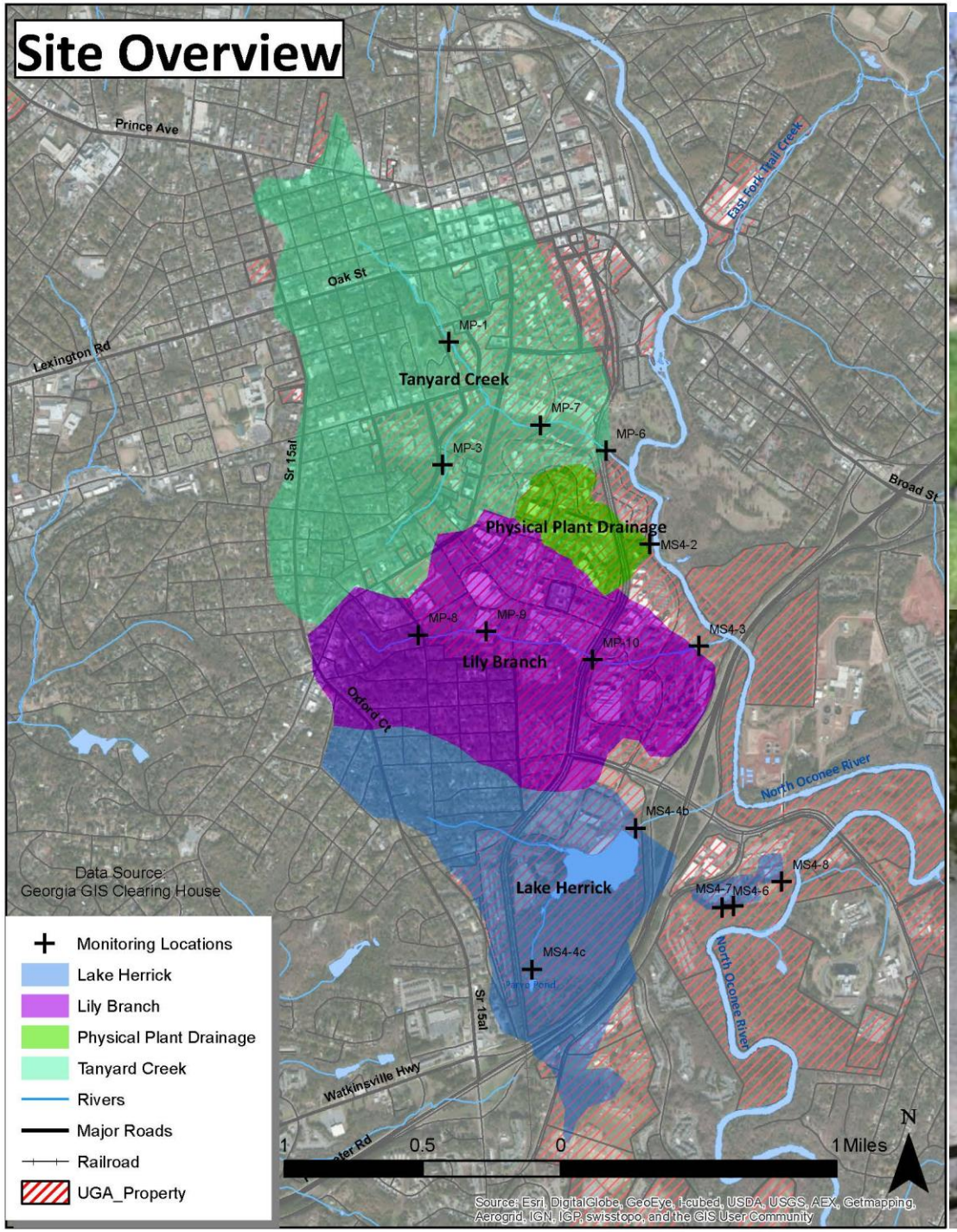
WATERSHED MANAGEMENT PLAN

FALL UPDATE 2014

UGA CAMPUS STREAMS




Site Overview



Watershed Issues

- Heavy urbanization in the watershed (lots of pavement)
- Piped for large portions of reach
- Polluted
- Invasive species
- Not always seen as amenities

Land-grant missions:

- Teaching
- Research
- Service & Outreach
- Operations

Teaching

Incorporate Watershed UGA into courses across campus

- Website
- Modules
- New STEM course
- Tours
- Workshops
- Incentives

Modules
Objectives
Activities
Files
Maps

Labels
Watershed Tanyard Creek
Lilly Branch
Steam Plant Stream
Lake Herrick

Level Introductory
Intermediate Advanced

Type Maps GIS
Data Collection Reading
Assignment Video Activity
UGA Research
Project Development
Sciences Humanities
UGA/Athens Sampling
Writing Technology

Bloom's Taxonomy
Remembering Understanding
Applying Analyzing
Evaluating Creating

Modules

These modules have been designed for one to three class periods. Click on a title for access to learning objectives, activities, resources, assessments, and lecture content.

Introduction to Watersheds

Introductory

This module is available in the eLC. Please send your name and email to watershed@uga.edu to request instructor access to the content. Follow this link for details.

- Background of Earth's supply of freshwater
- What is a watershed?
- Human interaction with watersheds
- UGA watersheds
- Summary/review of key concepts
- Call to action
- Resources for more information

Humans Impacts to Rivers and Streams

Intermediate

This module is available in eLC. Please send your name and email to watershed@uga.edu to request instructor access to the content.
Follow this link for details

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Learning Objectives

Objectives are associated with specific modules, but can be stand-alone. They are labeled from Basic to Advanced and according to levels of Bloom's and Fink's Taxonomy. Click on the title for access to associated activities and resources.

Define "watershed"

Students will be able to define what a watershed is.

Introductory Remembering Foundational Knowledge

Describe how UGA campus watersheds are part of a connected, larger system.

Introductory Understanding Integration

Explain why it is important for UGA watersheds to be healthy

Introductory Applying Caring

Identify the 3 pillars of sustainability

Students will be able to identify the 3 pillars of sustainability as they apply to watersheds

Introductory Applying Human Dimension

Differentiate between human-induced impacts to campus

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Activities

Activities are associated with Learning Objectives and Modules. They are labeled according to Bloom's and Fink's Taxonomy. Click on a title to pull up the content and other resources for download.

Snowball activity

(5 minutes)

Students should read the 9-Element Watershed Management Plan (available on the Resources page) before completing this activity.

Have students take out a scrap piece of paper. Write down one sentence summarizing something they learned from the 9-Element Watershed Management Plan (WMP). Instructions to students: Crumple it up into a ball and throw it to someone across the room (all at once). Pick up a snowball, if you didn't catch one. Read what was written and add another thing you learned from the WMP. Crumple it up and throw it again. Repeat. Throw them all to the front of the room. Instructor picks up a few and reads them aloud to the class.

It is likely that most of the key and supplemental learning objectives will be covered pursuant to this activity.

Introductory Activity Remembering Understanding Foundational Knowledge

Problem Identification Activity

(10 minutes)

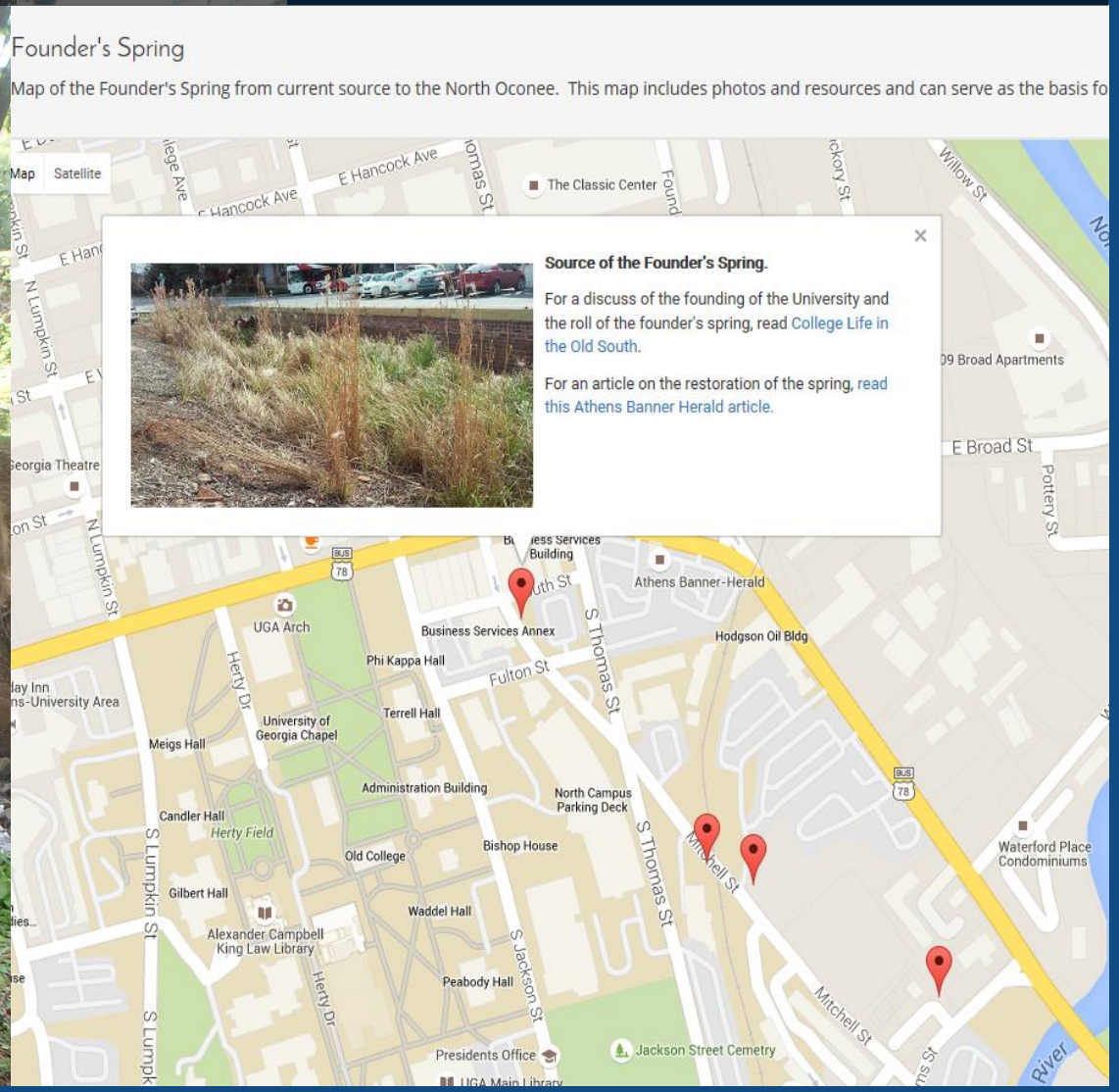
Students are assigned to small groups; each group is assigned one of the four campus watersheds. Referring to the Watershed Management Plan, the PowerPoint, background readings, and the video, groups will assess their watershed regarding pollution, and answer the following questions:

1. Is there evidence of problems (pollution, water quality, water quantity) in your stream/watershed?
2. What source(s) are likely contributing to the issue(s)? How do you know?

Faculty Workshops

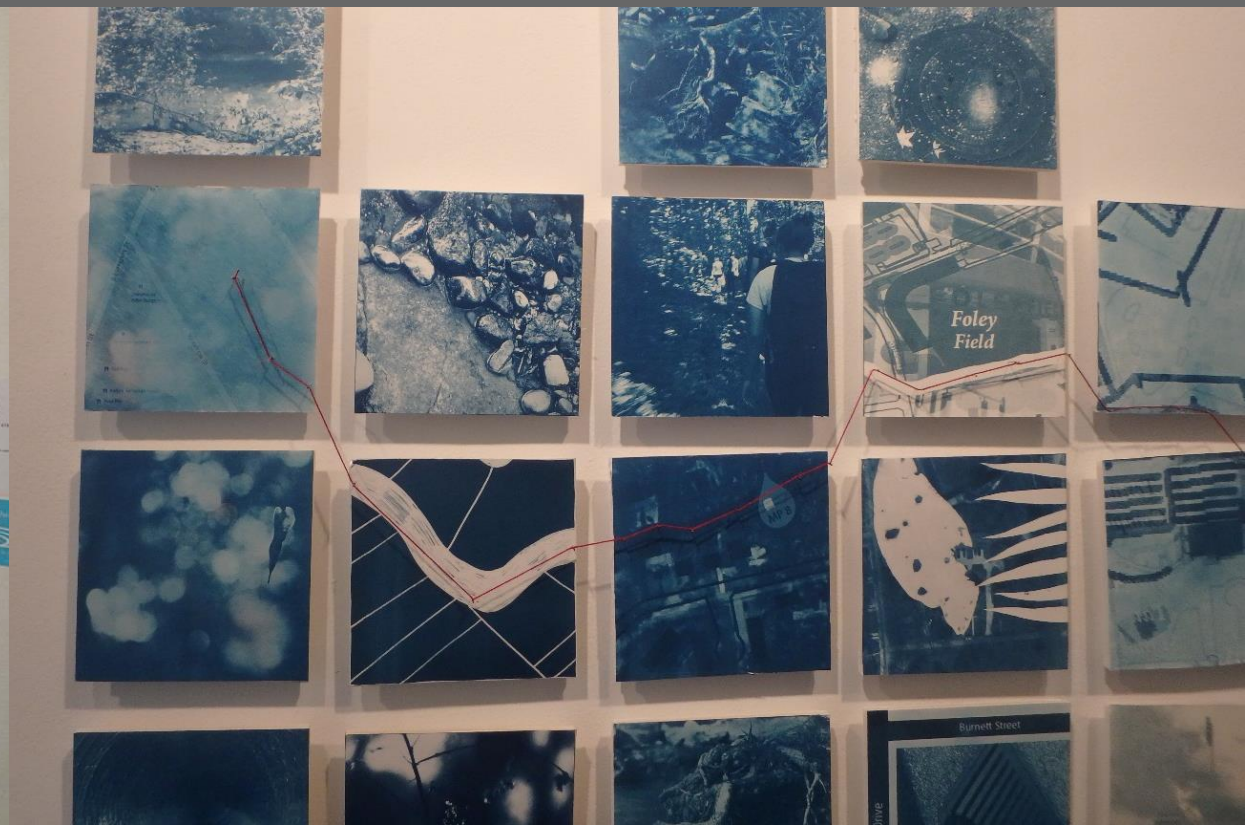
- At least once a semester
- 73 faculty

Tours


Founder's Spring
Map of the Founder's Spring from current source to the North Oconee. This map includes photos and resources and can serve as the basis fo
Map
Satellite
Source of the Founder's Spring.
For a discuss of the founding of the University and the roll of the founder's spring, read College Life in the Old South.
For an article on the restoration of the spring, read this Athens Banner Herald article.
The Classic Center
E Hancock Ave
Athens Banner-Herald
Business Services Annex
UGA Arch
Phi Kappa Hall
Terrell Hall
University of Georgia Chapel
Meigs Hall
Administration Building
North Campus Parking Deck
Hodgson Oil Bldg
Fulton St
S Thomas St
Herty Dr
Herty Field
Candler Hall
Old College
Bishop House
Gilbert Hall
Waddel Hall
Alexander Campbell King Law Library
Peabody Hall
S Jackson St
S Lumpkin St
N Lumpkin St
Mitchell St
Presidents Office
Jackson Street Cemetry
Waterford Place Condominiums
E Broad St
Pottery St
Willow St
River

Watershed UGA Minigrants

- Water Quality Monitoring
- Art Mural
- Elementary Education Material (Backpacks, Puppets, Books)
- Design Charrette- Restoration
- IPad App - Channel Roughness



Courses Implementing Watershed UGA Fall 2015

- ARST 2330 - Beg. Screen Print
- ARST 2310 - Introductory Printmaking: Intaglio
- ARST4285/6285 - Alternative Photography
- CHEM 1110L - Elem. Chemistry Lab
- CHEM 1211L - Freshman Chem. Lab
- COMM 1100 - Introduction to Public Speaking
- ECOL 6080 - Conservation and Sustainable Development
- ECOL/FISH/WASR 4310/6310 - Freshwater Ecosystems
- ECOL 8730 - Environmental Policy
- ECON 2100 - Economics of Environmental Quality
- EHSC 4610 - Water pollution and Human Health
- ENGL 1101 - First Year Composition
- ENGR 4410 - Open Channel Hydraulics
- ENGR 4440 - Environmental Engineering Unit Operations
- ENTO 3300S - Outreach and Service
- ESCI 4420 - Science Early Childhood
- ESCI 4420 - Science for early childhood
- FANR 3200 - Ecology and Natural Resources
- FANR 3800 - Spatial Analysis of Natural Resources
- FISH 5360/7360 - Fisheries Management
- FYOS 1001 - Global Engagement Learning Community
- FYOS 1001- Take me to the river: the ecology and conservation needs of aquatic ecosystems
- FYOS 1001 - Human Impacts on Landscapes of the World
- FYOS 1001 - Water: The Most Interesting Resource in the World
- FYOS 1001 - What is your water footprint?
- FYOS 1001 – Invasive Species
- GEOG 2250H - Resources, Society, and the Environment (Honors)
- GEOG 3010 - General Geomorphology
- GEOG 4020/6020 - Fluvial Geomorphology
- GEOG 4060/6060 - Field and Lab Methods in Physical Geography
- GEOL 4220/6220 - Hydrogeology
- GEOL3020 - Surface Processes
- HIPR 4680S/6680S - Community Design Charrette Course
- JOUR 3710 - Advanced Photojournalism
- JURI 5280 Environmental Law
- JURI 5289, Environmental Practicum
- LAND 4360 -Applied Landscape Ecology
- WASR 1020 - Introduction to Water Resources

Semester In Review

Faculty Learning Community

Research

- Graduate Research- Center for Integrating Research, Teaching and Learning (CIRTL) Stipends, Research assistantships
- Center for Undergraduate Research Opportunities (CURO)

Service and Outreach

- Service-learning opportunities
- K-12 Education
- Community cleanups, invasive species pulls, etc.
- List of community service and internship opportunities

Dawg Day of Service

- Invasive species removal
- Trail maintenance to prevent erosion
- Trash removal

Community Service Partners

Events

Athens Water Festival

Saturday, September 10 10:30 AM

We invite you to join us for the 7th Athens Water Festival, a family-friendly event that puts the spotlight on our water resources. Scheduled for Saturday, September 10, 2016, from 10:30 - 2:30 at Sandy Creek Park, the focus this year is on drinking water, which coincides with the 80th anniversary of clean drinking water treatment and delivery from the JG Beacham Drinking Water Treatment Plant.

Read the full description for Athens Water Festival.

Every Drop Counts: Managing Georgia's Water Supply

Monday, September 12 9:00 AM

On Display September 12-December 16, 2016

Although historically blessed with an abundance of water, Georgia is quickly becoming familiar with water scarcity problems. Exploding growth and development in the north and increasing irrigation needs in the south are causing demand for water to increase.

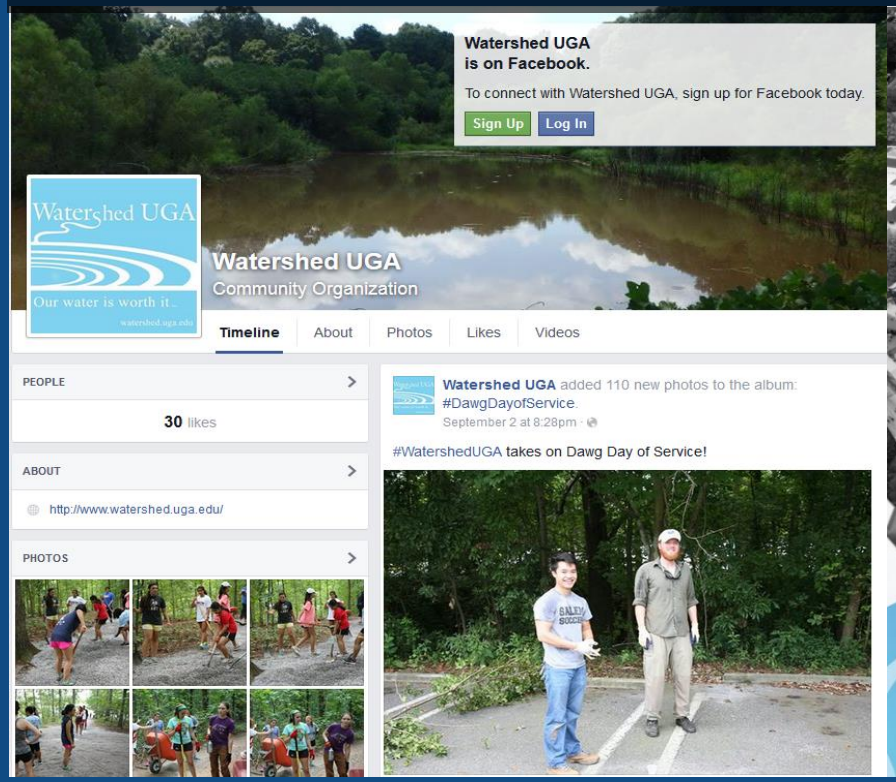
Read the full description for Every Drop Counts: Managing Georgia's Water Supply.

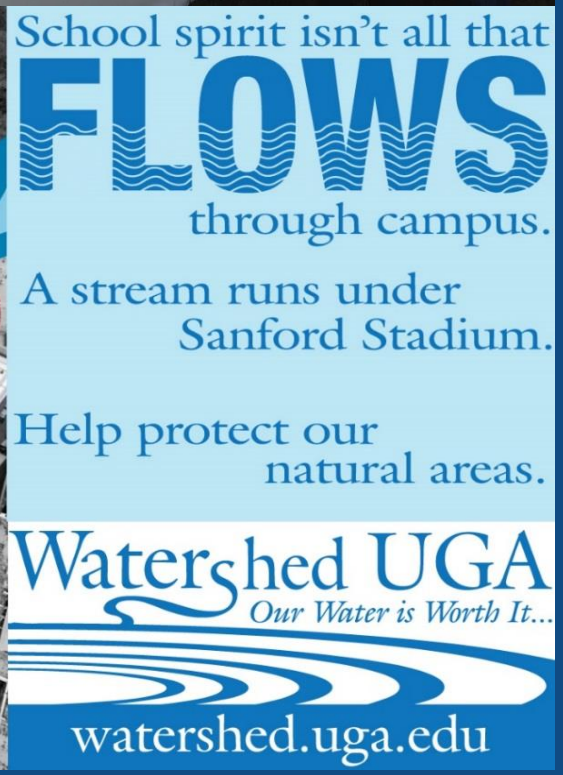
Re-dedication of the Stephen Elliot Draper Center & Archives for the Study of Water Law and Policy.

Saturday, September 17 1:00 PM

Communications and Outreach

- Websites, posters, jumbo-tron
- Social media – Facebook, Twitter, Instagram
- Promotional items





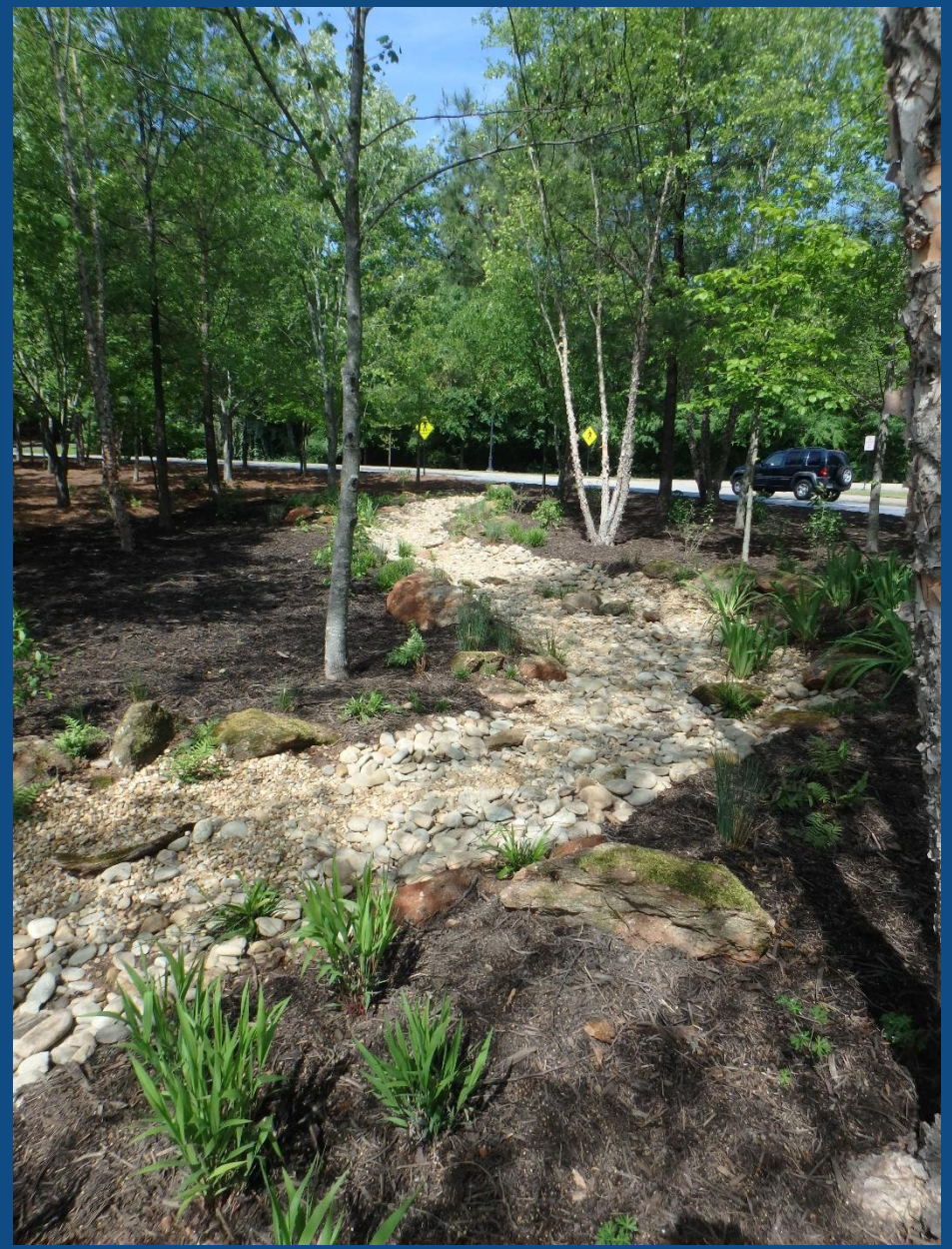
Community Survey Results Pre-Watershed UGA

248 surveys (on campus, downtown, Georgia Square Mall)

- 21% did not know that there were streams on campus
- 51.6% did not know the source of our drinking water
- 37.5% did not know the definition of a watershed

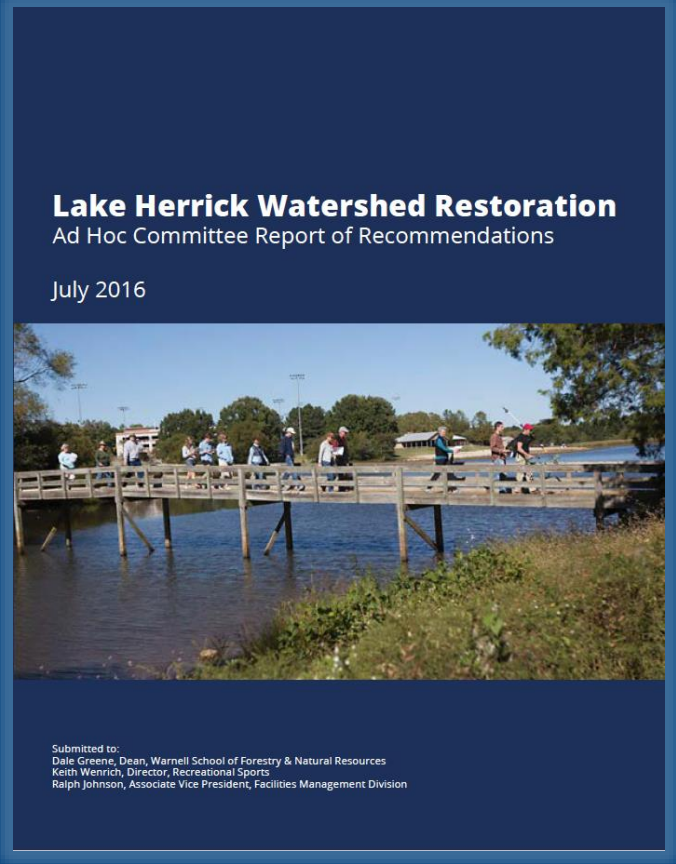
Campus Operations:

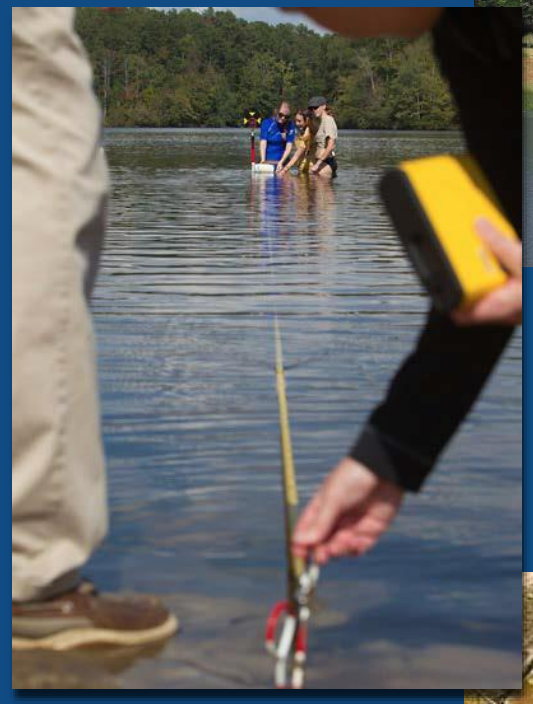
“Daylighting” Lilly Branch



Campus Operations:

Lake Herrick restoration





Current Focus…

- Institutionalizing Watershed UGA
- Expanding to a new watershed– Trail Creek
- Developing monitoring database
- “Daylighting” and incorporating art
- Restoration activities
- Sharing our story (AASHE, SEC Academic Conference, here)

QUESTIONS?

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www.watershed.uga.edu

Watershed UGA