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# FORESTS & WATER

## CONNECTION INITIATIVE

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FORUM SPONSOR



**Georgia-Pacific**

## COLLABORATORS



THANK YOU!



Atlanta Regional Commission

The Nature Conservancy



Georgia Association of Water Professionals



GEORGIA

DEPARTMENT OF NATURAL RESOURCES



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION



Columbus Water Works  
Serving our Community  
Protecting the Environment

COX ENTERPRISES



GEORGIA HEIRS PROPERTY LAW CENTER

City of Zebulon

SAVANNAH  
Public Works & Water Resources



THE JONES CENTER AT ICHAUWAY

Oconee River Land Trust



sgrc SOUTHERN GEORGIA REGIONAL COMMISSION

THE CONSERVATION FUND



CHATTAHOOCHEE RIVERKEEPER

GEORGIA CHAMBER

THE WATER TOWER  
GLOBAL INNOVATION HUB @ GWINNETT



USDA NRCS  
United States Department of Agriculture  
Natural Resources Conservation Service



Gwinnett  
vibrantly connected



FLINT RIVER  
SOIL AND WATER  
CONSERVATION DISTRICT



**FORESTS HAVE  
ALWAYS CLEANED  
OUR WATER.**

So, why does this project matter?

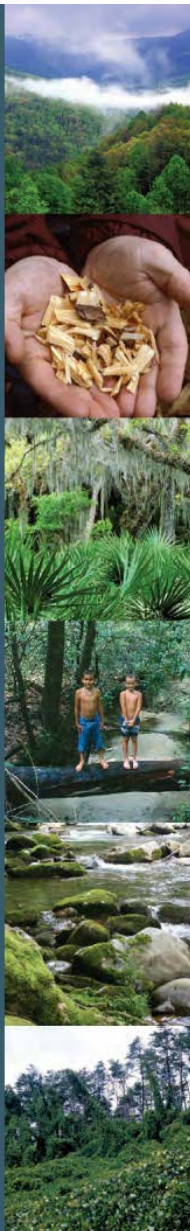


United States Department  
of Agriculture  
Forest Service  
Research & Development  
Southern Research Station  
General Technical Report  
SRS-178

## The Southern Forest Futures Project

TECHNICAL REPORT

David N. Wear  
and John G. Greis,  
Editors



“

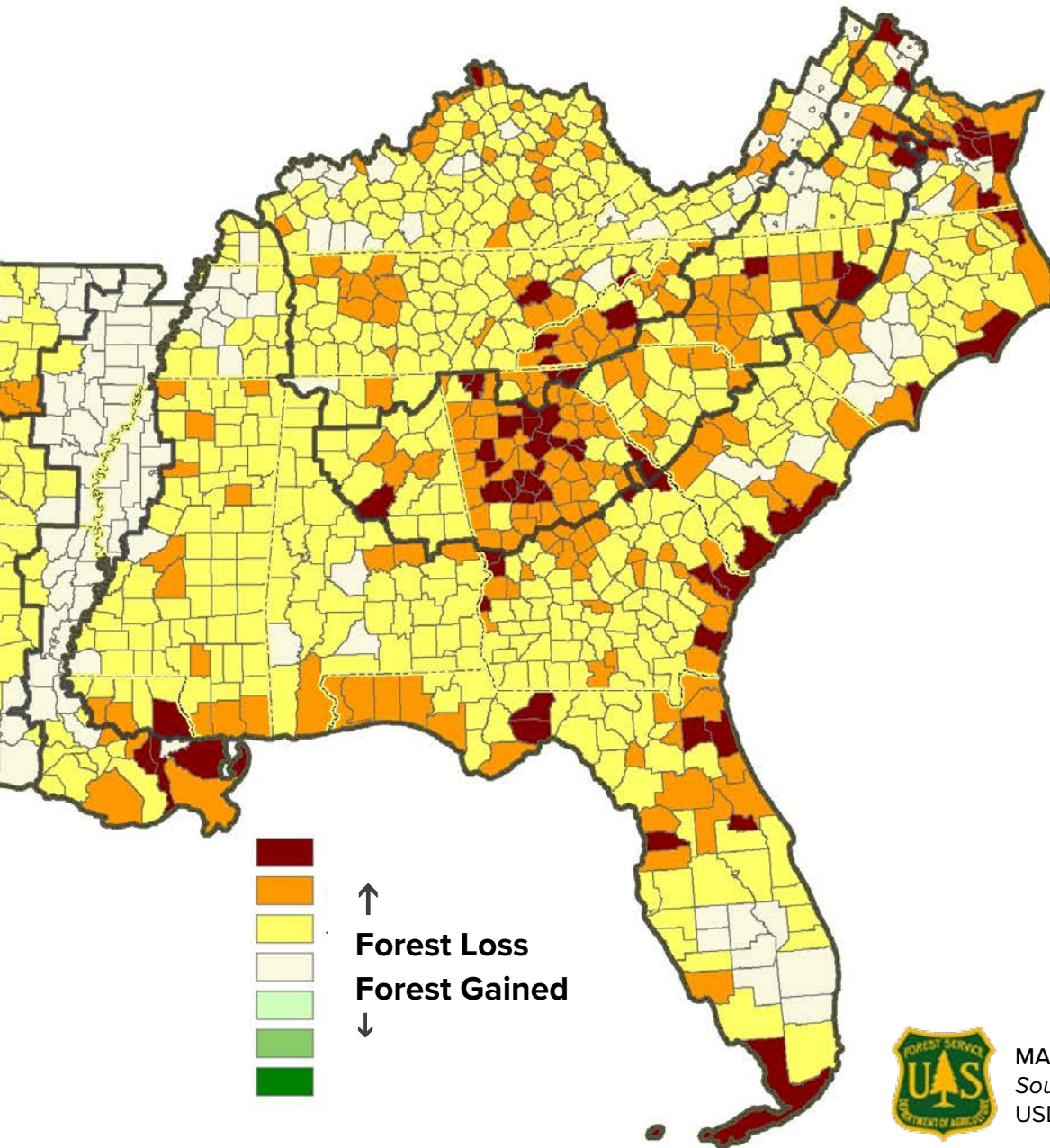
From 1997 to 2060, the South is forecasted to lose between **11 to 23 million acres of forests**, nearly all to urban uses.

# WHAT IS AT STAKE

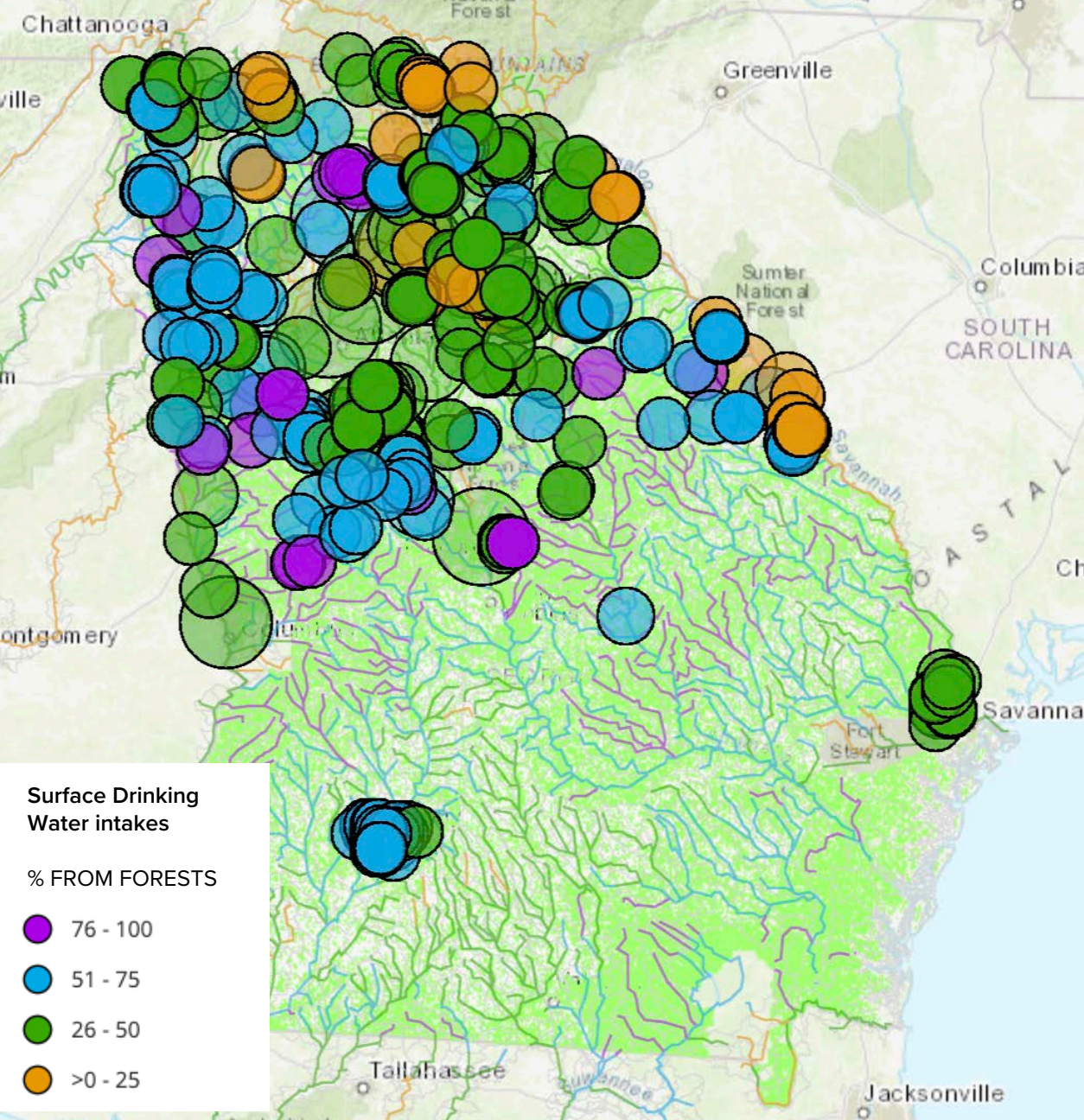
↑ Urban Sprawl + ↓ Timber Prices = ↑ Forest Loss

Loss of forests means a loss of critical ecosystem services:

- Water Quality and Quantity
- Air Quality and Carbon Sequestration
- Wildlife Habitat
- Recreation and Aesthetics
- Soil Formation and Stability
- Pollination
- Human Health and Well Being



MAP SOURCE  
*Southern Forest Futures Report,*  
USDA Forest Service, Southern Research Station



# WHAT IS AT STAKE

↑ Forest Loss = ↓ Water Quality

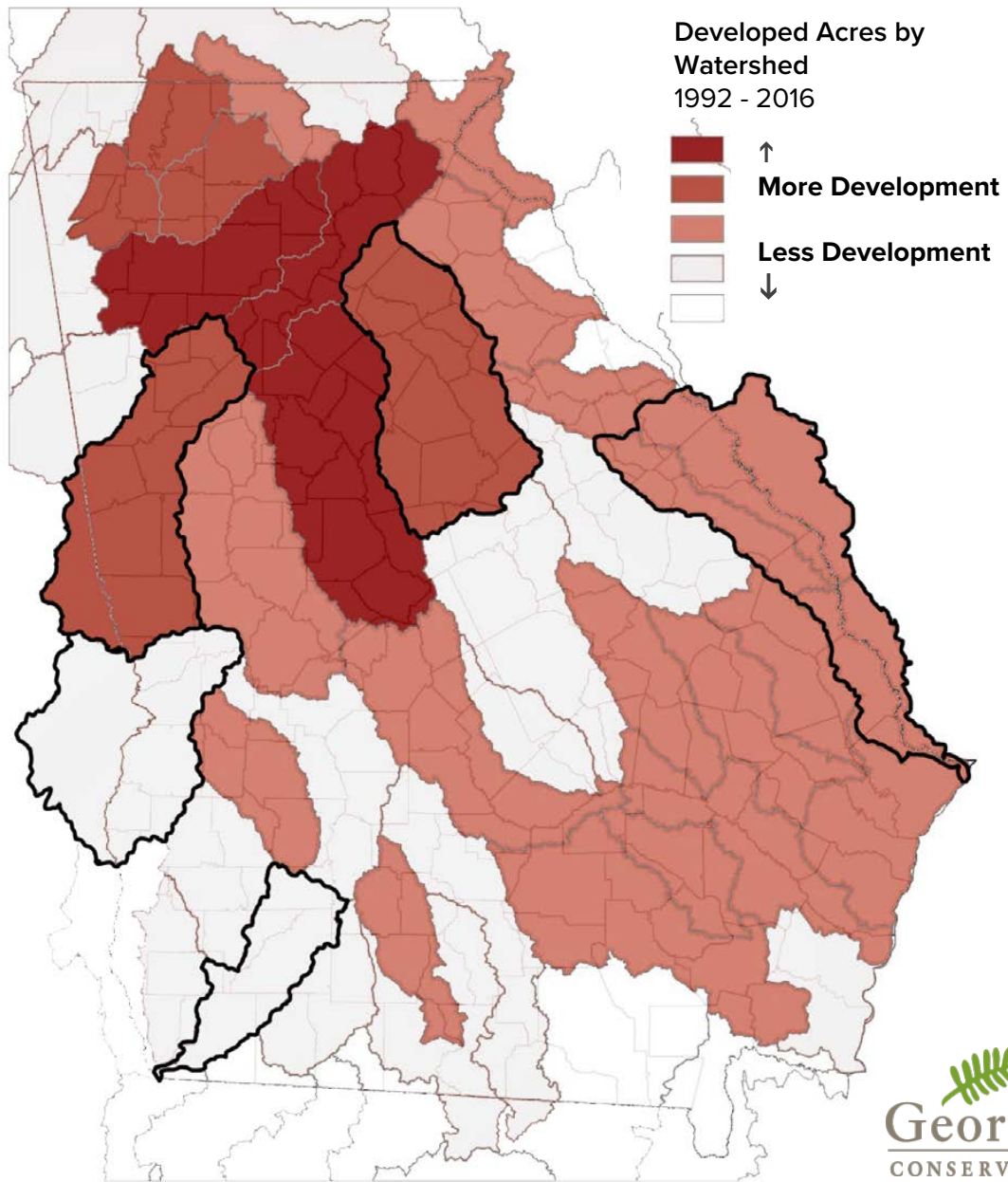
Privately-owned forests serve as the greatest at-scale solution for water quality and quantity in Georgia

- 404 surface drinking water intakes
- 5,910,180 people
- 146 communities



MAP SOURCE  
Benefits of State and Private Forests for the South  
USDA Forest Service, Southern Research Station





# WHAT IS AT STAKE

↓ Water Quality = ↑ Water Treatment Costs

**Loss of clean water services from forests can lead to a drinking water emergency**

- Loss of natural filtration of precipitation and storm runoff
- Increase in sediment and contaminants
- Loss of stream flow moderation and increase in flooding impacts
- Increased soil erosion



MAP SOURCE  
*Georgia: Now and Forever*  
Georgia Conservancy



67,900 miles of perennial  
and intermittent streams!

# 65% OF GEORGIA WATERSHEDS

FLOW THROUGH PRIVATELY-OWNED, WORKING FORESTS

SOURCE: GEORGIA FORESTRY COMMISSION

# 5.9 MILLION GEORGIANS

DEPEND ON WATER FROM FORESTED WATERSHEDS

*57% of the state's  
total population!*

SOURCE: USDA FOREST SERVICE, SOUTHERN RESEARCH STATION



That could offset the reforestation costs for 113,000,000 acres with genetically improved seedlings

**\$500,000 - \$6 BILLION  
IN SAVINGS**

OBSERVED ACROSS SEVEN U.S. CITIES BY MAINTAINING HIGH QUALITY SOURCE WATER AND AVOIDING WATER TREATMENT COSTS THROUGH NATURAL INFRASTRUCTURE INVESTMENTS

SOURCE: WORLD RESOURCES INSTITUTE

# **DIRECT INVESTMENTS IN FORESTS AS NATURAL INFRASTRUCTURE MAKES SENSE.**

**Keep Forests as Forests**  
**Maintain High Quality Source Water**  
**Reduce Water Treatment Costs**

# What is the role of a payment ecosystem services market?

Direct payments to landowners for the natural infrastructure they provide

## WATER PROVIDERS

Diversifying your toolbox for source water protection at-scale

Long-Term Conservation Easements

Direct Land Purchases

Ecosystem Services Market

## LANDOWNERS

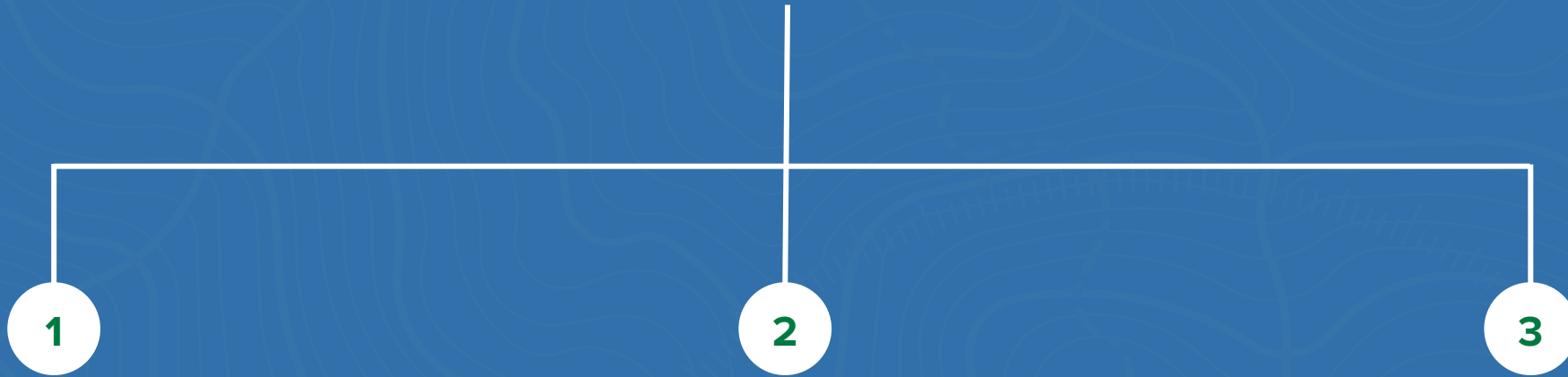
Increasing the value of your forestland investment

Timber Harvests  
Hunting Leases

Ecosystem Services Market

# INITIATIVE OBJECTIVE

Identifying ecosystem service market structures that work for Georgia forest owners and water users.



1

IDENTIFY PREFERRED  
CONSERVATION  
MECHANISMS

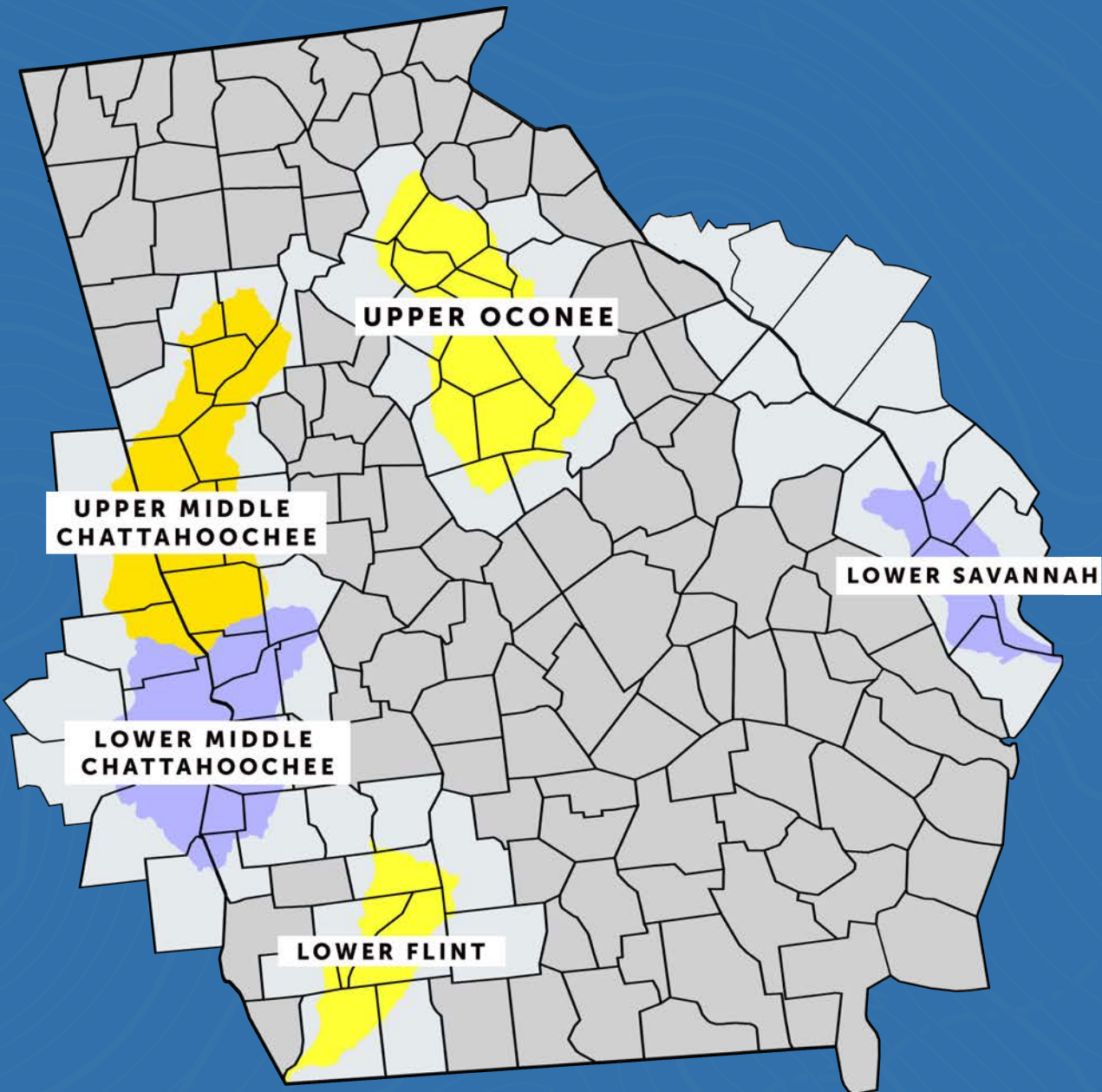
2

GATHER FEEDBACK  
FROM LANDOWNERS  
AND PROVIDERS

3

DEVELOP PROGRAM  
AND ENGAGEMENT  
RECOMMENDATIONS

## PRIORITY WATERSHEDS



- Threat to forest
- Threat to water
- Existing grassroots networks established
- Perceived greatest chance for success



# WHAT ARE ECOSYSTEM SERVICES WORTH?



**KEEPING  
FORESTS**



**NC STATE  
UNIVERSITY**

College of  
Natural Resources

**Department of Forestry & Environmental Resources**

## Quantifying forest benefits for water quantity and quality in the southern United States

- Phase I: Modeling to quantify forest water relationships
- Phase II: Estimate economic value
- Phase III: Share results

## INITIATIVE OBJECTIVES

Identifying **ecosystem service market structures** that work for Georgia forest owners and water users



# Ecosystem Services

Commonly defined as:

**benefits people obtain from ecosystems**

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# Ecosystem Services Markets

## Sellers

- Landowners that provide ecosystem services by sustainably managing their forests, wetlands, grasslands
- Motivations - quality of life, asset potential, risk mitigation, regulation avoidance

## Buyers

- Entities (utilities, water treatment facilities, developers, corporations) who have a vested interest in the maintenance of those services
- Motivations - sustainable supply, cost and conversion avoidances

# Payments for Ecosystem Services

a term broadly defining:

*a variety of methods of financially compensating landowners for the tremendous environmental values that their working forests provide to society*

# Ecosystem Services Markets

**Buyers** - purchase credits or offsets



**Sellers** - invest money in protection of ecosystems & services



**Result** - watersheds protected, land conversion avoided



**Goal** - treatment costs lowered, corporate sustainability goals met

# Ecosystem Services Markets:

A different way to think about how to finance conservation

## Traditional conservation programs

- For example; Conservation Reserve Program, Environmental Quality Incentives Program
- Pay for **practices** on land prioritized by program administrators
- Early ESM model: **riparian buffers** to protect ecosystem service - **clean water**

## Ecosystem Services Markets

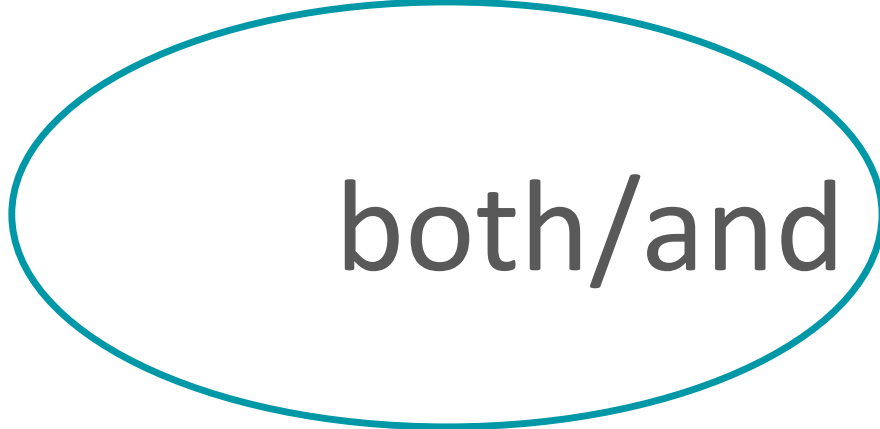
- Pay for **services** or **protection of the services** those lands provide
- Monetizes services protected by conservation practices
- Shift in mindset allows **investors to target tangible services**; potentially including greater private investment



# Ecosystem Services Markets:

A different way to think about how to finance conservation

  
either/or

  
both/and

# Conservation Easements

**Why can't we just put more land in easements to protect these services?**

- easements are an extremely effective tool in our conservation finance toolbox
- easements do not work for all landowners; there are limits to how much land can be successfully put into easements
- many landowners are looking for programs with greater flexibility to maintain working lands and forests

# Ecosystem service: acres of well-managed forest land



# JOIN OUR EFFORTS

1

## **Give us your feedback!**

Attend an upcoming watershed forum on Feb. 3 or 4

2

## **Sign Up & Stay Engaged!**

We will be sharing the results of the forum and next steps

3

## **Become a Collaborator!**

Join our growing list of collaborators, add your logo to our site at [www.forestsandwater.org](http://www.forestsandwater.org), and help us spread the word

# CONTACT US

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