

Watershed Groups for Better Watershed Leadership: Mississippi Case Studies

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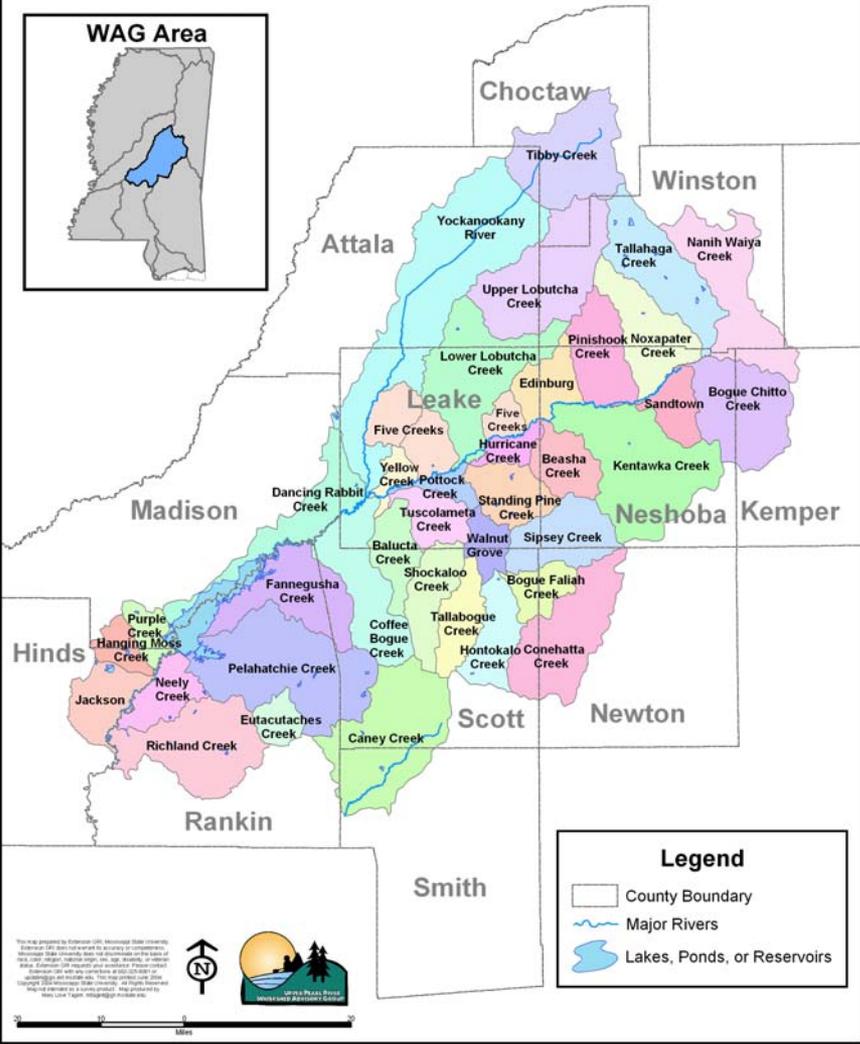


Three Examples:

1. **Upper Pearl River Watershed Advisory Group (MS)**
2. **Luxapallila Creek Watershed Alliance (MS)**
3. **Linking Coastal Watersheds: A Pilot Project on Collaboration Linking Inland and Coastal Water Resources Management Systems in the Tennessee-Tombigbee and Mobile Bay Basin (MS and AL)**

Upper Pearl River - WAG:

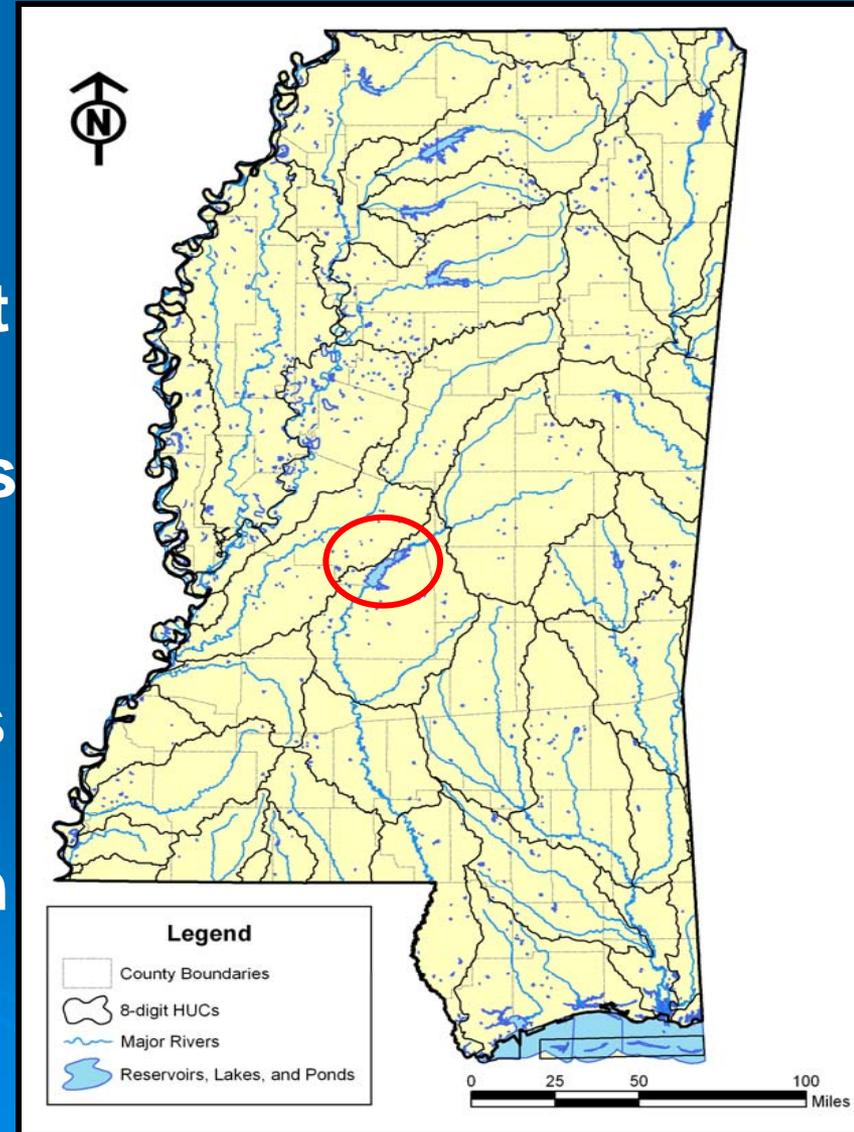
UPR-WAG Subwatersheds



- www.upperpearl.org
- About 20 participating governments, agencies, and organizations
- Established in March 2004 with an MOU
- Funded by EPA and MS Dept. Environmental Quality

Upper Pearl River - WAG:

- The Pearl River Valley Water Supply District (PRVWSD) is the state agency managing the 33,000-acre Ross Barnett Reservoir.
- Ross Barnett is Mississippi's largest surface water impoundment, providing drinking water for the state's capital city, Jackson.
- PRVWSD was lead partner in developing the UPR-WAG.



Upper Pearl River - WAG:

Upper Pearl River Watershed Advisory Group

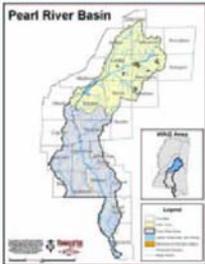


Mission

To protect, sustain, restore, and enhance the natural resources in the Upper Pearl River Watershed.

Where is the Upper Pearl River Watershed?

The Upper Pearl River Watershed is located in east-central Mississippi. The Pearl River is formed in Neshoba County by the confluence of Bogue Chitto, Nanih Waiya and Tallahaga Creeks. The Upper Pearl River is approximately 150 miles long, drains an area of 4,060 square miles, and comprises all or part of 12 counties.



Why Should I Get Involved?

Each of us can simultaneously improve the waters we rely on every day and improve our quality of life.

- **HEALTH AND SAFETY** - Drinking water advisories are a result of bacterial contamination from failing septic systems and animal waste.
- **COST** - Tons of sediment continue to flow into the Ross Barnett Reservoir each year. Removing this sediment costs hundreds of thousands of dollars annually.



How are Lands Used in the Watershed?

The Upper Pearl River Watershed is dominated by natural forest (43%). Agricultural land comprises the next largest portion (27%) and includes croplands and pastures. Disturbed areas, such as strip mines, gravel pits, sandy, barren, and transitional areas, make up 18 percent of the watershed. These patterns are changing quickly in parts of the watershed. Much of the traditional cropland has been forested under the Conservation Reserve Program. The effects of increased urbanization are becoming more evident throughout the watershed. This change is especially evident around the Jackson Metropolitan area. Despite their increasing impact on the watershed, urban areas make up only one percent of the Pearl Watershed's total land cover.



Why is the Upper Pearl Watershed Special?

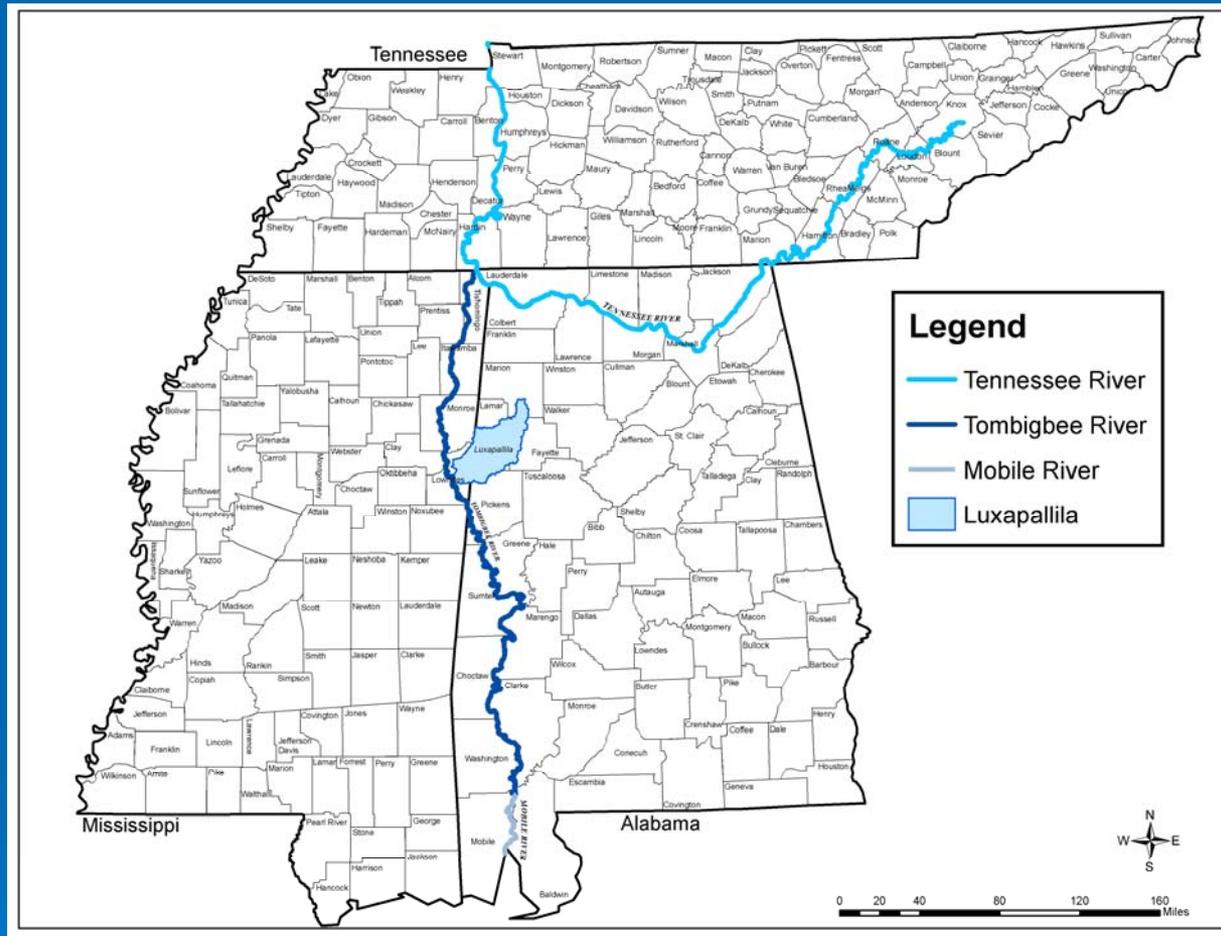
The Upper Pearl Watershed is special because it drains into the state's largest surface water drinking source, the Ross Barnett Reservoir. Many people live in the watershed on tribal lands, in cities, suburbs or in rural areas outside cities. The watershed and the 33,000-acre reservoir provide a special quality of life and numerous recreational opportunities for boating, fishing, swimming, and more.

Where do People Live in the Watershed?

The greatest concentration of people is found in Hinds, Madison, and Rankin counties. For example, from 1990-2002, Madison County experienced a 45 percent population increase, while Rankin County had a 40 percent increase in population. This highlights a growing population in the Jackson metro area (U.S. Census Bureau).

- UPR-WAG was organized to better integrate SDA and CWA programs in the Upper Pearl Basin and avoid duplication of data collection efforts
- Fact sheet and logo (left) was created and used to recruit additional stakeholders and publicize group's mission and efforts

Luxapallila Creek Watershed Alliance



UPR-WAG was such a success that a similar effort was begun in the Luxapallila Creek Watershed

Luxapallila Creek Watershed Alliance

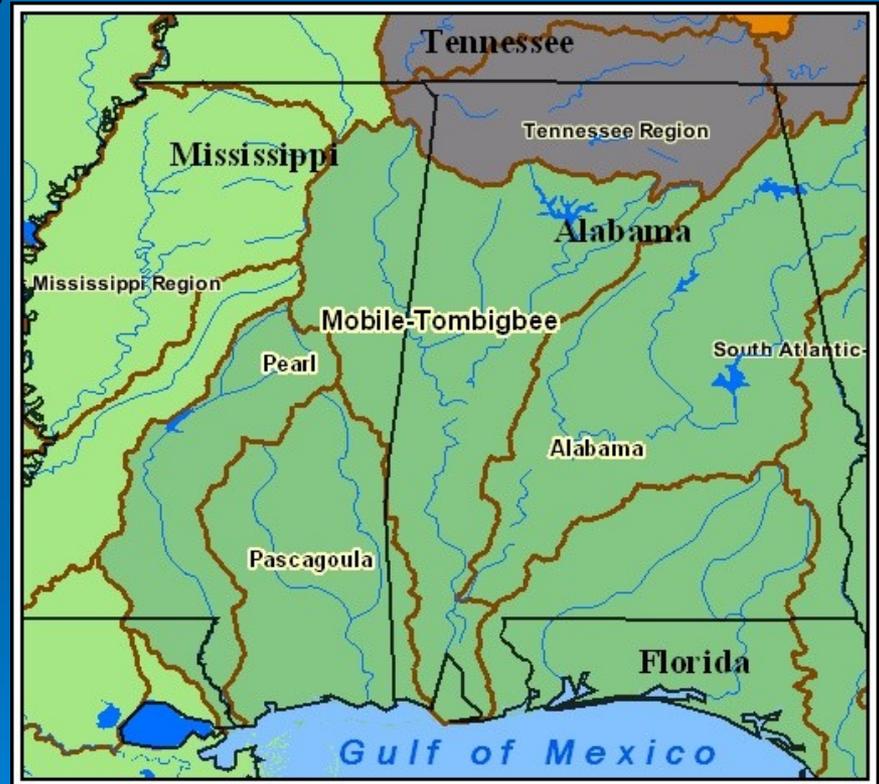
- Also funded by EPA and MS DEQ (2004-2007)
- Geospatial data was used as the basis to increase collaboration among stakeholders
- Two image collection flights were made, covering majority of the watershed, and imagery was distributed to stakeholders
- Fewer partners with smaller geographic area

Partner Logos



Linking Watersheds

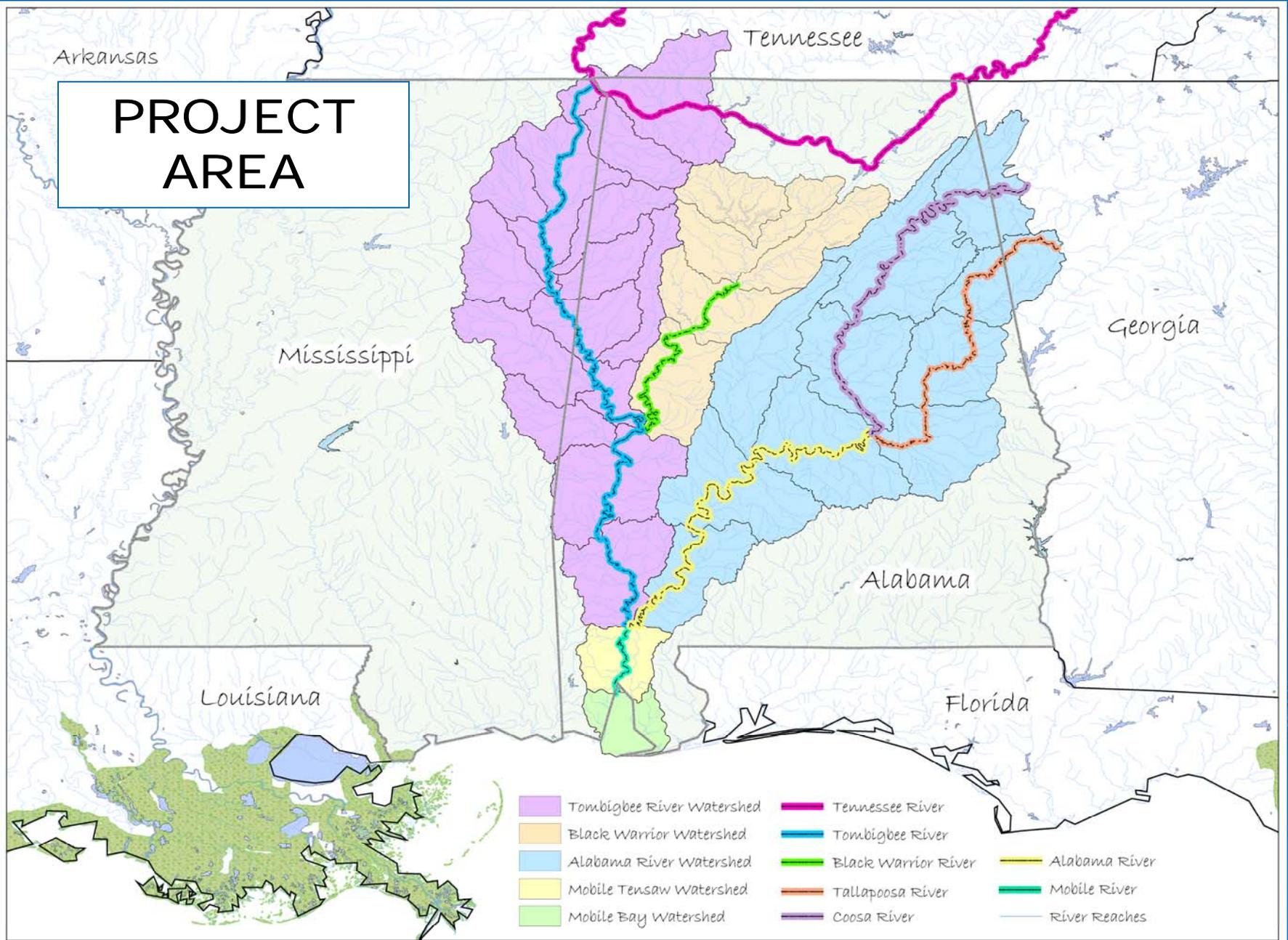
Funded by NOAA's Coastal Services Center to facilitate more effective engagement between key inland and coastal management institutions in the Tennessee-Tombigbee-Mobile Bay Basin to identify and integrate priority geospatial information.



Linking Watersheds: Objectives

- 1. Create a basis for sustained collaboration on data and decision making for the Tennessee-Tombigbee-Mobile basin:**
 - Mutually benefit upstream and coastal communities
 - Highlight Mobile Bay's estuarine research and protection needs
 - Recognize the Tenn-Tom Waterway's purpose and role in regional economic development
- 2. Record and assess the results of this effort for transfer to other inland-coastal basins in the northern Gulf coast and the Southeastern Atlantic regions.**

PROJECT AREA



Linking Watersheds: Partners



NOAA Coastal Services Center
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

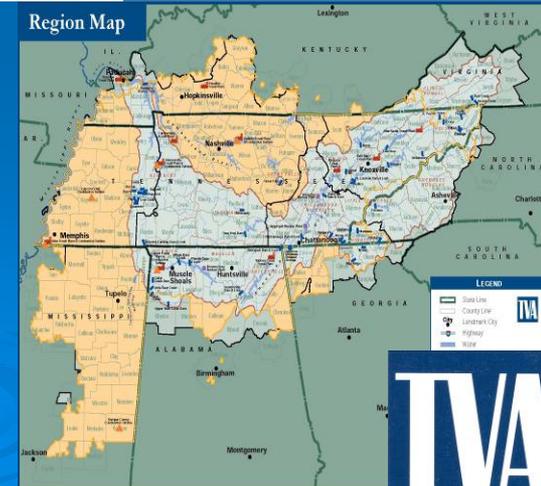


US Army Corps of Engineers
MOBILE DISTRICT

Tombigbee River Valley
water management district



Coming Together
Around Innovative
Ideas



Linking Watersheds: Approach

- ❑ Recruit partners and participants
- ❑ Workshops and dialogue
- ❑ Identify decision support needs plus tools and available data (GIS) to create common understanding and sharing.



Linking Watersheds: Workplan

- 1. Initiate collaborative arrangements (individual meetings, host 2 workshops).**
- 2. Establish a prototype database and website.**
- 3. Expand and strengthen the collaborative coalition.**
 - Feedback from stakeholders on prototype database and website.**
 - Participation in additional workshops.**

Web Page

Mobile, Alabama, and Tenn-Tom - Microsoft Internet Explorer

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<http://www.wrri.msstate.edu/linking/>

Linking Coastal Watersheds

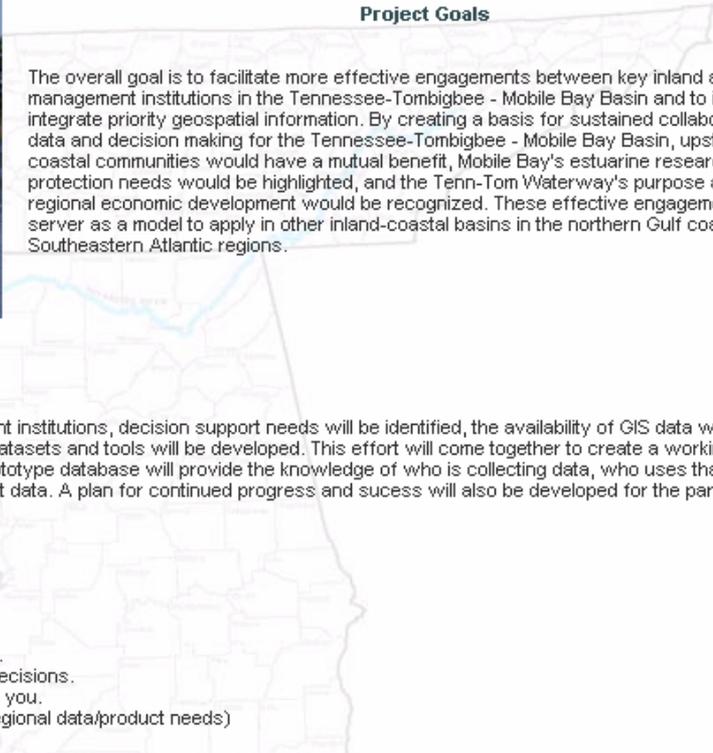
[Workshops](#) | [Partners](#) | [Tools](#) | [Maps](#) | [Data Resources](#)

A Pilot Project to Link Inland and Coastal Management in the Tenn-Tom to Mobile Bay Basin



Project Goals

The overall goal is to facilitate more effective engagements between key inland and coastal management institutions in the Tennessee-Tombigbee - Mobile Bay Basin and to identify and integrate priority geospatial information. By creating a basis for sustained collaboration on data and decision making for the Tennessee-Tombigbee - Mobile Bay Basin, upstream and coastal communities would have a mutual benefit, Mobile Bay's estuarine research and protection needs would be highlighted, and the Tenn-Tom Waterway's purpose and role in regional economic development would be recognized. These effective engagements would serve as a model to apply in other inland-coastal basins in the northern Gulf coast and the Southeastern Atlantic regions.



Outcomes

Through workshops and collaborations among the different institutions, decision support needs will be identified, the availability of GIS data will be discovered, and a common understanding and sharing of datasets and tools will be developed. This effort will come together to create a working upstream-downstream coalition among institutions. A prototype database will provide the knowledge of who is collecting data, who uses that data to make decisions, and what kind priorities are placed on that data. A plan for continued progress and success will also be developed for the participating institutions.

Benefits for the Participants

- Improved knowledge of data available for sharing.
- Knowledge of how your data are used to guide decisions.
- Opportunity to affect design of products useful to you.
- Economies of scale (a "partnership" to promote regional data/product needs)

search go

[Workshops](#)

[Partners](#)

[Tools](#)

[Maps](#)

[Announcements](#)
[Questionnaire](#)
We have created a short on-line questionnaire to help project participants by promoting collaboration.
[Submit the questionnaire here.](#)

Web Page Structure

Main Page

Workshops

Partners

Tools

Maps

Data Resources



Web Page Structure

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Address <http://www.wrri.msstate.edu/linking/tools.html>

Linking Coastal Watersheds

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Tools and Resources

NSDI Node

The Geological Survey of Alabama (GSA) with support from the Federal Geographic Data Committee (FGDC) has developed and maintains a National Spatial Data Infrastructure (NSDI) Site Node of the National Geospatial Data Clearinghouse that houses metadata and geospatial data sets archived by the GSA and State Oil and Gas Board.
Visit <http://www.gsa.state.al.us/gsa/GIS/clearinghouse.html>

Environmental Quality

- [NOAA Coastal Services Center products](#) are available in categories of Training, Data, Tools, and Publications can be found on the CSC web site.
- [BASINS, Better Assessment Science Integrating Point and Non-Point Sources](#) is a multi-purpose environmental analysis system that integrates a geographical information system (GIS), national watershed data, and state-of-the-art environmental assessment and modeling tools into one convenient package.
- MS Watershed Selection Tool is a simple tool to identify watersheds of interest and prioritize them for restoration and protection.
- [LATIS](#) - a method for evaluating smart growth alternatives and their water quality effects in site development.
- The [Impervious Surface Analysis Tool \(ISAT\)](#) is used to calculate the percentage of impervious surface area of user-selected geographic areas (e.g., watersheds, municipalities, subdivisions).
- [Spatial Wetland Assessment for Management and Planning \(SWAMP\)](#) uses a conceptual GIS-based model to help managers prioritize wetland habitats within a watershed. The model consists of two modules, tidal and riverine, that examine a wetland's contribution to water quality, hydrology and habitat.
- USDA's [National Sedimentation Laboratory Models](#) offer land erosion and stream stability calculation procedures, including AGNPS, CONCEPTS, and Bank Stability/Toe Erosion.
- [WARSSS](#) is an EPA technical procedure developed for water quality scientists to use in evaluating streams and rivers impaired by excess sediment.

Data and Data Tools

- [NOAA Coastal Services Center products](#) are available in categories of Training, Data, Tools, and Publications can be found on the CSC web site.
- [Interactive Sand Resources Map](#) identifies shoreline profile locations and vibracore and foundation borings to determine sand resources off the coast of Alabama.

Web Page Structure

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Address <http://www.wrri.msstate.edu/linking/pdf/SAGDUG.htm> Go Links >>

The South Alabama Geospatial Data User Group (SAGDUG) was formed in 2001 by the US Army Corps of Engineers' Spatial Data Branch to compile GIS data on south Alabama water sources. Below is a compilation of the results from the SAGDUG survey.

Credit: Lynn Hardegree

Date Compiled: March 2006
Numbers in parenthesis indicate multiple datasets

Organization	Dataset Name	Data Format			Data Type								Contact Information		
		GIS	MAPS	PHOTO	Water	Sed	Flood	Lnđ	Geo	Infra	Topo	Other			
Alabama Emergency Management Agency	gisdata	X			X		X			X			X	Name Address City, State, Zip Phone Email	Jerry McRay 5898 County Road Clanton, AL 35046 205-280-2237 jerrym@aema.state
Bishop State Community College	Protected Areas	X		X	X								X	Name Address City, State, Zip Phone Email	Will Ehler 925 Dauphin Island Mobile, AL 38605 334-476-7312 wehlert@bscc.cc.a
Bishop State Community College	Dog River Watershed Photo			X									X	Name Address City, State, Zip Phone Email	Will Ehler 925 Dauphin Island Mobile, AL 38605 334-476-7312 wehlert@bscc.cc.a
Dauphin Island Sea Lab	Auburn GIS Data	X			X			X	X	X	X			Name Address City, State, Zip Phone Email	Dana Word 101 Bienville Blvd Dauphin Island, AL 334-861-6122 danaword@hotmail
Dauphin Island Sea Lab	Coastal Hazards Assessment, AL	Name Address	Dana Word 101 Bienville Blvd

Linking Watersheds: Conclusions

- Stakeholders requested a regional spatial data clearinghouse.
- Stakeholders are interested in more exposure to GIS data, tools, and resources.
- Stakeholders need easier access to GIS data and need to know where to look for certain types of data.

Summary

- **Relationships with local stakeholders is critical to effort.**
- **Considerable time is required to develop these relationships.**
- **Land grant university can be integral to bridge gaps between local entities and environmental primacy agencies.**
- **Success builds success.**
- **Each watershed is unique, although approach for building watershed groups is similar.**

Questions

THANK YOU!

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