

# **Accessing NWI Data Via the Web**

## **The Wetlands Mapper**

<http://www.fws.gov/wetlands/>

<http://www.fws.gov/wetlands/Data/Mapper.html>

# NWI Home Page



## National Wetlands Inventory

Branch of Resource and Mapping Support

### Geospatial Wetlands Data

- Fact Sheets
- Wetlands Mapper
- Download Digital Data
- Web Map Services (WMS)
- View Wetlands w/Google Earth
- Product Summary and Metadata
- Wetland Codes
- Hard-copy maps
- Data Standards



[Learn More ...](#)

[NSDI Wetlands Layer](#)

[Status and Trends](#)

[Other Wetland Topics](#)

[Contacts & Other Info.](#)

The U.S. Fish and Wildlife Service (Service) is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. The agency has developed a series of topical maps to show wetlands and deepwater habitats. This geospatial information is used by Federal, State, and local agencies, academic institutions, and private industry for management, research, policy development, education and planning activities. Digital data can be viewed and downloaded through several methods.

Wetlands provide a multitude of ecological, economic and social benefits. They provide habitat for fish, wildlife and a variety of plants. Wetlands are nurseries for many saltwater and freshwater fishes and shellfish of commercial and recreational importance. Wetlands are also important landscape features because they hold and slowly release flood water and snow melt, recharge groundwater, act as filters to cleanse water of impurities, recycle nutrients, and provide recreation and wildlife viewing opportunities for millions of people.

A Congressional mandate also requires the Service to produce wetlands status and trends reports for the nation and to report to the Congress at periodic intervals. [Learn more ...](#)

[Regional Wetlands Coordinators](#) are located in each of the Service's regions.

[New Wetland Documents](#)

### Shortcuts



[Wetlands Mapper](#)



[Download Digital Data](#)



[View Wetlands w/Google Earth](#)



[Website & Document Search Engine](#)



[Frequently Asked Questions](#)



[Contact Us](#)

# Mapper Page – Click to Open



## National Wetlands Inventory Branch of Resource and Mapping Support

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### Wetlands Mapper

The Wetlands Mapper integrates digital map data with other resource information to produce timely and relevant management and decision support tools. We recommend looking at the following prior to launching a map:

#### Step 1:

Please read the Disclaimer, Data Limitations and Uses, and the Wetlands Geodatabase User Caution.

#### Step 2:

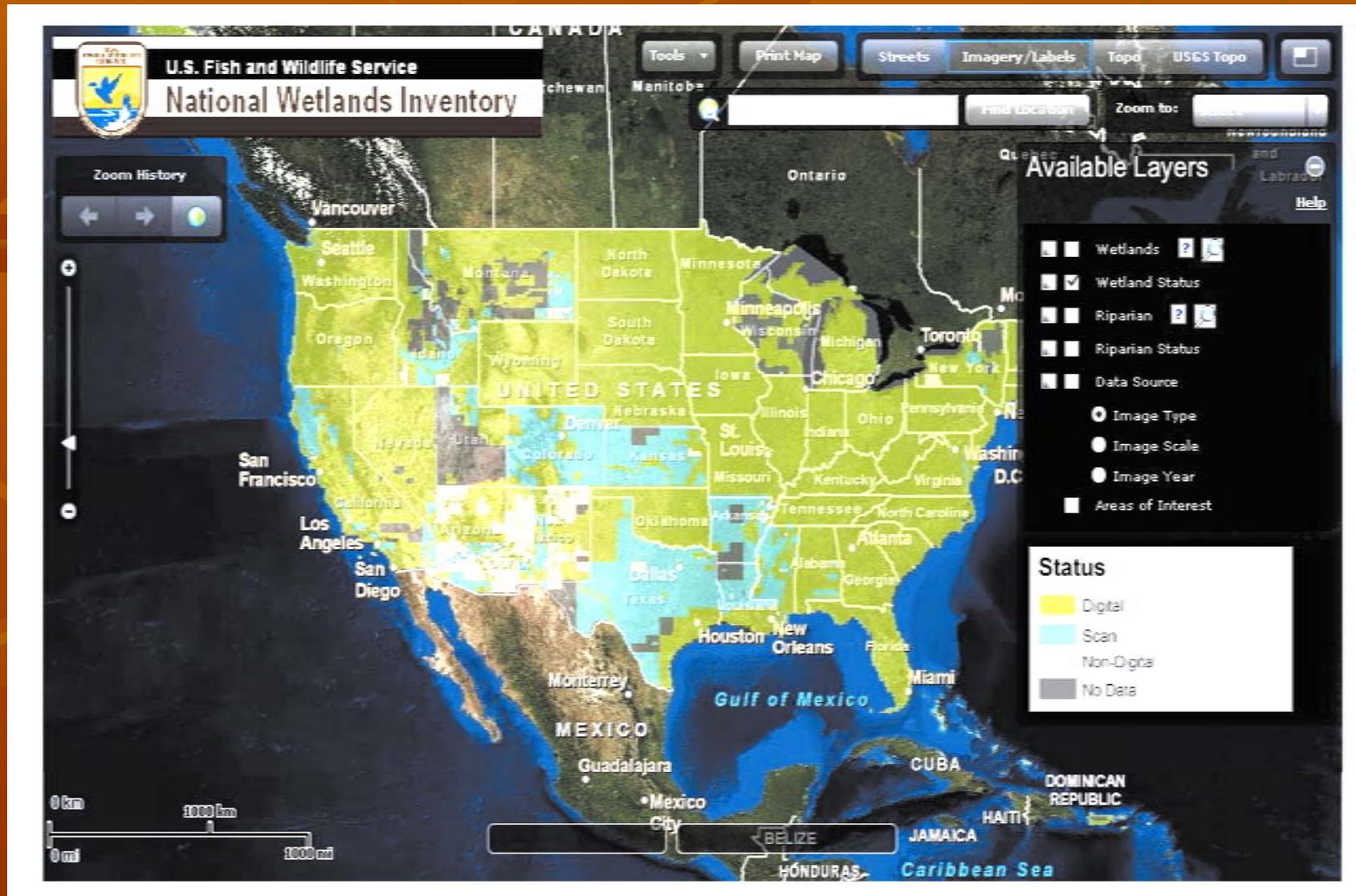
Refer to the following links for documentation and answers to frequently asked questions:

- [Wetlands Mapper Documentation and Instructions Manual \(860KB PDF\)](#)
- [Frequently Asked Questions: Wetlands Mapper \(PDF\)](#)
- [Frequently Asked Questions web page](#)

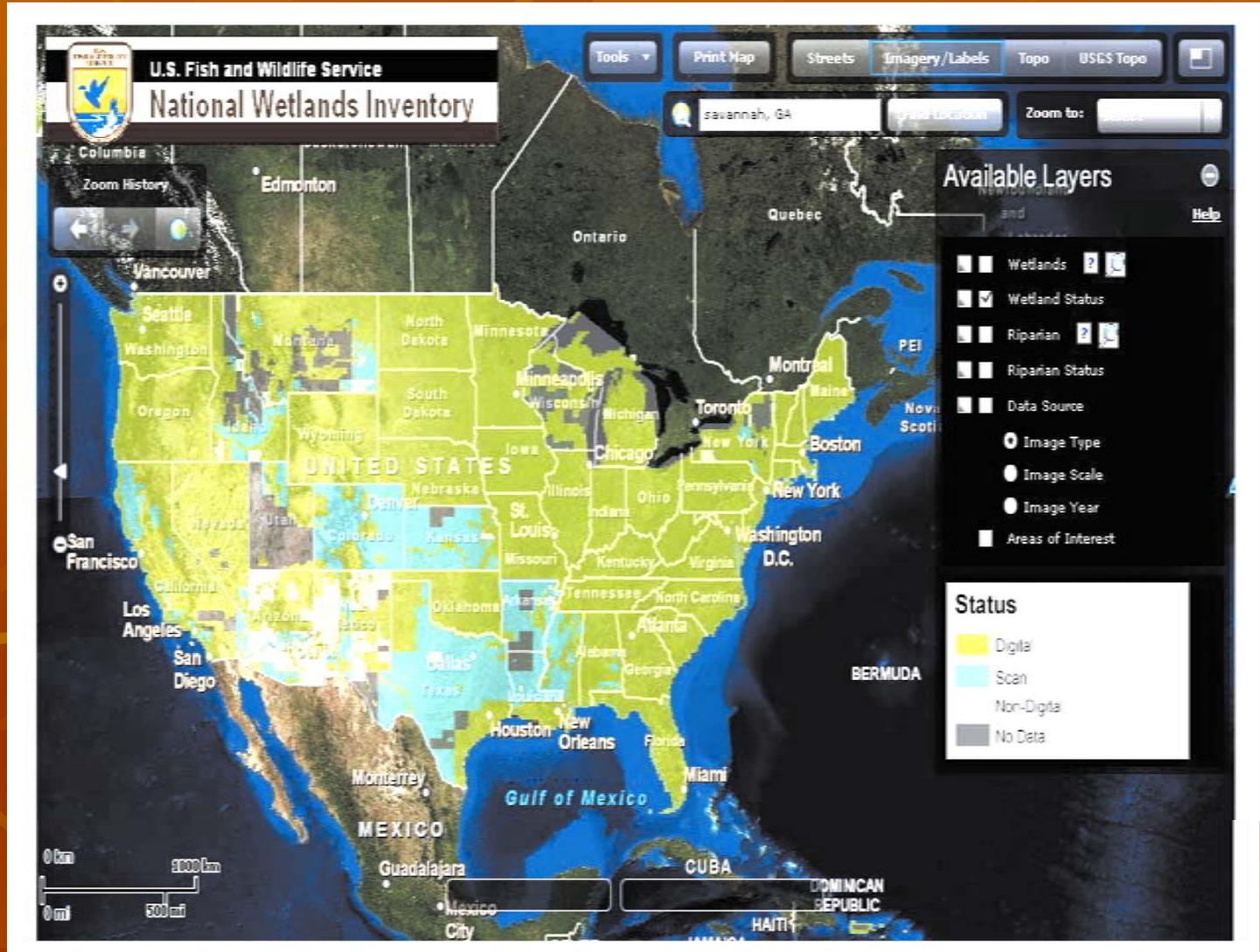
[Click here to open the  
Wetlands Mapper](#)



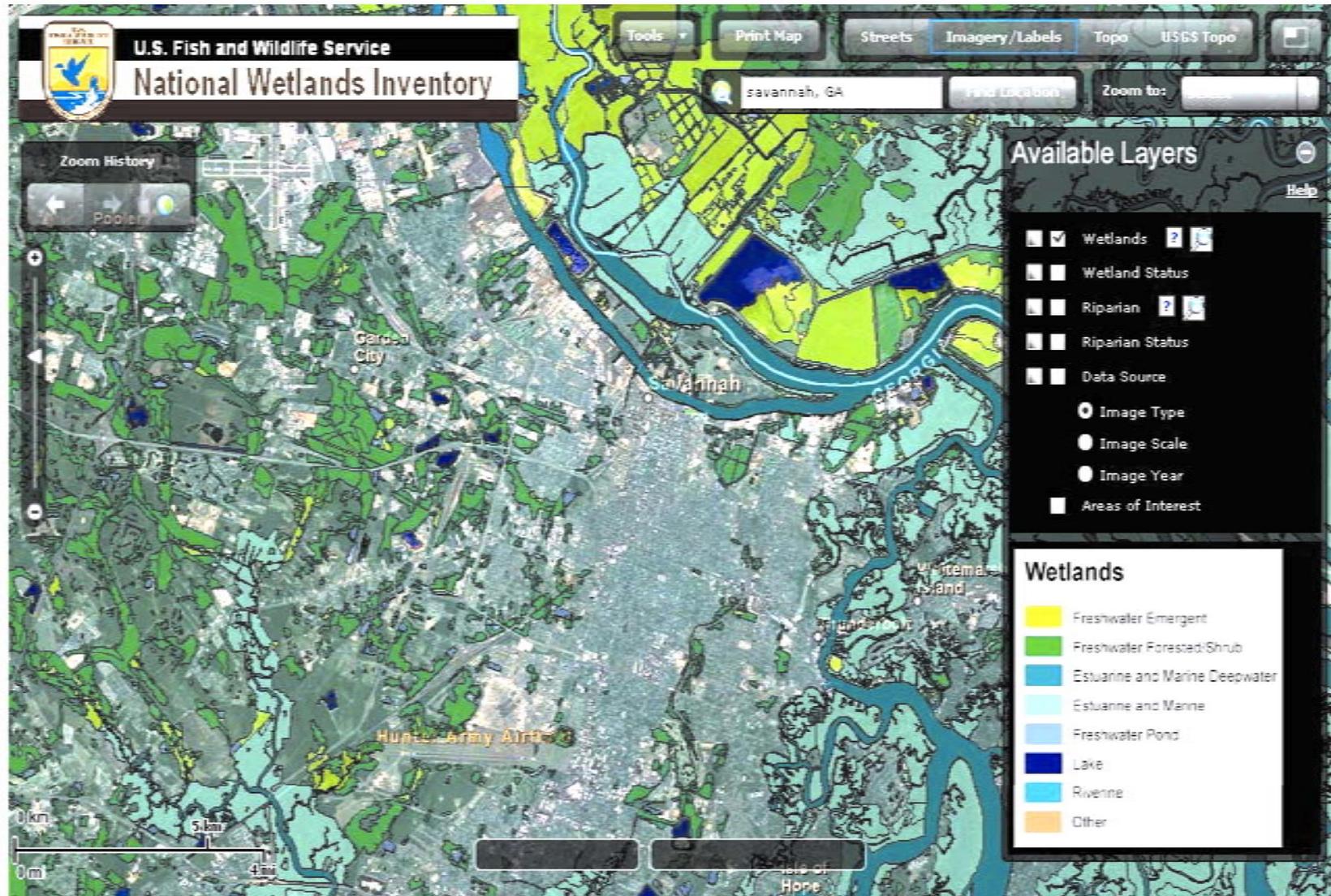
# Wetland Status – Type of Data Available



Type in  
Location  
of  
Interest



# NWI Data on Aerial Image



# Click on Polygon for Specific Info

**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

Tools | Print Map | Streets | Imagery/Labels | Topo | USGS Topo

savannah, GA | Find Location | Zoom to:

Zoom History | Poolery

**Wetland**

Zoom To Feature | Opacity: [ ]

Classification Code: PFO1/SS1B ( [decode](#) )  
Wetland Type: Freshwater Forested/Shrub Wetland  
Acres: 411.64  
Status: Digital  
Image Date(s): xx/04, xx/06, xx/07  
Image Type: CIR, TC, BW  
Image Scale: 1  
24k Quad Name: Garden City  
100k Quad Name: Garden City  
Project Metadata: [click here](#)  
Historic Map Info: [click here](#)  
[click here](#)  
[click here](#)  
[click here](#)  
[click here](#)  
FGDC Metadata: [click here](#)

**Available Layers**

- Wetlands
- Wetland Status
- Riparian
- Riparian Status
- Data Source
- Image Type
- Image Scale
- Image Year
- Areas of Interest

**Wetlands**

- Freshwater Emergent
- Freshwater Forested Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

# Decoder



U.S. Fish & Wildlife Service

**National Wetlands Inventory**

Branch of Resource and Mapping Support

Enter Classification code:  (Example: **L1UB1Hx**)

For geographically specific information\* (optional), please enter a State code:  (Example: **TX** for Texas)



*Last updated March 11, 2010.*

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*\* Information on likely [plants](#) colonizing this wetland type and the likely [soil](#) types present. Please note that the reported soil and plant lists are not exhaustive.*



U.S. Fish & Wildlife Service

## National Wetlands Inventory

Branch of Resource and Mapping Support

Enter Classification code:  (Example: **L1UB1Hx**)

For geographically specific information\* (optional), please enter a State code:  (Example: **TX** for Texas)



Description for code **PFO1B** :

**P** System **PALUSTRINE**: The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, emergents, mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 ppt. Wetlands lacking such vegetation are also included if they exhibit all of the following characteristics: 1. are less than 8 hectares ( 20 acres ); 2. do not have an active wave-formed or bedrock shoreline feature; 3. have at low water a depth less than 2 meters (6.6 feet) in the deepest part of the basin; 4. have a salinity due to ocean-derived salts of less than 0.5 ppt.

Subsystem :

**FO** Class **FORESTED**: Characterized by woody vegetation that is 6 m tall or taller.

**1** Subclass **Broad-Leaved Deciduous**: Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season; e.g., black ash (*Fraxinus nigra*).

Modifier(s):

**B** WATER REGIME **Saturated**: The substrate is saturated to surface for extended periods during the growing season, but surface water is seldom present.

# Click on Project Metadata

**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

Tools | Print Map | Streets | Imagery/Labels | Topo | USGS Topo

seavannah, GA | Find Location | Zoom to: [ ]

Zoom History | Pooler

**Wetland**

Zoom To Feature | Opacity: [ ]

Classification Code: PFO1/SS1B ( [decode](#) )  
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Status: Digital  
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Image Type: CIR, TC, BW  
Image Scale: 1  
24k Quad Name: Garden City  
100k Quad Name: Garden City  
Project Metadata: [click here](#)  
Historic Map Info: [click here](#)  
[click here](#)  
[click here](#)  
[click here](#)  
FGDC Metadata: [click here](#)

**Available Layers**

- Wetlands ?
- Wetland Status
- Riparian ?
- Riparian Status
- Data Source
- Image Type
- Image Scale
- Image Year
- Areas of Interest

**Wetlands**

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- Freshwater Forested Shrub
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- Estuarine and Marine
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- Lake
- Riverine
- Other

# Project Metadata

## Supplemental Map Information (User Report)

Project Title or Area: R04Y08P11 - Georgia Coast

Source Imagery (type, scale and date):

- 1) Base imagery was USGS GA Coastal Areas True Color 0.5-meter resolution dated 2006
- 2) Where USGS 2006 imagery was unavailable, Florida Bureau of Survey and Mapping-LABINS High Resolution Color Infrared Imagery 1-meter resolution dated 2004 was used as base imagery.
- 3) Where USGS 2006 and Florida 2004 were unavailable, National Agriculture Imagery Program imagery 1-meter resolution dated 2007 was used as base imagery.

Collateral Data (include any digital data used as collateral):

- 1) National Agriculture Imagery Program imagery 1 meter resolution dated 2007.
- 2) USGS National Hydrography Dataset.
- 3) USGS Digital Orthophoto Quadrangle color-infrared (CIR) 1-meter resolution dated 1999.
- 4) USGS 24K Topoquad.
- 5) Original NWI.
- 6) LiDAR Elevation Data - Glynn County.
- 6) Georgia DNR - Wildlife Resources Division Vegetation data for Glynn County National Vegetation Classification System.

Inventory Method (original mapping, map update, techniques used): map update, heads up technique.

Classification (Cowardin wetlands, riparian, uplands, hydrogeomorphic, etc.):

Data Limitations: We lacked recent CIR photography taken in the spring or fall for the Project Area.

General description of the Project Area:

Geography: The Project Area is primarily composed of the Sea Islands/Coastal Marsh ecoregion with Sea Island Flatwoods ecoregion inland and Floodplains and Low Terraces along the Altamaha and Savannah Rivers.

Vegetation, soils, land use: The land cover in the project area is largely pine forest and open water which together make up approximately 40 percent of the Project Area. Estuarine emergent and palustrine forested wetlands make up the bulk of the wetland habitat (see below). Upland scrub/shrub and grassland make up approximately 12 percent of the Project Area. Developed areas are less than 5 percent and cultivated crops 1 or 2 percent. Source NOAA C-CAP (2006).

Natural history or important cultural features:

Description of wetland habitats:

# Click on Historic Map Info

**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

Tools | Print Map | Streets | Imagery/Labels | Topo | USGS Topo

savannah, GA | Find Location | Zoom to: [ ]

Zoom History | Poolery

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24k Quad Name: Garden City  
100k Quad Name: Garden City  
Project Metadata: [click here](#)  
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[click here](#)  
[click here](#)  
FGDC Metadata: [click here](#)

**Available Layers**

- Wetlands ? [ ]
- Wetland Status
- Riparian ? [ ]
- Riparian Status
- Data Source
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**Wetlands**

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- Freshwater Pond
- Lake
- Riverine
- Other

# Historic Map Information: Mapping Conventions

## Mapping Conventions

### Georgia Coastal Plain

Field Trip: February 2-6, 1987

Personnel: Ken Caraccia, Martel  
Donley Kisner, Martel  
Tom Kunneke, Martel  
John Hefner, USFWS

Project Area (1:100K Maps): Brunswick NW (22 quads), Savannah SW (19 quads), Savannah NW (16 quads), Macon SE (32 quads), Macon NE (32 quads).

#### Map Conventions:

##### 1. Forested

PF01A - Red maple (Acer rubrum), sweetgum (Liquidambar styraciflua), laurel oak (Quercus laurifolia), water oak (Quercus nigra), American elm (Ulmus americana), hickory (Carya spp.) and sycamore (Platanus occidentalis). Broad mix of white, blue and red crowns.

PF01C - Red maple, sweetgum, blackgum (Nyssa sylvatica), water oak, laurel oak, river birch (Betula nigra) and willow (Salix nigra). Swamp palmetto (Sabal minor) occurs frequently in this habitat. Broad white and blue crowns within sloughs, swamps and floodplain.

PF01F - Blackgum and sweetgum. Dark blue, tight crowns, usually located within, or, adjacent to floodplains.

PF06C,F - Blackgum, bald cypress (Taxodium distichum), red maple and sweetgum. Predominantly isolated pockets, or "stands", within sloughs or swamps. Light blue signature with broad and tight crowns mixed indicates seasonally flooded. Dark blue, tight crowns, occasionally interspersed with pockets of marsh, indicates semipermanently flooded conditions.

PF04A,C - Longleaf pine (Pinus palustris), loblolly pine (Pinus taeda), slash pine (Pinus caribaea) and pond pine (Pinus serotina). Understory comprised of red bay (Persea borbonia), greenbriar (Smilax laurifolia), titi (Cyrilla racemiflora), blueberry (Vaccinium spp.) and buckwheat (Cliftonia monophylla). Temporarily flooded pine habitat occurs adjacent to other wetlands, exhibits light pink, open canopy with light red understory, whereas seasonally flooded habitat occurs within or adjacent to floodplains and swamp, with tight pink crowns.

PF01/4A,C - Red maple, sweetgum, slash pine, pond pine, blackgum and water oak. Broad white or blue crowns with tight pink crowns interspersed.

# Historic Map Information: User Notes

## USER NOTES

### Sea Island Study Area of South Carolina and Georgia

#### Introduction

Wetland mapping of the coastal zones of South Carolina and Georgia was one of the initial mapping efforts conducted by the National Wetland Inventory Project (NWI). The following 1:100,000 scale maps were included in the study area:

Beaufort (Savannah SE)	Kingstree (Georgetown NW)
Brunswick (Brunswick SW)	Myrtle Beach (Georgetown NE)
Fernandina Beach (Jacksonville NW)	Saint George (Augusta SE)
Georgetown (Georgetown SW)	Savannah (Savannah SW)
James Island (James Island NW)	Sylvania (Savannah NW)
Jessup (Brunswick NW)	Walterboro (Savannah NE)
Wassaw Sound (Brunswick NE)	

#### Map Production

The maps were produced through stereoscopic photo-interpretation of high altitude aerial photography. Scale, emulsion, and quality of the photography varied throughout the study area. Photography used included color-infrared (CIR) at an approximate scale of 1:130,000 taken in 1972 and 1974; limited quantities of CIR at 1:80,000 scale taken in 1974; and black and white at a scale of 1:80,000 taken in 1977. Interpretation of photography and field checking was conducted from 1977 through 1979. The South Carolina

# Historic Map Information: Map Report for Updates

## MAP REPORT: COASTAL GEORGIA UPDATES Draft

### I. INTRODUCTION

The U.S. Fish and Wildlife Service's National Wetland Inventory is producing maps showing the location and classification of wetlands and deepwater habitats of the United States. The Classification of Wetlands and Deepwater Habitats of the United States by Cowardin et al is the classification system used to define and classify wetlands. Photointerpretation conventions, hydric soils lists, and wetland plant lists are also available to enhance the use and application of the classifications system.

#### A. PURPOSE

The purpose of the notes to users is threefold: (1) to provide localized information regarding the production of NWI maps, including specific imagery and interpretation discussion; (2) to provide a descriptive cross-reference from wetland codes on the map to common terminology and representative plant species; and (3) to explain local geography, climate, and wetland communities.

### II. FIELD RECONNAISSANCE

#### A. PROJECT AREA

1:100,000	Quad Name
Savannah SW	Rincon
	Port Wentworth
	Garden City
	Meldrim
	Meldrim SE
	Savannah

#### B. PERSONNEL

Charles Storrs - U.S. Fish and Wildlife Service, Region IV  
Richard Eastlake - Greenhorne & O'Mara, Inc.

#### C. DATE OF FIELD TRIP

September 4-7, 2001

#### D. AERIAL PHOTOGRAPHY

Type: Color Infrared Transparencies NAPP



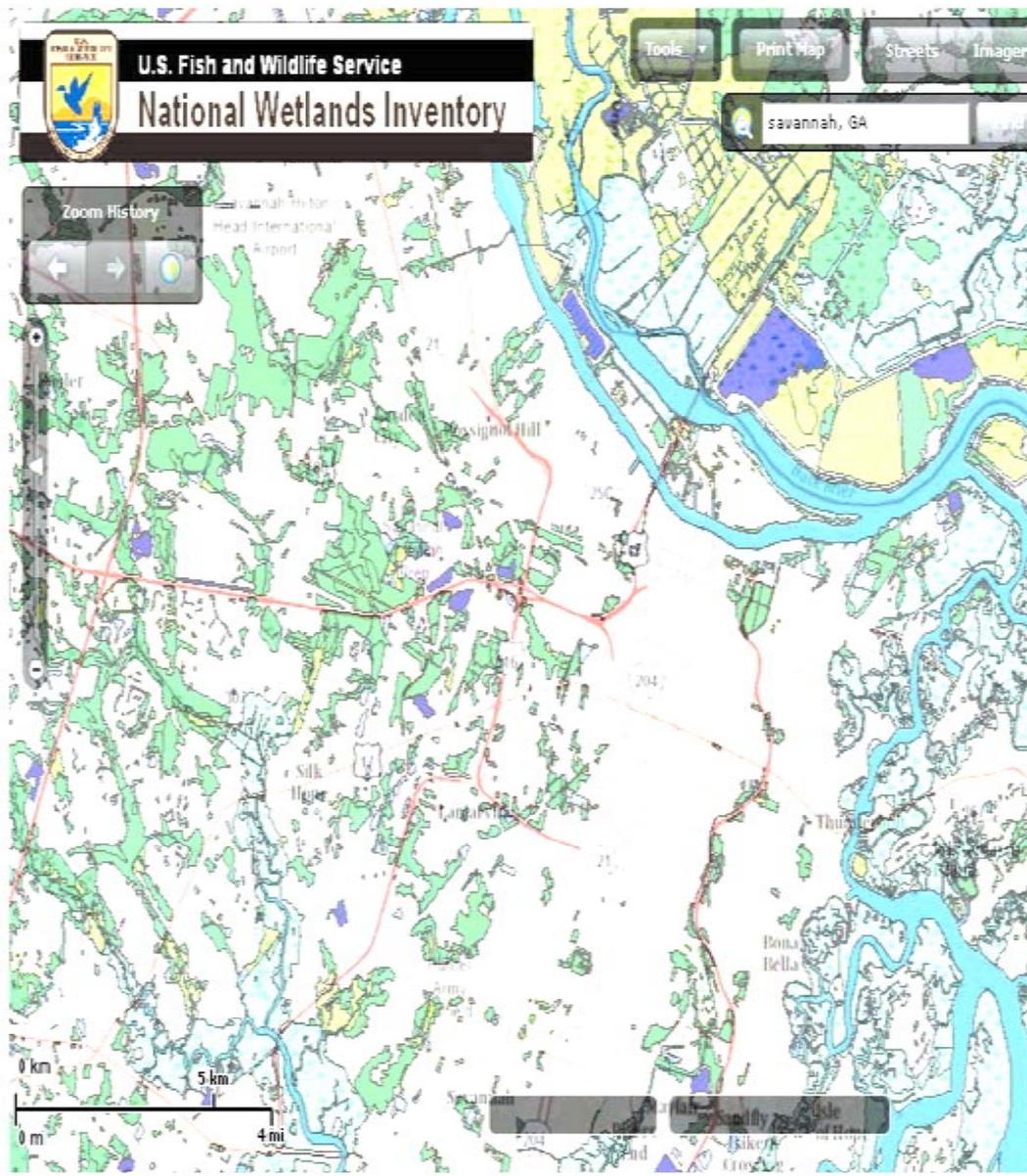
**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

Tools | Print Map | Streets | Imagery / Labels | Topo | USGS Topo

Search: savannah, GA | Zoom to: [input]

Zoom History

← → [wheel icon]



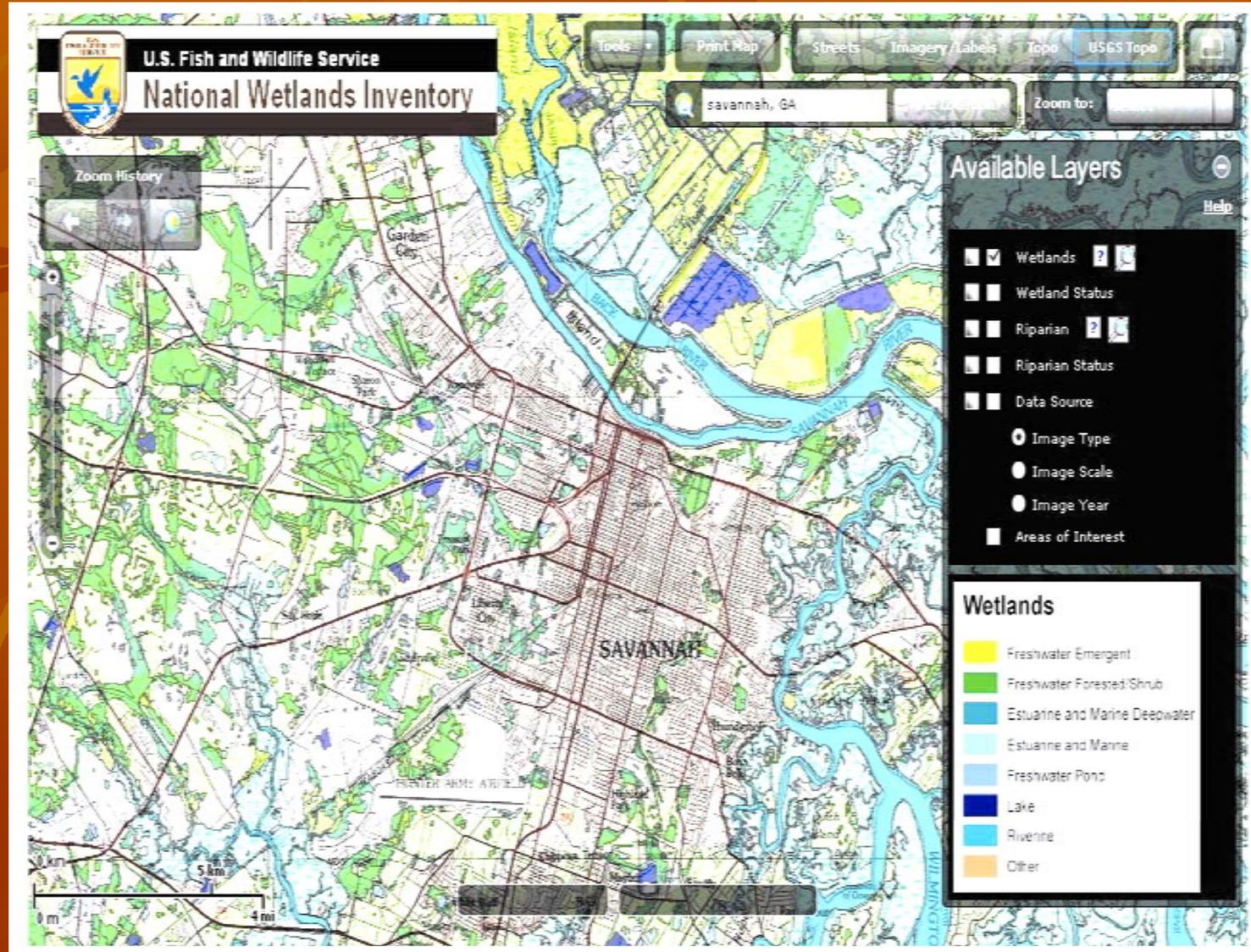
**Available Layers**

- Wetlands
- Wetland Status
- Riparian
- Riparian Status
- Data Source
- Image Type
- Image Scale
- Image Year
- Areas of Interest

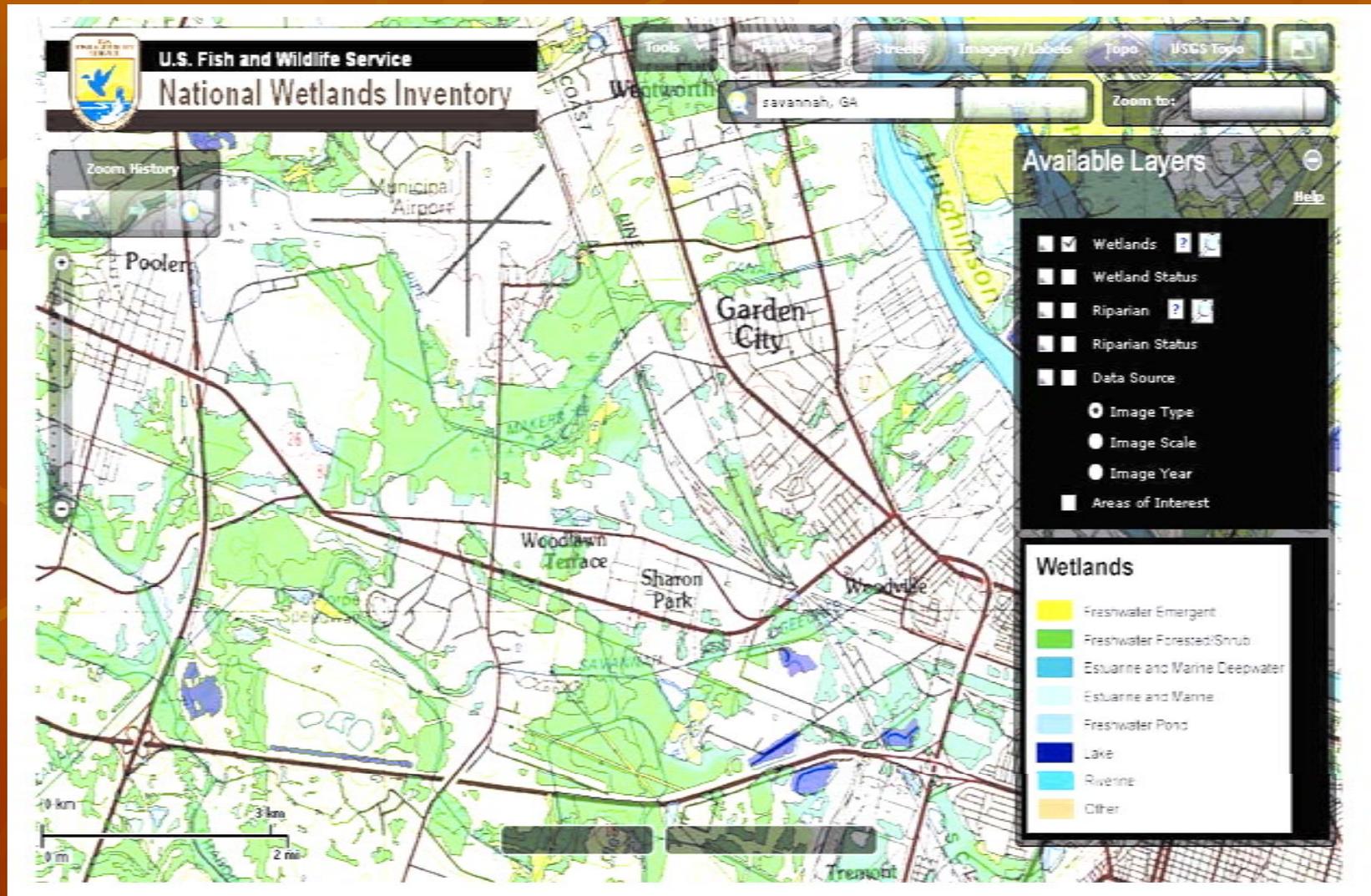
**Wetlands**

- Freshwater Emergent
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- Rivenne
- Other

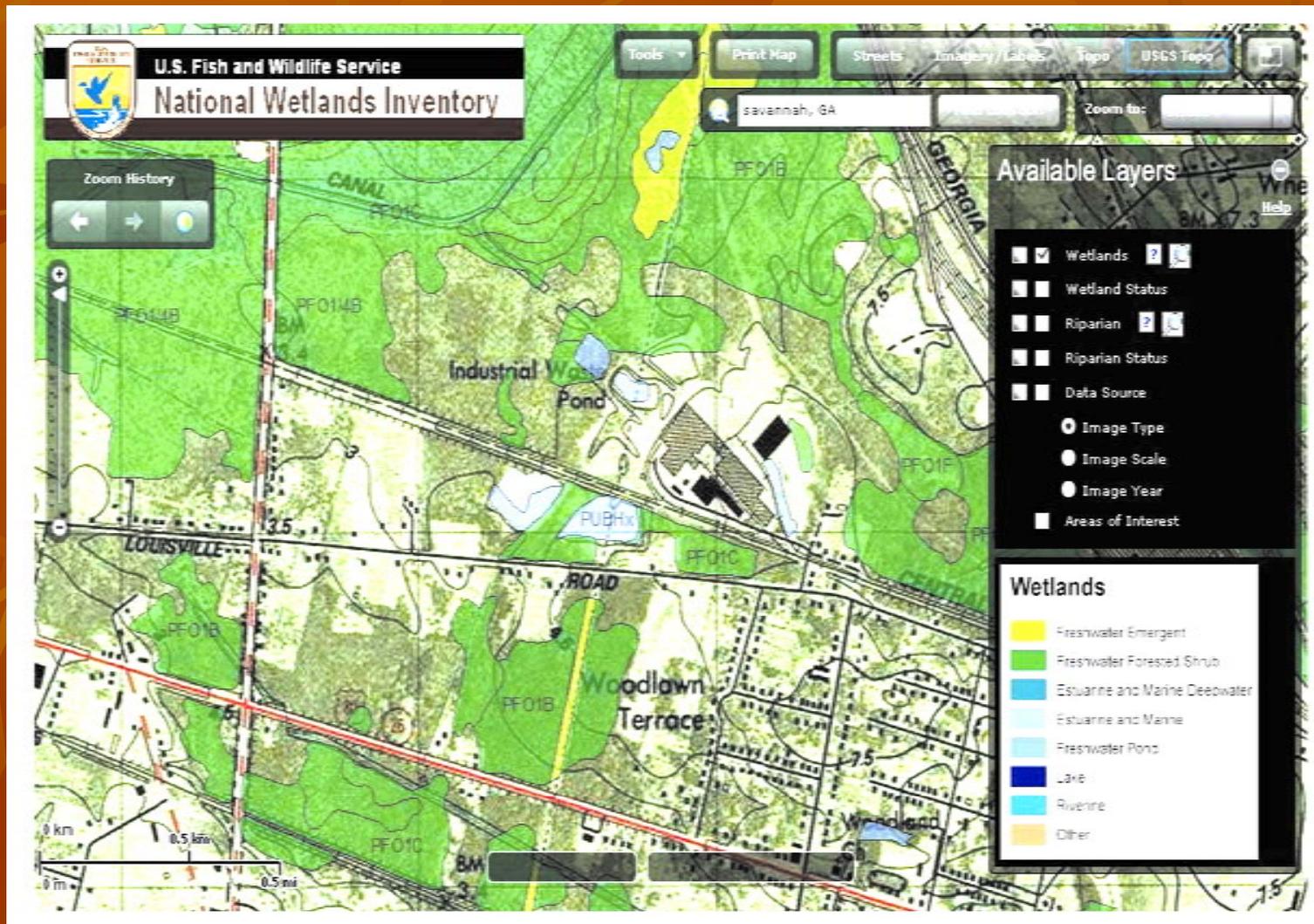
# Data on USGS Topo



# Zoom In – More Detail on Base Map



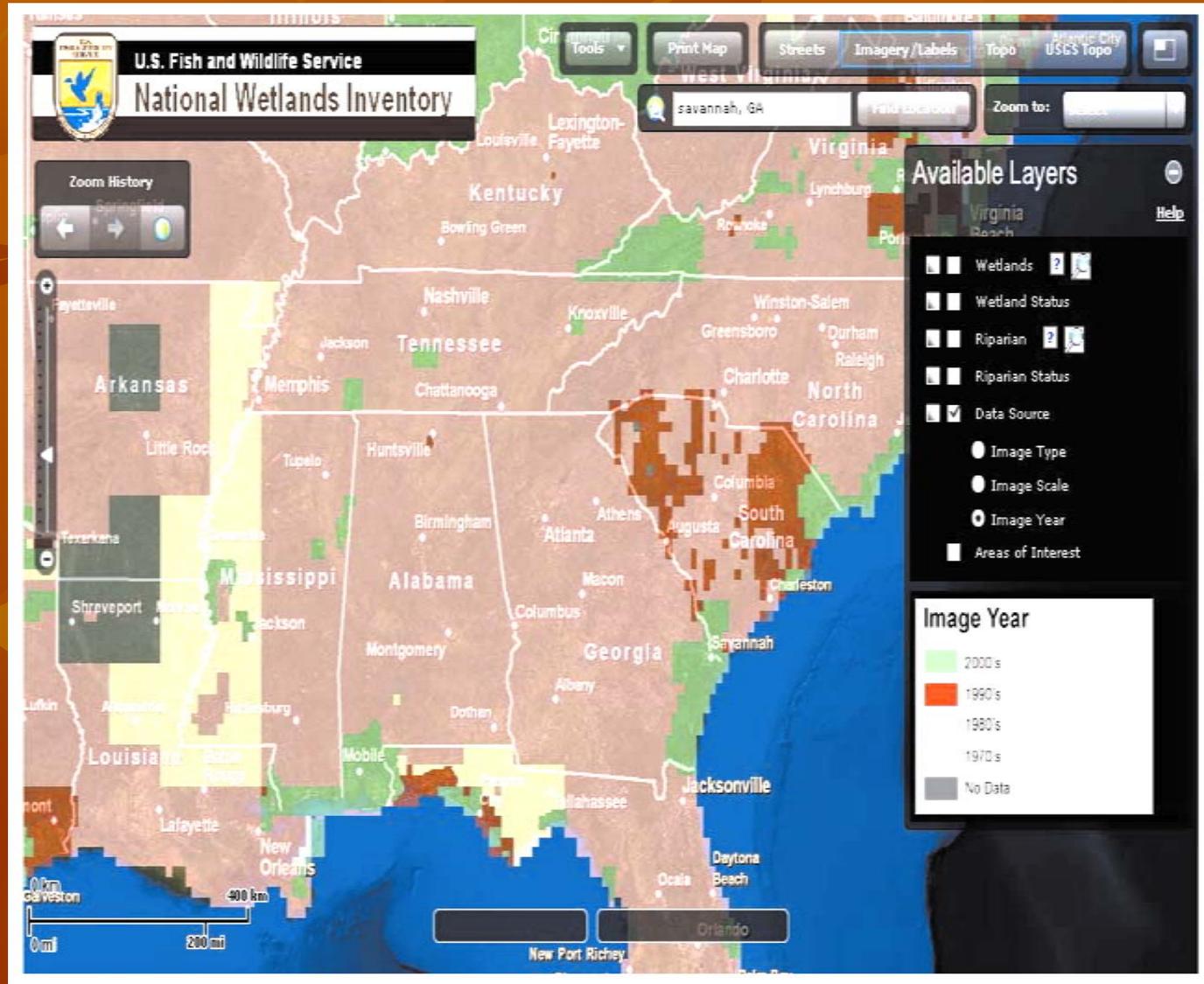
# Zoom In Again – Even More Detail on Base Map and Polygon Labels





# **Other Information**

# Image Year



# Image Type

**U.S. Fish and Wildlife Service**  
**National Wetlands Inventory**

Tools | Print Map | Streets | Imagery/Labels | Topo | USGS City | USGS Topo

savannah, GA | Zoom to: |

Zoom History

Available Layers

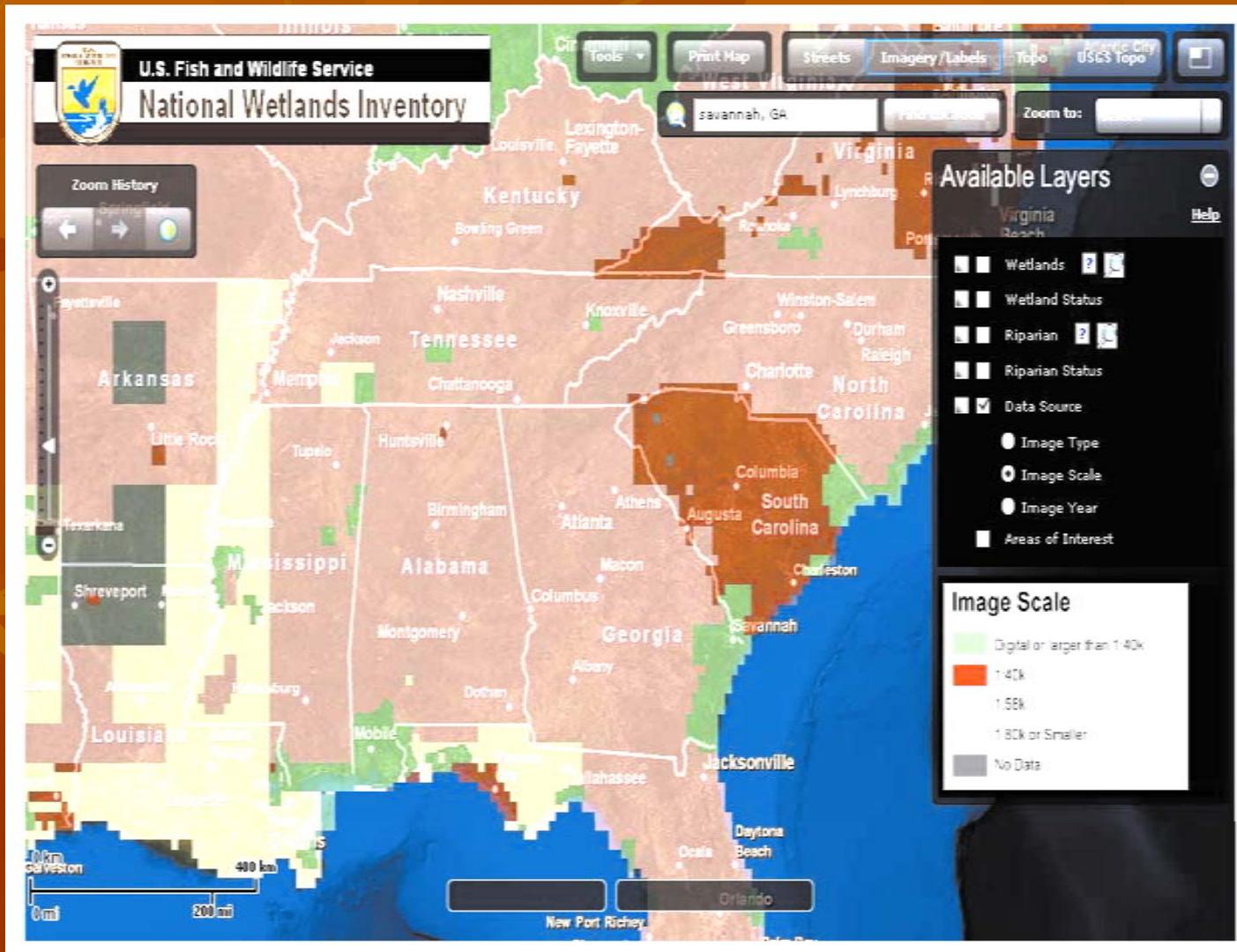
- Wetlands
- Wetland Status
- Riparian
- Riparian Status
- Data Source
- Image Type
- Image Scale
- Image Year
- Areas of Interest

Image Type

- True Color
- Color Infrared
- Black and White
- No Data

Scale: 0 to 400 km / 0 to 200 mi

# Image Scale



The background of the slide is a solid brown color with a pattern of stylized, overlapping autumn leaves in various shades of brown and tan. The leaves are scattered across the entire frame, creating a textured, seasonal feel.

# NWI on Google Earth

Click on  
kmz



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## View Wetlands Data with Google Earth\*

A Keyhole Markup Language file has been created to view Wetlands Data with Google Earth. **Please note that Google Earth version 4.2, or higher, is required to run this file.** To ensure that you use the latest version, it is recommended that you always load the file and open Google Earth by selecting the link below:

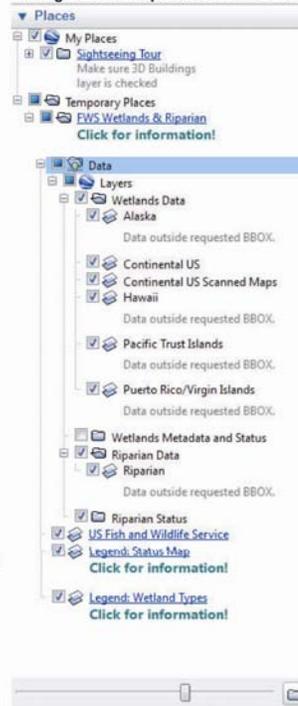
[WetlandsData.KMZ](#)  
(last modified on May 20, 2010)

If Google Earth fails to launch automatically, the file can also be used by first launching the Google Earth application. Select the menu option **File, Open**, and then locate the previously downloaded file (WetlandsData.KMZ); then click the **Open** button.

### Notes:

- Click on any layer checkbox to view or hide the image layer
- Click on any legend checkbox to view or hide it
- The display of each layer is dependent on the current scale and location. Status will display on a scale of 1:200,000 or smaller. Wetland and Riparian data will display at a scale of 1:200,000 or larger.
- If two versions of Google Earth are currently installed on your computer, it is recommended that the oldest version (and its associated desktop icon) is removed from your computer.
- To remove the Wetlands KMZ file from Google Earth, right-click on the FWS Wetlands Data folder located under Places (Google Earth left panel), then select **Delete**.
- Viewing Wetlands Data w/Google Earth Fact Sheet (1MB PDF)

### Google Earth sample file content menu:



# Example – UMass Amherst

