

# HOW THE NATIONAL WETLANDS INVENTORY IS USED

## For Spatial Modeling Efforts

- ↪ to create Thunderstorm maps to manage for migratory waterfowl
- ↪ in SLAMM models to predict changes in tidal marsh area and habitat type in response to sea-level rise
- ↪ as a data layer in NOAA'S SLOSH model to predict storm surge heights
- ↪ in NOAA's C-CAP program to produce a nationally standardized database of land cover and land change information for the coastal regions of the U.S.
- ↪ by the Office of Surface Mining, Reclamation & Enforcement Services for their GeoMine Federal Viewer to address Federal geospatial and hydrologic data needs
- ↪ in Primordial's Ground Guidance® software to plan fast and concealed routes on- and off-road for dismounted and mounted soldiers

## For Planning & Decision-Making

- ↪ agricultural planning
- ↪ aviation & military installation assessments
- ↪ biological monitoring
- ↪ efficient development permit processes
- ↪ emergency management planning
- ↪ endangered species recovery efforts
- ↪ energy development project planning
- ↪ enforcement & compliance efforts
- ↪ habitat conservation, identification & delineation
- ↪ hurricane planning & recovery efforts
- ↪ informed real estate decisions
- ↪ invasive species control programs
- ↪ land acquisition decisions
- ↪ land use planning
- ↪ legal defense cases
- ↪ license reviews
- ↪ prioritization of conservation & restoration projects
- ↪ research & education
- ↪ stormwater management & flood control planning
- ↪ to evaluate wetland permits
- ↪ to identify ecosystem services
- ↪ to write applications for wetland permits
- ↪ transportation planning
- ↪ water quality planning & compliance
- ↪ watershed planning
- ↪ wetland restoration & mitigation efforts

“Given the scope and scale of investments in wetlands conservation by FWS and its partners, the widespread use and application of the NWI data in the USPPR and across the country more than justifies continuation of the program.”

Johann Walker, Lead Scientist  
Ducks Unlimited Great Plains Office,  
Bismark, North Dakota



**Species which have been protected for the continuing benefit for the American people by the NWI program through habitat identification, restoration and preservation:**

Alaskan Salmon	Gadwall Duck	Plymouth Redbelly Turtle
Alaskan Sea Duck	Hine's Emerald Dragonfly	Queen Snake
Arid Land Ribbon Snake	James Spiny mussel	Rails
Blanchard's Cricket Frog	King Rail	Roanoke Logperch
Blanding's Turtle	Least Bittern	Roswell Springsnail
Blue-Winged Teal Duck	Least Shrew	Sonora Tiger Salamander
Bog Turtle	Longtail Salamander	Southwestern Willow Flycatcher
Bogbean Buckmoth	Mallard Duck	Spectacled Eider
California Red-Legged Frog	Massasauga Rattlesnake	Spiny Softshell Turtle
Canadian Geese	Mexican Tetra	Tomah Mayfly
Caspian Tern	Northern Cricket Frog	Tundra Swans
Chiricahua Leopard Frog	Northern Pintail Duck	Wood Duck
Common Tern	Northern Shoveler Duck	Wright's Marsh Thistle
Devil Crawfish	Pecos Pupfish	Several species of damselfly and dragonfly
Eastern Massasauga	Pecos Sunflower	Several fish, snail and crawfish species
Freshwater Mussels	Pied-Billed Grebe	Several rare plant species

**Examples of Use of NWI for Wildlife and Habitat Protection & Enhancement**

The Service's Habitat and Population Evaluation Team (HAPET) in the Midwest Region has produced duck Breeding Pair Accessibility Maps using NWI data. Thunderstorm maps display predictions of the number of upland nesting ducks pairs (mallards, blue-winged teal, gadwall, northern pintail, and northern shoveler) that could potentially nest in the upland portion of every 40 acre block of the Prairie Pothole Region (PPR) of Minnesota and Iowa. Thunderstorm maps are used to help identify priority sites for the protection or restoration of grassland habitats for breeding waterfowl. They are also useful in identifying priority wetland complexes to be protected through acquisition of Waterfowl Protection Areas and easements, and to be enhanced by private lands wetland restorations. National Wetlands Inventory data are used for modeling and predictions.

The Endangered Species Program has been using digital NWI data on the Texas coast to aid in the designation of critical habitat for the wintering population of the threatened piping plover (*Charadrius melodus*). By referring to certain Cowardin codes in the NWI database, ES biologists are able to construct more accurate maps that identify critical habitat areas. The NWI completed wetlands and riparian habitat mapping and a wetland assessment report assessing changes and damages to wetland/riparian vegetative communities along a stretch of the Gila River as a result of a major flood in February of 2005. This stretch of river is considered a key area for potential southwestern willow flycatcher (*Empidonax traillii extimus*) habitat restoration activities of the Service and other organizations.

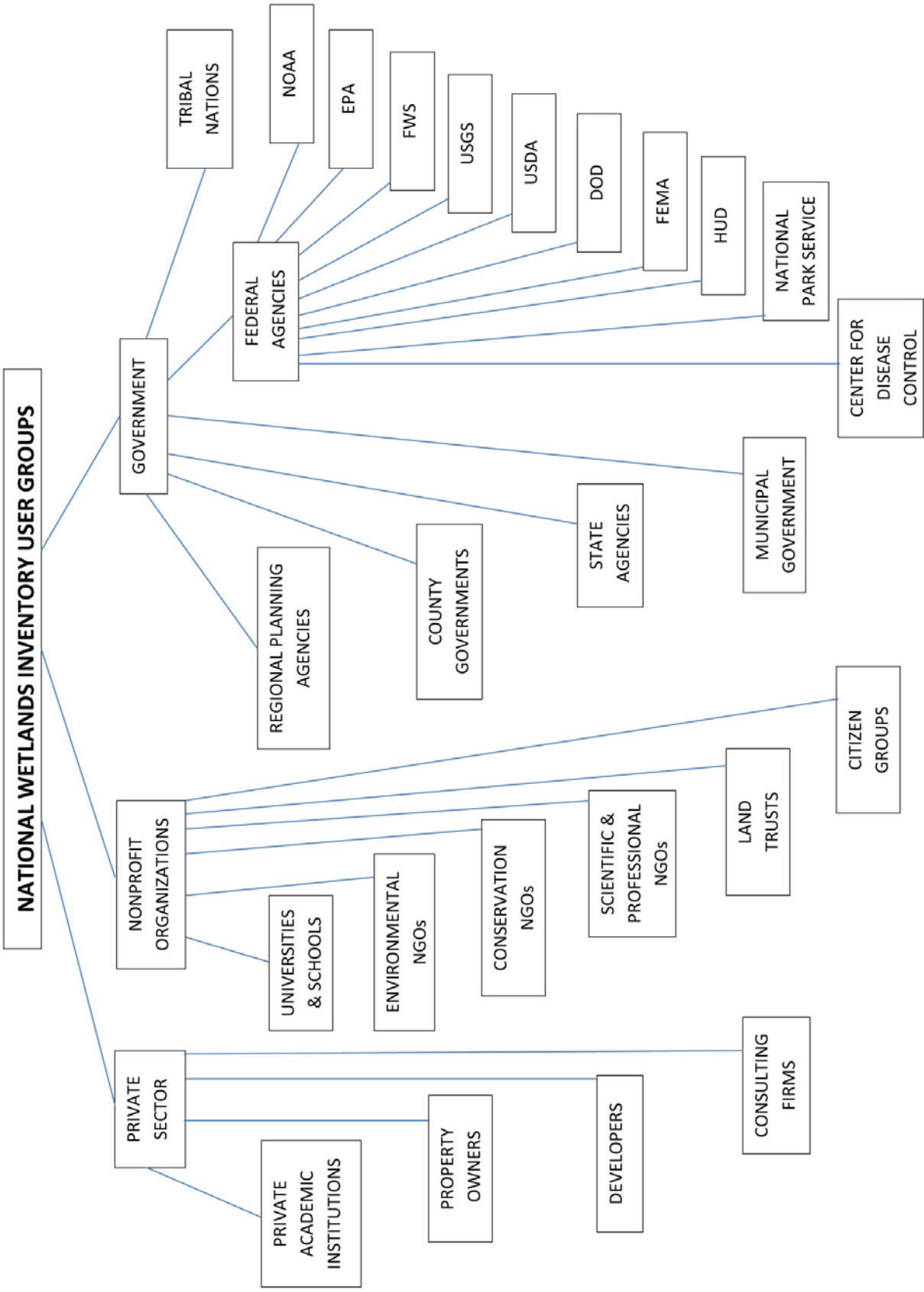
NWI data is used to quantify shorebird foraging habitat in the Great Salt Lake system. Applying this data to estimates of shorebird food densities for various wetland types allows us to calculate foraging habitat objectives for migrating shorebirds.

The New York Natural Heritage Program (NYNHP) is using NWI data and state wetland data to target the full range of habitats potentially used by wetland-dependent species of concern. Known occurrences of these species (i.e. occupied wetlands determined by ground surveys and radio-telemetry) are combined with wetlands and uplands (as appropriate) within the known range of the species using conservative estimates to determine areas that should be conserved. These "important area" models have been developed for numerous animals including freshwater mussels, dragonflies, damselflies, Tomah mayfly (*Siphonisca aerodromia*), bogbean buckmoth (*Hemileuca* sp.), devil crawfish (*Cambarus diogenes*), bog turtle (*Clemmys muhlenbergii*), Blanding's turtle (*Emydoidea blandingii*), spiny softshell turtle (*Trionyx spiniferus*), queen snake (*Regina septemvittata*), eastern massasauga (*Sistrurus catenatus catenatus*), northern cricket frog (*Acris crepitans*), longtail salamander (*Eurycea longicauda*), marsh birds (including pied-billed grebe *Podilymbus podiceps*, least bittern *Ixobrychus exilis*, and rails), common tern (*Sterna hirundo*), and several fishes.

The Hine's Emerald Dragonfly (*Somatochlora hineana*) is the only federally listed dragonfly protected under the Endangered Species Act. Part of the recovery plan was to conduct surveys in appropriate wetland habitat, mostly small fens crawfish burrows. In 2005, using National Wetlands Inventory (NWI) digital wetlands maps data for a 10-county area, the Columbia Missouri Field Office looked for unknown fens. With partner Missouri Department of Conservation running a GIS (geographic information system) analysis looking at NWI code PEMB (palustrine freshwater wetland with emergent vegetation and saturated soil), the Field Office was able to identify numerous potential sites with appropriate habitat that were unknown to conservation agencies in the state. As a result of this study, all researchers and enthusiasts in Missouri were convinced that using NWI digital maps data to identify new potential habitat in Missouri and other states would be a major contributing factor in expanding the knowledge and distribution of the Hine's Emerald Dragonfly.

The Plymouth redbelly (red-bellied) turtle (*Pseudemys rubriventris bangsi*) at the time of the recovery plan was restricted to 17 ponds and one river site in Plymouth County, Massachusetts. Several populations have been introduced and development threatens potential habitat sites, which includes not only the wetlands used for feeding and hibernating, but also surrounding uplands used for nesting sites. The National Wetlands Inventory mapped wetlands for one million acres in coastal Massachusetts covering the critical habitat and possible restoration and introduction areas for recovery of this endangered species.

To aid in the recovery of the Roanoke logperch (*Percina rex*) found in only four stretches of the Roanoke River and the James spiny mussel (*Pleurobema collina*) found in the James River basin, the National Wetlands Inventory mapped 700 thousand acres in the two watersheds. Digital data would be used to plan the management of the watersheds to secure viable populations by habitat improvement project to assure appropriate water temperature and flows, water quality, and silt-free substrata that may be limiting species recovery. Special analysis of stream buffer conditions was vital to restoration, which includes livestock exclusion fencing and replanting of woody species in agricultural areas to reduce erosion and sedimentation and to help target areas for easements or other protection measures.



# MINNESOTA & THE NATIONAL WETLANDS INVENTORY

NOVEMBER 2013

## Wetland Summary

Minnesota has about 10.6 million acres of wetlands, about one-half the wetland acreage present in predevelopment times. Most wetland losses have been due to drainage for agriculture. Minnesota's wetlands are diverse, ranging from extensive northern peatlands to small prairie potholes. The centerpiece of Minnesota's efforts to protect wetlands is the Wetland Conservation Act (WCA) of 1991, which sets a goal of "...no net loss in the amount, quality and biological diversity of the state's wetlands." The law fills the gap in wetland protection between larger, deepwater habitats that are already protected by Minnesota statute and agricultural wetlands that are addressed by the Federal "Swampbuster" provisions of the Farm Bill. For more information on the WCA, please go online to: [www.bwsr.state.mn.us/wetlands/](http://www.bwsr.state.mn.us/wetlands/).

## Distinctive Example of NWI Usage in Minnesota

The Metropolitan Surface Water Management Act requires watershed management organizations to be established in the seven-county metropolitan area of the Twin Cities. These organizations are required to develop, adopt, and implement a local water management plan that aims to: protect, preserve, and use natural surface and groundwater storage and retention systems; minimize public capital expenditures needed to correct flooding and water quality problems; and identify and plan for means to effectively protect and improve surface and groundwater quality. Under this authority, the Carver County Watershed Management Organization (CCWMO) performed a county-wide wetland functions and value assessment as part of their water management plan. This assessment uses indicators of particular wetland functions to assign a value representing the quality or importance for that wetland function. The purpose of this assessment is to aid the CCWMO in organizing, prioritizing, and managing wetland resources comprehensively. The assessment was performed using the National Wetland Inventory data along with other GIS data for two broad categories: stormwater management and water quality; and natural resource/habitat. The MN DNR wetland mapping page is located at [http://www.dnr.state.mn.us/eco/wetlands/nwi\\_proj.html](http://www.dnr.state.mn.us/eco/wetlands/nwi_proj.html).

## Identified Uses of NWI In Minnesota



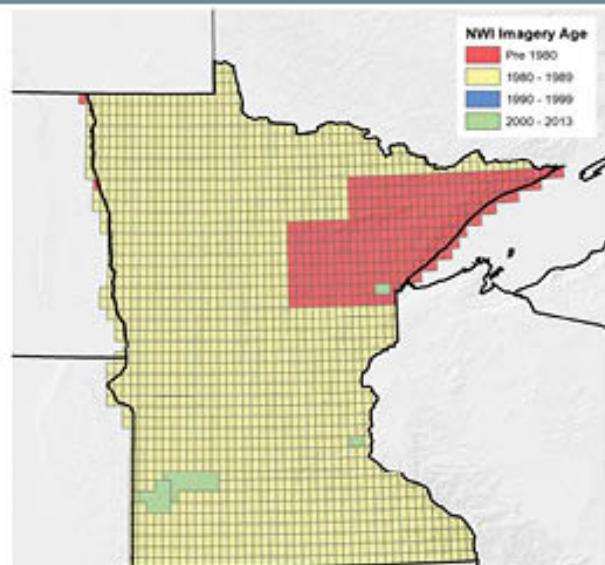
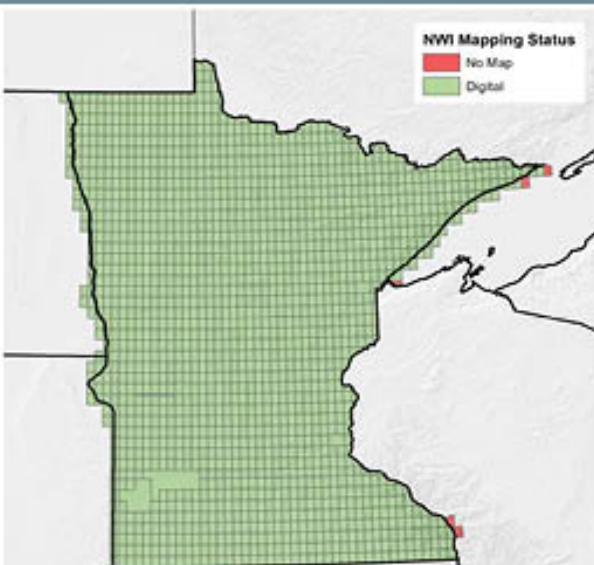
## LEGEND

How the NWI has been used:

-  Agricultural Planning & Conservation
-  Climate Change Mitigation & Adaptation Planning
-  Development, Real Estate & Permitting Decisions
-  Energy Project Siting Decisions
-  Enforcement & Legal Defense
-  Hurricane, Storm Surge & Sea Level Rise Planning
-  Military Installation Assessment
-  Transportation Planning
-  Water Quality & Watershed Management Projects
-  Wetland Restoration, Monitoring & Assessment
-  Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:

Steve Kloiber, Minnesota Dept. of Natural Resources, Wetlands Program; [www.dnr.state.mn.us/eco/wetlands](http://www.dnr.state.mn.us/eco/wetlands)



# WISCONSIN & THE NATIONAL WETLANDS INVENTORY

OCTOBER 2013

## Wetland Summary

Wetlands cover more than 5 million acres (15 percent) of Wisconsin. Common wetlands include swamps and marshes in southern Wisconsin and peatlands in northern Wisconsin. Wetlands are most numerous in glaciated parts of the State; the unglaciated "driftless" section of southwestern Wisconsin has few wetlands, except in stream valleys filled with unconsolidated outwash and alluvium. Wetland acreage has decreased by nearly one-half over the last 200 years, primarily owing to agricultural development. In 1991 the State became the first to adopt water-quality standards for wetlands; the standards allow the State to control wetland development under section 401 of the Clean Water Act.

## Distinctive Example of NWI Usage in Wisconsin

NWI data was used in a demonstration project, lead by The Nature Conservancy, of how to use a "watershed approach" in identifying and evaluating compensatory mitigation opportunities and align them with voluntary conservation goals in Wisconsin. The evaluation of lost ecosystem services and potential benefits to the watershed could not have been done without the use of the "NWI+" system and the conversion from WWI to NWI. Even though this project was done in Wisconsin, which is unique in having its own Wetland Inventory, the project used an NWI product, based on a cross-walk from the Wisconsin Wetland Inventory to the NWI. This was done because a critical element in the assessment of wetland ecosystem service for the watershed required the use of the "NWI+ classification system". The critical element was the assignment of more precise water regime modifiers which are used by the NWI, but not the WI Wetland Inventory. To access the Wisconsin Wetland Inventory and download current data, go to <http://dnr.wi.gov/topic/wetlands/inventory.html>.

## Identified Uses of NWI In Wisconsin



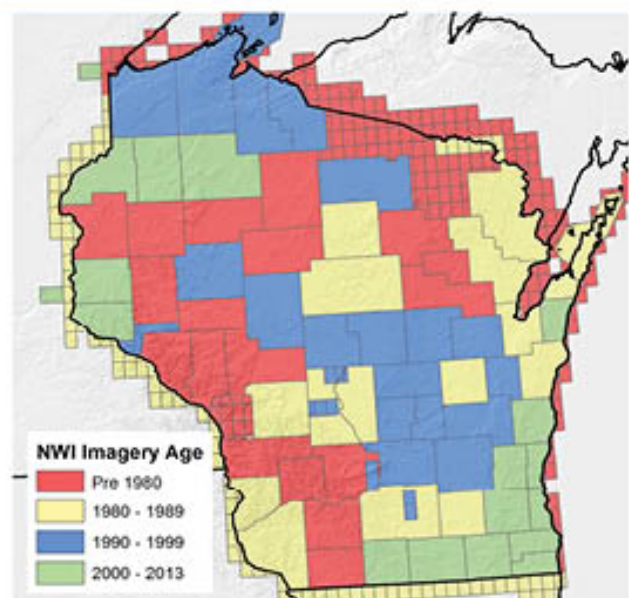
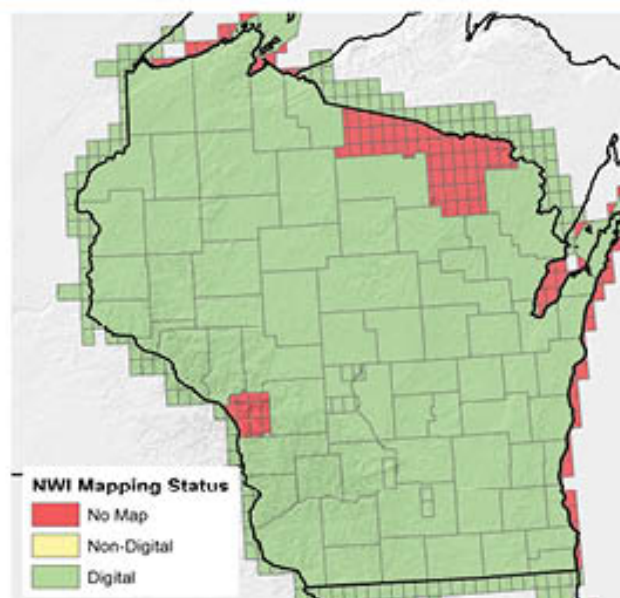
## LEGEND

How the NWI has been used:

- Agricultural Planning & Conservation
- Climate Change Mitigation & Adaptation Planning
- Development, Real Estate & Permitting Decisions
- Energy Project Siting Decisions
- Enforcement & Legal Defense
- Hurricane, Storm Surge & Sea Level Rise Planning
- Military Installation Assessment
- Transportation Planning
- Water Quality & Watershed Management Projects
- Wetland Restoration, Monitoring & Assessment
- Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:

Lois Simon, WI Dept. of Natural Resources, Bureau of Watershed Management; [www.dnr.wi.gov](http://www.dnr.wi.gov)  
 Thomas Bernthal, WI Dept. of Natural Resources, Water Quality Division; [www.dnr.wi.gov](http://www.dnr.wi.gov)



# IOWA & THE NATIONAL WETLANDS INVENTORY

SEPTEMBER 2010

## Wetland Summary

Iowa has diverse wetlands that include prairie-pothole marshes, swamps, sloughs, bogs, fens, and ponds. Wetlands cover about 1.2 percent of Iowa, but about 200 years ago more than 11 percent of the State's area was wetland. Conversion of wetlands to agricultural lands, largely in the prairie-pothole region, has been the primary cause of wetland loss. Wetland acreage has been slowly increasing since 1987 as a result of the Prairie Pothole Joint Venture, a cooperative Federal, State, county, and private-organization program. The Wetland Reserve Program of the 1990 Food, Agriculture, Conservation, and Trade Act has the potential to add a substantial number of additional acres.

## Distinctive Example of NWI Usage in Iowa

The Iowa Department of Natural Resources used updated NWI data to randomly selected sites for monitoring the condition of wetlands across the state. Semipermanently and permanently flooded potholes on public or private lands were selected for study. Chemical, physical, and biological parameters are being monitored to determine the ecological condition of Iowa's remaining wetlands.

## Identified Uses of NWI In Iowa



## LEGEND

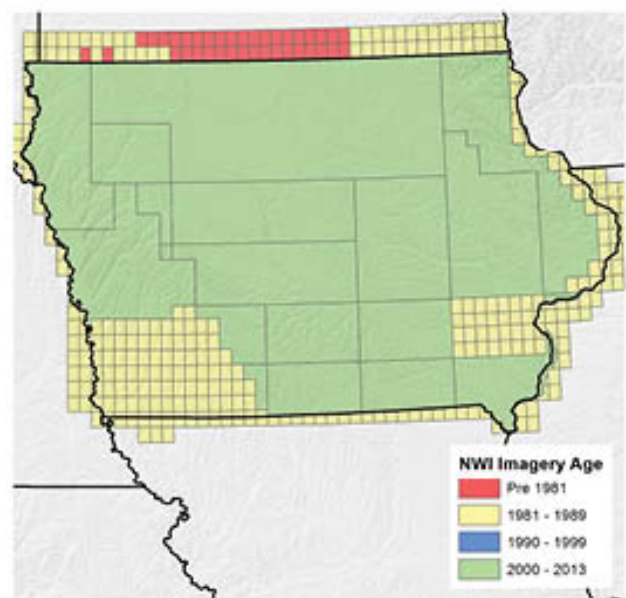
How the NWI has been used:

-  Agricultural Planning & Conservation
-  Climate Change Mitigation & Adaptation Planning
-  Development, Real Estate & Permitting Decisions
-  Energy Project Siting Decisions
-  Enforcement & Legal Defense
-  Hurricane, Storm Surge & Sea Level Rise Planning
-  Military Installation Assessment
-  Transportation Planning
-  Water Quality & Watershed Management Projects
-  Wetland Restoration, Monitoring & Assessment
-  Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:

Chris Ensminger, Iowa Department of Natural Resources

[www.iowadnr.gov](http://www.iowadnr.gov)



# ILLINOIS & THE NATIONAL WETLANDS INVENTORY

August 2013

## Wetland Summary

Wetlands cover about 3.5 percent of Illinois. The largest acreage of wetlands is in the bottom-land forests and swamps along the State's major rivers. Northeastern Illinois also has a large concentration of wetlands. Illinois has lost as much as 90 percent of its original wetlands over the last 200 years; most of the losses have been due to drainage for conversion to agricultural and other uses. The primary State law governing wetlands is the Interagency Wetland Policy Act of 1989, which sets a goal of no net loss of wetlands due to projects funded by the State. Wetlands can be owned and protected by the public as County Forest Preserve Districts. Wetlands on private lands can be protected using various conservation tools such as being designated as a Nature Preserve or Land and Water Reserve by the Illinois Nature Preserves Commission or by public entities such as Conservation or Forest Preserve Districts or the Illinois Department of Natural Resources.

## Distinctive Example of NWI Usage in Illinois

The DuPage County, Illinois Wetland Maps were developed based on the NWI maps. DuPage County is currently working to revise the maps with the intent to share data with US Fish and Wildlife for inclusion in the NWI maps. Members of the public, regulatory and development communities use the maps in the following ways: informed real estate decisions; informed residents; education; and watershed planning. Recently, Ducks Unlimited updated the NWI maps for all of Illinois.

## Identified Uses of NWI In Illinois



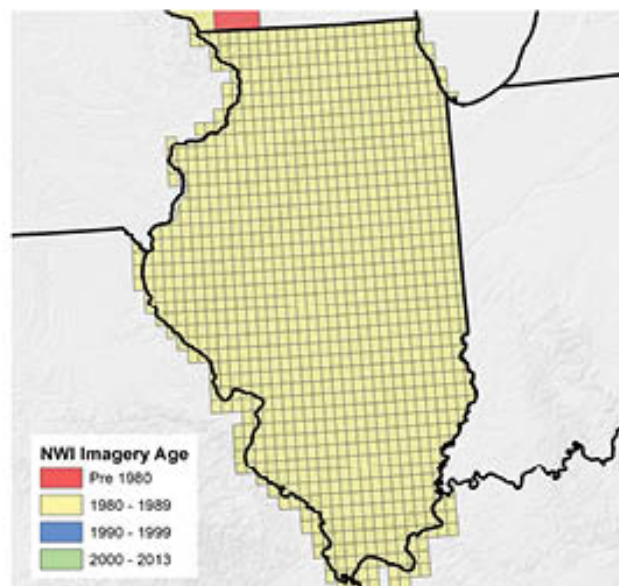
## LEGEND

How the NWI has been used:

- Agricultural Planning & Conservation
- Climate Change Mitigation & Adaptation Planning
- Development, Real Estate & Permitting Decisions
- Energy Project Siting Decisions
- Enforcement & Legal Defense
- Hurricane, Storm Surge & Sea Level Rise Planning
- Military Installation Assessment
- Transportation Planning
- Water Quality & Watershed Management Projects
- Wetland Restoration, Monitoring & Assessment
- Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:

Pat Malone, Illinois Department of Natural Resources  
[www.dnr.illinois.gov/Pages/default.aspx](http://www.dnr.illinois.gov/Pages/default.aspx)



# MISSOURI & THE NATIONAL WETLANDS INVENTORY

OCTOBER 2013

## Wetland Summary

Missouri's wetlands occupy 643,000 acres, about 1.4 percent of the State's area. Swamps and other forested wetlands, marshes and fens, and shrub swamps constitute most of the wetland acreage. Missouri's location on the Mississippi Flyway makes the State a favored wintering area for hundreds of thousands of waterfowl and other birds, including bald eagles. Missouri has lost as much as 4.2 million acres (87 percent) of its original wetlands. Most wetland loss has been due to agricultural conversions, urban development, and flood control measures. The State developed a wetland-management plan to guide its efforts in the restoration and management of wetlands until the year 2000.

## Distinctive Example of NWI Usage in Missouri

The Hine's Emerald Dragonfly is the only federally listed dragonfly protected under the Endangered Species Act. Part of the recovery plan was to conduct surveys in appropriate wetland habitat, mostly small fens crawfish burrows. Areas for surveys include states where the species currently exists, states where it existed historically, and neighboring states, 24 in total. At the end of the 2004 survey in Missouri, it was generally understood that all known high quality fens had been searched and that it was unlikely additional population sites would be discovered. In 2005, using National Wetlands Inventory (NWI) digital wetlands maps data for a 10-county area, the Columbia Missouri Field Office looked for unknown fens. With partner Missouri Department of Conservation running a GIS (geographic information system) analysis looking at NWI code PEMB (palustrine freshwater wetland with emergent vegetation and saturated soil), the Field Office was able to identify numerous potential sites with appropriate habitat that were unknown to conservation agencies in the state. LIDAR data is being collected in various parts of the state. The LIDAR data is being considered for use to enhance the NWI in Missouri. A status map of LIDAR production in Missouri is available from the Missouri Spatial Data Information Service at [www.msdis.missouri.edu/data/lidar/](http://www.msdis.missouri.edu/data/lidar/).

## Identified Uses of NWI In Missouri



## LEGEND

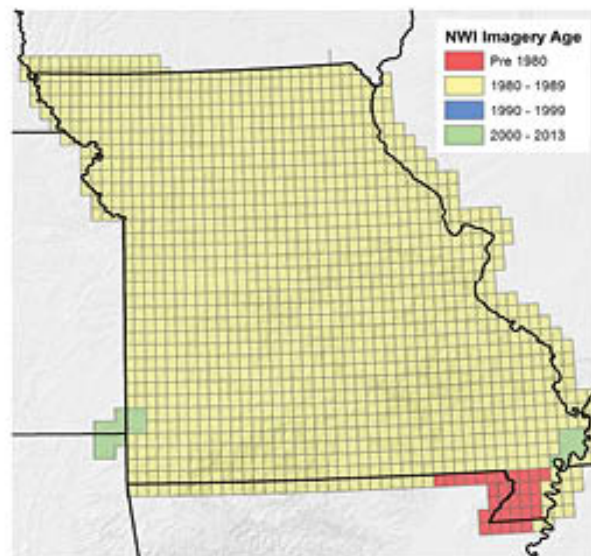
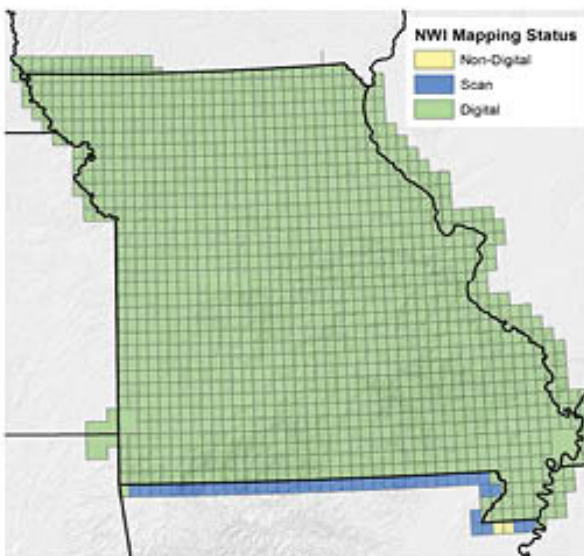
How the NWI has been used:

- Agricultural Planning & Conservation
- Climate Change Mitigation & Adaptation Planning
- Development, Real Estate & Permitting Decisions
- Energy Project Siting Decisions
- Enforcement & Legal Defense
- Hurricane, Storm Surge & Sea Level Rise Planning
- Military Installation Assessment
- Transportation Planning
- Water Quality & Watershed Management Projects
- Wetland Restoration, Monitoring & Assessment
- Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contacts listed below:

Charles DuCharme, Missouri Dept. of Natural Resources; [www.dnr.mo.gov](http://www.dnr.mo.gov)

Frank Nelson, Missouri Dept. of Conservation; [www.mdc.mo.gov](http://www.mdc.mo.gov)



# KENTUCKY & THE NATIONAL WETLANDS INVENTORY

August 2013

## Wetland Summary

Wetlands compose less than 2.5 percent of Kentucky's land area, but they have considerable environmental, socioeconomic, and esthetic value. Most Kentucky wetlands lie shoreward of rivers, lakes, and reservoirs and include cypress swamps, bottom-land hardwood forests, marshes, and ponds. More than one-half of Kentucky's original wetlands have been lost, primarily as a conversion to cropland and pastureland; most conversions have been in western Kentucky. The State fosters protection of wetlands through a system of registry and dedication agreements with private entities. Most of Kentucky's wetlands are privately owned.

## Distinctive Example of NWI Usage in Kentucky

NWI layers are the only source of reference for assessments via desktop of wetland impacts for the state of Kentucky. They are used for every 401 water quality certification project in the state of Kentucky and for reference for presence/absence, verification of type for wetland impacts & delineations.

## Identified Uses of NWI In Kentucky



## LEGEND

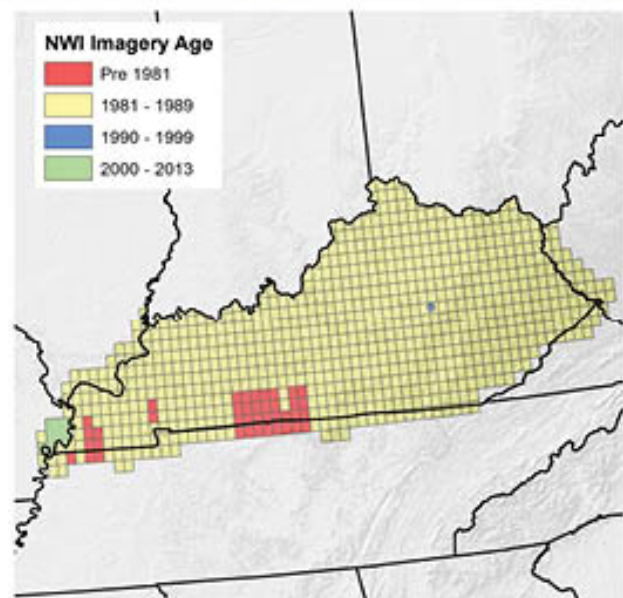
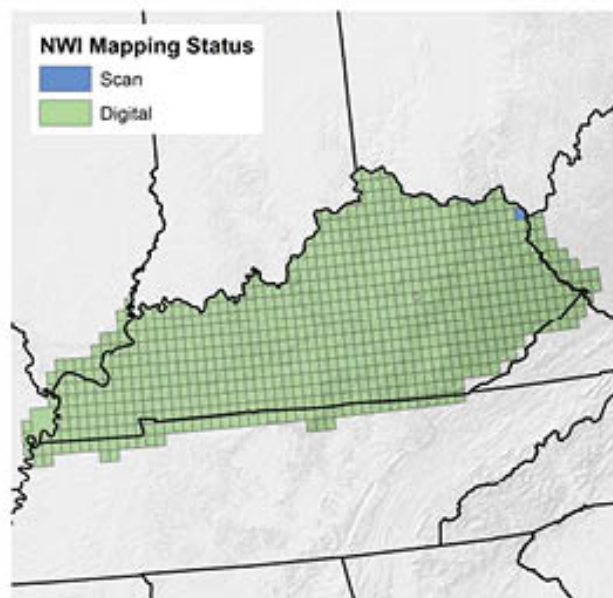
How the NWI has been used:

-  Agricultural Planning & Conservation
-  Climate Change Mitigation & Adaptation Planning
-  Development, Real Estate & Permitting Decisions
-  Energy Project Siting Decisions
-  Enforcement & Legal Defense
-  Hurricane, Storm Surge & Sea Level Rise Planning
-  Military Installation Assessment
-  Transportation Planning
-  Water Quality & Watershed Management Projects
-  Wetland Restoration, Monitoring & Assessment
-  Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:

Barbara Scott, Dept. of Environmental Protection, Division of Water, Water Quality Certification Program

[www.water.ky.gov/permitting/pages/kywaterqualitycertprog.aspx](http://www.water.ky.gov/permitting/pages/kywaterqualitycertprog.aspx)



# TENNESSEE & THE NATIONAL WETLANDS INVENTORY

October 2013

## Wetland Summary

Estimates of Tennessee's wetland area range from 640,000 to 1,400,000 acres. Although wetlands constitute a small percentage of Tennessee, they are ecologically and economically valuable to the State. Bottom-land forests are the most common Tennessee wetlands; they are most abundant in the flood plains of rivers in the western part of the State. Nearly three-fifths of Tennessee's original wetlands have been lost; major causes of loss or degradation in Tennessee have included agricultural conversions, logging, reservoir construction, channelization, sedimentation, and urbanization. The Tennessee Wetlands Acquisition Act of 1986 authorizes the acquisition of wetlands by use of real estate transfer taxes.

## Distinctive Example of NWI Usage in Tennessee

The 817 quads for Tennessee are mapped and digitized. Much of the digitizing of the 1980s era maps was funded by the Tennessee Valley Authority (TVA). The Tennessee Wildlife Resources Agency (TWRA) has also digitized National Wetlands Inventory (NWI) data and has shared those results with the TVA and the US Fish & Wildlife Service. Wetland maps can be found on the TWRA website at [http://www.tn.gov/twra/gis/nwi\\_wetlands.html](http://www.tn.gov/twra/gis/nwi_wetlands.html). The Tennessee Spatial Data Server can be accessed online here: [http://www.tngis.org/frequently\\_accessed\\_data.html](http://www.tngis.org/frequently_accessed_data.html). The TWRA is also in the process of scanning the original mylar NWI maps and georeferencing them for archival purposes.

## Identified Uses of NWI In Tennessee



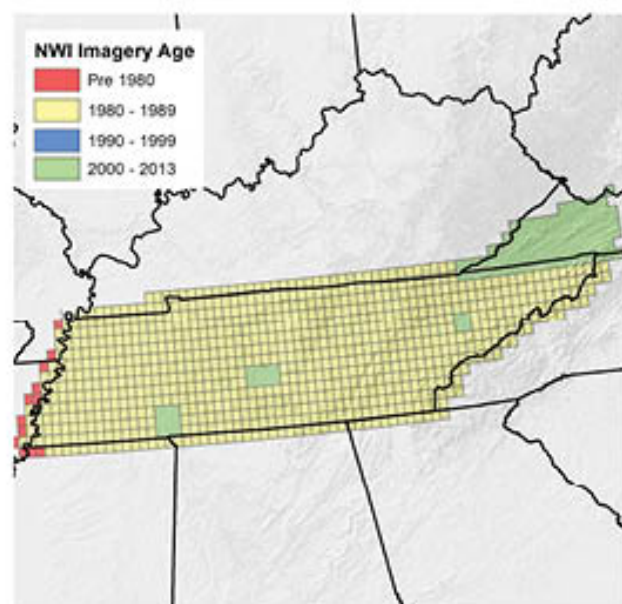
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How the NWI has been used:

-  Agricultural Planning & Conservation
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-  Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:

Jeanette Jones, Tennessee Wildlife Resources Agency; [www.state.tn.us/twra/](http://www.state.tn.us/twra/)



# ARKANSAS & THE NATIONAL WETLANDS INVENTORY

## Wetland Summary

About 8 percent of Arkansas is wetland. The most extensive areas are forested wetlands (swamps and bottom-land forests) along major rivers. Arkansas wetlands, especially those in the Mississippi River Valley, are a critical component of the series of wetlands along the Mississippi Flyway. Wetlands in the Cache-Lower White River system have been designated as one of 27 "Wetlands of International Importance" in the United States. Arkansas has lost more wetland acres than any other inland State; most of the loss has been due to conversion to farmland. Arkansas has adopted a program that applies an antidegradation policy to substantial alteration of water bodies, including adjacent wetlands.

## Distinctive Example of NWI Usage in Arkansas

As of 2010, there were 932 maps in Arkansas, all of which have been mapped for wetlands except for 160 quads, or 17 percent of the state. Arkansas had 139 maps digitized and available to the public online, 15 percent of the state, mostly near the Cache River watershed. Although most of the completed maps were from the 1980s, eastern Arkansas maps were based on 1970s imagery. The NWI has scanned remaining hard-copy maps and made them available as images on the Wetlands Mapper. In FY 12, 11 million acres of wetland scalable data were generated in Arkansas and Louisiana that previously remained unmapped or no data existed.

## Identified Uses of NWI In Arkansas

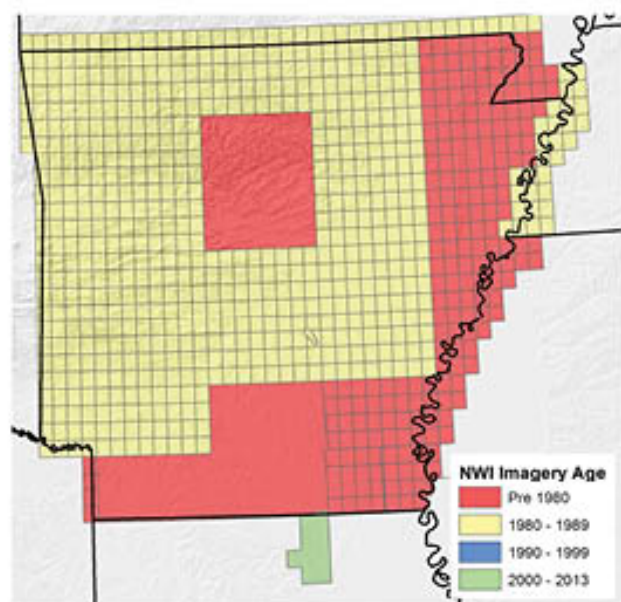
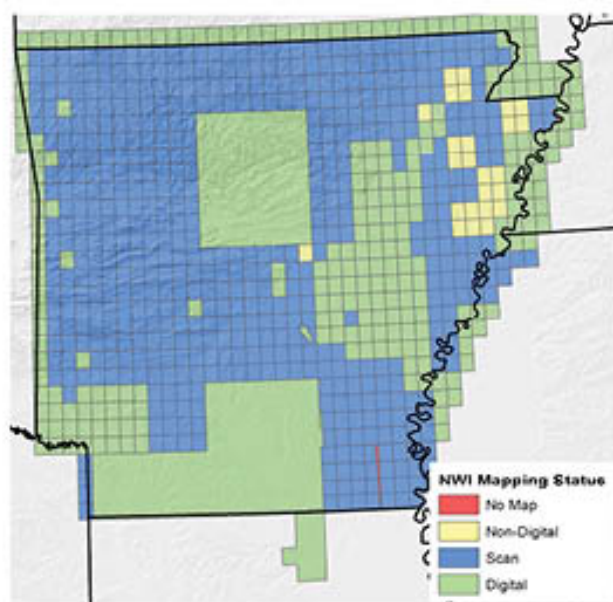


## LEGEND

How the NWI has been used:

- Agricultural Planning & Conservation
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- Enforcement & Legal Defense
- Hurricane, Storm Surge & Sea Level Rise Planning
- Military Installation Assessment
- Transportation Planning
- Water Quality & Watershed Management Projects
- Wetland Restoration, Monitoring & Assessment
- Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact listed below:



# MISSISSIPPI & THE NATIONAL WETLANDS INVENTORY

## Wetland Summary

Wetlands occupy more than 13 percent of Mississippi. Bottomland forests, swamps and freshwater marshes account for most of Mississippi's wetland acreage; coastal marshes also are extensive. Wetlands in Mississippi are a key part of the Lower Mississippi Valley Joint Venture program for the restoration of Mississippi Flyway waterfowl populations. Nearly three-fifths of the State's wetlands have been converted to nonwetland uses, primarily agriculture. Mississippi wetlands have been and continue to be a source of timber, and the cleared, fertile lands have become productive farmland. The Natural Heritage Program identifies and inventories priority wetlands.

## Distinctive Example of NWI Usage in Mississippi

In 2012, at the request of the Assistant Director for Fisheries and Habitat Conservation at the U.S. Fish and Wildlife Service, the NWI completed a county-based status and trends reports for selected coastal watersheds in Harrison County, Mississippi. This work was in conjunction with the National Oceanic & Atmospheric Administration and is part of the Service's contribution to the National Ocean Policy. In addition to the reports, NWI updates were completed for 4 quads in Harrison County, Mississippi.

## Identified Uses of NWI In Mississippi

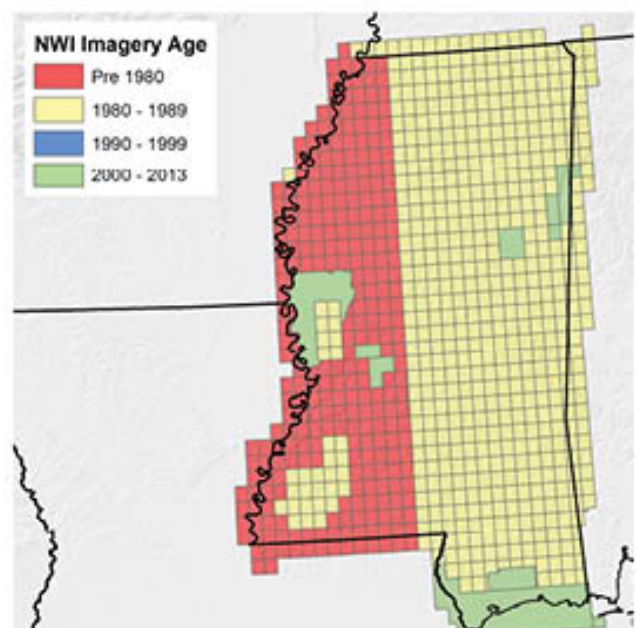
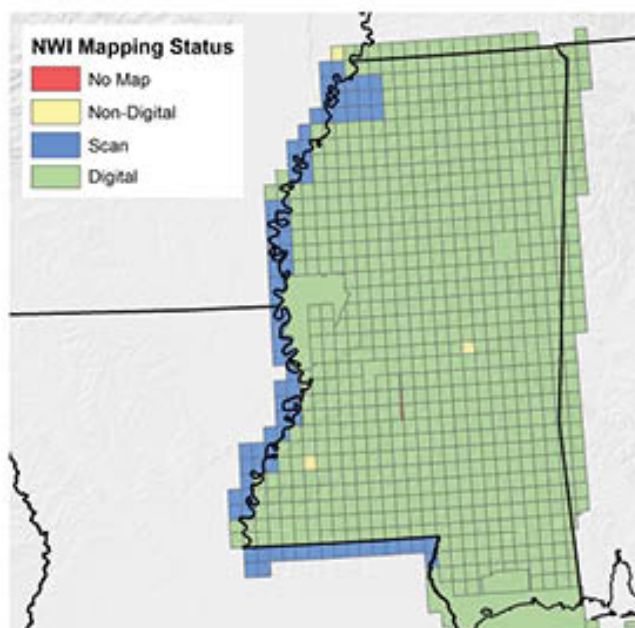


## LEGEND

How the NWI has been used:

- Agricultural Planning & Conservation
- Climate Change Mitigation & Adaptation Planning
- Development, Real Estate & Permitting Decisions
- Energy Project Siting Decisions
- Enforcement & Legal Defense
- Hurricane, Storm Surge & Sea Level Rise Planning
- Military Installation Assessment
- Transportation Planning
- Water Quality & Watershed Management Projects
- Wetland Restoration, Monitoring & Assessment
- Wildlife & Habitat Conservation

For the most up-to-date wetland mapping information, please contact the state contact(s) listed below:



# LOUISIANA & THE NATIONAL WETLANDS INVENTORY

NOVEMBER 2012

## Wetland Summary

Wetlands are a major source of income for the people of Louisiana, providing revenues from harvesting of fish and shellfish, trapping, and recreation. Most of the State's wetlands are freshwater swamps, but the area of coastal marsh is substantial: Louisiana's coastal marshes represent as much as 40 percent of the coastal marshes in the United States. Wetlands once covered more than one-half of the area that is now Louisiana, but wetland acreage has declined to less than one-third of the State's land surface over the last 200 years. The Louisiana Coastal Wetlands Conservation and Restoration Program implements specific projects to conserve, enhance, restore, and create coastal wetlands.

## Distinctive Example of NWI Usage in Louisiana

In 2011, NWI maps were updated for three refuges in Louisiana with funds from the Refuge System Inventory and Monitoring (I&M) Program. The refuges were D'Arbonne, Black Bayou Lake, and Upper Ouchita NWRs, covering 300,000 acres. Additional Refuge System funding was received in FY 2011 to update 726,000 acres for the Cache River NWR in Arkansas. All of these refuges manage wetlands that support a variety of species, including waterfowl and other migratory birds. In FY 12, 11 million acres of wetland scalable data were generated in Arkansas and Louisiana that previously remained unmapped or no data existed.

## Identified Uses of NWI In Louisiana



## LEGEND

How the NWI has been used:

- Agricultural Planning & Conservation
- Climate Change Mitigation & Adaptation Planning
- Development, Real Estate & Permitting Decisions
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Karl Morgan, Louisiana Dept. of Natural Resources, Office of Coastal Management

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