

# WATER MARKS

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Louisiana Coastal Wetlands Planning, Protection and Restoration News

April 2015 Number 51



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CWPPRA projects, from sea to shining sea

**Protecting and Restoring Coastal  
Wetlands Throughout the Country**

**April 2015**  
Number 51

*WaterMarks* is published two times a year by the Louisiana Coastal Wetlands Conservation and Restoration Task Force to communicate news and issues of interest related to the Coastal Wetlands Planning, Protection and Restoration Act of 1990.

This legislation funds wetlands restoration and enhancement projects nationwide, designating nearly \$80 million annually for work in Louisiana. The state contributes 15 percent of total project costs.

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#### **ABOUT THIS ISSUE'S COVER . . .**

*The Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) authorizes funding for projects that protect or restore wetlands in coastal watersheds throughout the United States and its territories. A coastal watershed is defined as an area of land from which water drains directly into an ocean, bay or estuary. About 40 per cent of all wetlands in the continental United States are coastal wetlands.*

*Outside of Louisiana, CWPPRA funds are administered through the National Coastal Wetlands Conservation grant program and the North American Wetlands Conservation Act grant program. Grants are matched by private and state-agency partners.*

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Sharon Coogler

For more information about Louisiana's coastal wetlands and the efforts planned and under way to ensure their survival, check out these sites on the World Wide Web:

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## FUNDING AUTHORIZED UNDER CWPPRA

# Grant Programs Support Wetlands Throughout America

**W**etlands, land where water saturation determines the soil structure and the types of resident plant and animal life, are essential to a functional, thriving natural environment. It is estimated that in the 17th century, there were more than 220 million acres of wetlands in the continental United States. Now more than half of those wetlands have disappeared – drained for agriculture, dredged for navigation, degraded by pollution, destroyed by erosion or overwhelmed by numerous other natural and man-made assaults.

Recognizing the essential role of coastal wetlands in performing such services as maintaining water quality, preventing floods and preserving biodiversity, Congress enacted the Coastal

Wetlands, Planning and Protection Act (CWPPRA) of 1990, which authorized funding for wetland restoration in Louisiana and for the National Coastal Wetlands Conservation (NCWC) grant program and the North American Wetlands Conservation Act (NAWCA) grant program.

Administered by the U.S. Fish and Wildlife Service, the NCWC grant program is financed through the Sport Fish Restoration and Boating Safety Trust Fund, which is derived from excise taxes on fishing equipment, import duties, motorboat and small engine fuels, plus interest. Matched in part by project partners, grants cannot exceed \$1,000,000. Between 1992 and 2015, \$340,900,000 in grant monies have been awarded to 25 coastal states and three

U.S. territories for 499 projects benefiting more than 338,237 acres of coastal wetland ecosystems.

NAWCA programs are administered by the U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation and are funded in part through the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA). Unlike grants made through the NCWC grant program, projects in Louisiana are eligible for NAWCA grants. From September 1990 through March 2014, grants totaling nearly \$1.3 billion were awarded to approximately 5,000 partners for 2,421 projects benefiting 27.5 million acres of habitat. Partners have contributed an additional \$2.7 billion in matching funds. 





## MAINE'S FISH THRIVE IN RESTORED HABITAT

# Penobscot Project Reconnects the River and the Sea

**I**n the ancestral memory of the Penobscot people, salmon by the tens of thousands made their way from the Gulf of Maine through the coastal estuary to spawning grounds far up the Penobscot River. But for the past 200 years, man-made barriers have prevented migrating fish from reaching their historical habitats. During that period, the numbers of salmon – and alewives, eels and other fish – plummeted. By the early years of the 21st century, native Penobscot River fish populations were at or near all-time lows, and as fish populations dwindled, so did birds and other wildlife dependent on fish for food.

The plight of the river attracted the attention of many interested parties. In 2004, they founded a non-

profit trust to implement the Penobscot River Restoration Project, a large-scale, ecosystem-based endeavor to re-establish the river's natural ecological functions and improve fish access throughout the Penobscot watershed. To accomplish these goals, the parties proposed that the Penobscot River Restoration Trust purchase and remove or bypass three hydropower dams obstructing fish migration and improve fish passages at other sites while maintaining net power generation in the watershed.

The upstream dam, Great Works, was removed in 2012, but the Veazie dam remained. Built on the site of the first dam erected on the river in 1834, at the top of the estuary just inland from the reach of tides, the 34-foot high, 850-foot-long dam pre-

Removing dams freed the flow of the Penobscot River for the first time in nearly two centuries. Though targeting the restoration of the river's historic fisheries, the project benefits human communities along the river as well. Fishing, canoeing, kayaking and other river-related activities draw tourists to the region, bolstering its economy.

vented a formidable barrier to migrating fish

### Tearing down the wall

To enable 11 species of native diadromous fish to access upriver habitat, the Penobscot River Restoration Project determined that the Veazie Dam had to come down. To assist in the dam's removal, the project was awarded a National Coastal Wetlands Conservation (NCWC) grant in 2013. Authorized by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) in 1990, the

NCWC grant program promotes coastal wetland conservation throughout the nation. “This was actually the second NCWC grant that the Penobscot River project received,” says Colleen Sculley, chief of the Division of Wildlife and Sport Fish Restoration for the U.S. Fish and Wildlife Service’s Northeast Region. “The first, awarded in 2007, helped get the entire project off the ground. Receiving the second grant in 2013 facilitated the quick removal of the Veazie Dam.”

Acting on behalf of the state of Maine, a Penobscot River Restoration Project partner, the Maine Department of Inland Fisheries and Wildlife prepared the NCWC grant

proposal. The department demonstrated the benefits that dam removals deliver to the Penobscot River ecosystem, among them

- improving wetland habitats from the estuary to the river above the dams
- increasing the abundance and diversity of fish species and other wildlife
- restoring impounded areas to more natural, free-flowing conditions
- increasing shallow-water areas used by wading birds
- restoring access to 100 percent of the historic habitat of lower-river sea-run fish
- improving access to historic river and tributary habitat for up-river sea-run fish

The effects of removing the Veazie Dam were dramatic. Quickly nearly 300 acres of in-stream and riparian habitats were restored to their natural conditions while miles of the second-largest tidally influenced river system in New England resumed their historical hydrological patterns. “With the dam gone, marine and freshwater ecosystems are reconnected,” says Sculley. “Sea water pulses up the river, expanding estuarine habitats, while fresh water pours down to invigorate the coastal marshes.”

Removing the dam was a complex undertaking. Scientists monitored the river’s ecological communities and hydrological conditions; engineers planned the dam removal and designed fish passages; communications experts explained the project to the public and built a network of support; and construction workers built access, demolished the structure and carted it away.





Scientists are hopeful that restoring access to spawning grounds up the Penobscot River watershed will help populations of the endangered Atlantic salmon to rebound.

“Now the river flows freely for more than 75 miles,” says Laura Rose Day, executive director of the Penobscot River Restoration Trust. “That opens about 1,000 miles of habitat in the Penobscot River watershed, restoring the historical range and spawning grounds for sea-run fish.”

While iconic species like Atlantic salmon carry the banner for the river’s recovery, all creatures in the ecosystem – from bald eagles soaring overhead to aquatic insects darting over riffles and pools – benefit from a rejuvenated watershed. “Used to be only a handful of herring would make it beyond Veazie Dam,” says Day. “Now a couple hundred thousand swim up the main artery of the river and into smaller streams in the woods, into places where they belong but couldn’t get to before. Food is moving freely throughout the system.”

### Relating to the river

“Protecting our natural heritage does more than conserve native fish and wildlife,” says Sculley. “By providing opportunities to reconnect to the river and its natural cycles, the Penobscot project benefits people, too.”

“The free-flowing river expands the potential for recreational activities,” says Day. “People walking along the shoreline are learning what a healthy river is – what it looks like, what it sounds like and what it does. Rebounding fish populations attract increasing numbers of anglers. For the first time in more than a century, people can paddle the river from the historic falls at Milford to the ocean, inspiring races that bring tourists and tourism dollars to the region.”

No one values the restoration of the river more than the Penobscot Indian Nation. “We have depended on the river for our survival

## Penobscot fish

Fish native to the Penobscot River include 11 species of diadromous fish, fish that migrate between salt water and fresh during some phase of their life cycle.

### Lower-river sea-run fish:

- Shortnose sturgeon\*
- Atlantic sturgeon
- Striped bass
- Rainbow smelt
- Tom cod

### Up-river sea-run fish:

- Atlantic salmon\*
- Shad
- Blueback herring\*\*
- Alewife\*\*
- American eel\*\*
- Lamprey

*\*Listed as endangered species*

*\*\*Listed as species of concern*

## Grants preserve nation's coastal wetlands

Established by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA), the National Coastal Wetlands Conservation (NCWC) Grant Program awards matching funds to projects in states (excluding Louisiana) and territories with the goal of long-term conservation of coastal wetland ecosystems.

In competing for grants, projects proposing to acquire, restore, manage or enhance coastal wetlands are evaluated according to criteria such as

- wetlands conservation
- maritime forest conservation
- coastal watershed management
- conservation of threatened or endangered species
- benefits to fish and to coastal-dependent or migratory birds
- prevention or reduction of site degradation
- education and outreach or wildlife-oriented recreation
- estimated longevity
- participation of project partners

for more than 10,000 years,” says John Banks, director of the Penobscot Nation’s Department of Natural Resources. “The river has provided us with sustenance and served as our transportation highway. The river, and the river’s fish, are central to our stories; the river flows through our veins. As the aboriginal tribe in this region, we feel reciprocity to protect, preserve and enhance the watershed. It is our God-given responsibility to improve the environment – for everyone’s benefit.”

With the river reconnected to the sea, the Penobscot Nation is resuming some practices and cultural activities that have lain dormant for 200 years. As ocean fish make their way upriver to the reservation, fishing

rights that were meaningless for lack of edible fish can again be exercised. Ceremonies suspended because of the scarcity of salmon may take place once more.

### The interconnected web of restoration partners

“Restoring a river involves many disciplines working together,” says Day. “Scientists, engineers, fish-passage designers, communications experts – the project’s partners assumed responsibility for various facets of the undertaking according to their skills.”

The Penobscot Nation used its treaty-reserved fishing rights as leverage to open doors to federal agencies and funding sources and to strengthen the argument

Now that fish once again swim through an unobstructed river and into the territory of the Penobscot Indian Nation, the tribe is reviving traditions thousands of years old. Not only are fish central to the Penobscots’ traditional diet, they are central to the Penobscots’ ceremonies, myths and stories.



Joe Dana

for improving fish passage on the river. In addition to wetland scientists, the U.S. Fish and Wildlife Service provided expertise that guided relicensing the remaining operational hydropower plants in the watershed to prevent any net loss of power generation.

“Winning the NCWC grant provided the catalyst for removing Veazie Dam,” says Day. “When the U.S. Fish and Wildlife Service made that investment in the project, it inspired others to pledge funds. This kind of work can only be accomplished through such public-private partnerships.”

### A river for the 21st century

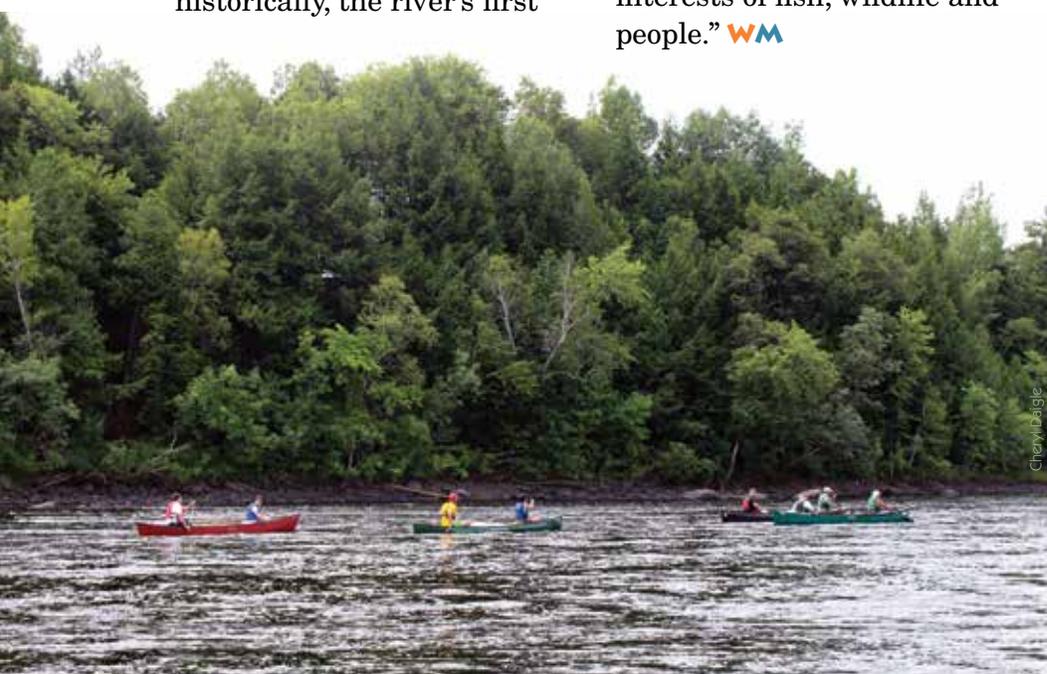
Fish can now swim unobstructed from the ocean to the fish lift at the hydropower plant at Milford Dam. The dam is sited where, historically, the river’s first

major falls blocked passage to about half the river’s fish. “While there is no better way to provide for fish passage than removing dams, we are striving to balance uses of the river,” says Day. “Operating this dam is essential in meeting the project’s goal of maintaining or increasing power production, so the dam’s owner, Black Bear Hydro – Brookfield, is improving its fish lift. Last year its performance was promising. More than 800 shad passed through, and shad are notably difficult to pass.”

“Changes made to the river a century or two ago no longer fit today’s sensibilities,” says Alex Hoar, a senior biologist with the U.S. Fish and Wildlife Service. “By re-designing the river to reflect our present ecological, cultural and economic values, the Penobscot River Restoration Project rebalances the interests of fish, wildlife and people.” **WM**

## Penobscot River Restoration Project partners

- Penobscot Indian Nation
- Private nonprofit organizations
  - Penobscot River Restoration Trust
  - American Rivers
  - Atlantic Salmon Federation
  - Maine Audubon
  - Natural Resources Council of Maine
  - The Nature Conservancy
  - Trout Unlimited
- State of Maine
- Department of Interior
  - U.S. Fish and Wildlife Service
  - Bureau of Indian Affairs
  - National Park Service
- National Oceanic and Atmospheric Administration
- Hydropower companies
  - PPL Corporation
  - Black Bear HydroPartners LLC



## OYSTERS BENEFIT FROM CLEAN WATER PROTECTION

# Grant Conserves Estuary's Shoreline in Washington State

**E**aten an oyster recently? If it were a west coast oyster, there's a good chance that it was raised in Willapa Bay. And what makes Willapa Bay such a good place to grow oysters? "Healthy conditions," says Mark Johnsen, an attorney who serves as counsel to the land trust Forterra (formerly Cascade Land Conservancy). For 15 years Johnsen has been involved in efforts to preserve the second largest and most intact estuarine ecosystem on the West Coast – and the top oyster-producing estuary in the country. "There is very little development along Willapa Bay's shoreline and lit-

tle pollution from upstream flowing into its waters. But the shallow bay is fragile. Any environmental degradation occurring upland as well as directly in the wetlands immediately affects the entire ecosystem."

Potential threats to Willapa Bay include the removal of its vegetative buffer due to logging or development, the building of homes and other structures along the shore or on nearby slopes, septic contamination and sedimentation of its waters. So when the opportunity arose to purchase 705 acres of salt marsh, eelgrass meadows, mudflats and freshwater for-

ested wetlands in south Willapa Bay, conservationists understood the importance of acquiring this property. Near the Willapa National Wildlife Refuge, the acquisition preserves five miles of pristine estuarine shoreline and expands and consolidates the bay's protected landscape.

Seemingly pristine wetlands in the Pacific Northwest face pressures similar to those threatening wetlands in other parts of the country: destruction due to development, upstream contamination from industry (in this case, logging), and conversion of native plant communities into stands of invasive species. Purchasing land and placing it in perpetual stewardship of its natural state is one approach to ensuring critical wetlands continue to provide ecological functions essential to human society and habitat for wild species.



Coastal habitats are among the most productive ecosystems on Earth. Types of coastal habitats include

- fresh marshes
- salt marshes
- seagrass beds
- mangrove swamps
- bottomland hardwood swamps

**Coastal wetlands are essential ecosystems for numerous species.**

- Coastal wetlands provide spawning grounds, nurseries, shelter and food for finfish, shellfish, birds, and other wildlife.
- More than half of the United States' commercial fishes live, feed or reproduce in estuarine or coastal waters.
- The quality and quantity of coastal wetlands correlate directly to the health and abundance of commercially harvested shrimp, blue crabs, oysters, and other species.
- Coastal wetlands nurture and shelter sport fish and provide recreational fishermen and women boating access to fishing grounds
- Coastal wetlands provide resting, feeding, and breeding habitat for 85 percent of waterfowl and other migratory birds.
- Coastal wetlands preserve biodiversity across the landscape and provide habitat for

many rare, threatened and endangered plant and animal species.

**Humans depend on wetlands for ecological services. Wetlands**

- help to control floods naturally, thereby protecting crops in agricultural areas and roads, buildings, and human health and safety in developed areas
- buffer shorelines against erosion
- help reduce the rate and volume of runoff in urban areas
- help maintain and stabilize streamflows over long periods of time
- trap sediment, nutrients and pollutants; sequester carbon
- recharge groundwater and filter drinking water
- provide opportunities for hunting, fishing, birdwatching, boating, tourism and other outdoor recreation.

**Nationwide, coastal wetlands have declined, largely because of**

- urban, industrial and agricultural development
- spatial isolation and fragmentation
- degradation caused by exotic and invasive species

**Grant award brings prominence to the project**

To purchase land near Stanley Point and the mouth of the Naselle River in south Willapa Bay, the Washington Department of Ecology engaged Forterra and other interested parties and applied for a grant through the National Coastal Wetlands Conservation (NCWC) pro-

gram, authorized under the Coastal Wetlands Planning, Protection and Restoration Act. "A NCWC grant facilitates accomplishing this kind of preservation project," says Johnsen. "In addition to providing substantial funds, it can be used to attract private money. A number of partners, including private foundations such as Forterra and Wildlife Forever, joined

the Washington Department of Fish and Wildlife in contributing matching funds."

"The grant was a driving force for this project," says Kyle Guzlas, who worked for the Washington Department of Fish and Wildlife at the time. "Without it, we would not have been able to purchase as much acreage. Not only was the money im-

portant, but the prestige of winning the grant helped us to increase financial support from other sources.”

Once purchased, most of the land was transferred to the ownership of the Washington Department of Fish and Wildlife, which will manage it in perpetuity.

### Protection strengthens all of Willapa Bay

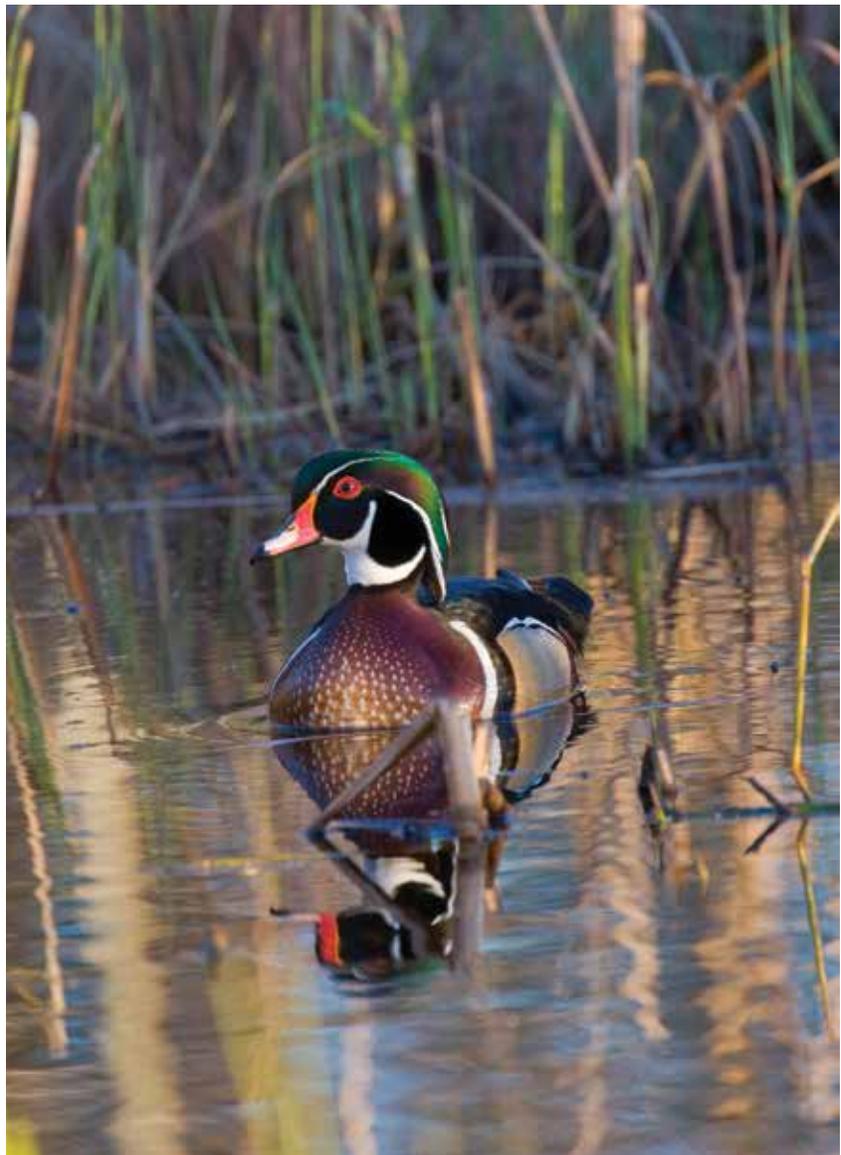
From saltwater marshes and eelgrass meadows to freshwater swamps and bogs to old-growth stands of cedar and hemlock to upland forests, the varied habitats of Willapa Bay host numerous species, including a number that are listed as threatened or endangered. Salmon, eulachon and other anadromous fish make their way through the bay and up streams and rivers to spawn. Cutthroat trout swim in brackish marshes where a rare kind of snail clings to reeds. Herons stalk the mud flats at low tide while endangered marbled murrelets fly in from the sea to search for nesting sites in old-growth trees.

“Providing shoreline habitat and a vegetative buffer zone improves the numbers and health of all kinds of animals, including migrating birds and fish and large land mammals like elk and bear,” says Johnsen. “Acquiring land near Stanley Point and the Naselle River mouth in-

creases habitat for a complex assemblage of wildlife, including species that attract hunters, fishers, birdwatchers and nature lovers. These are visitors upon whom the local tourist-based economy depends. By expanding the protected area of this coastal wetland ecosystem, the NCWC grant benefits all the

creatures that depend on a healthy natural environment.”

And, one might say, the grant benefits the nation’s cuisine as well, as oysters continue to flourish in the clean waters of a better protected Willapa Bay. **WM**



Waterfowl throughout the hemisphere depend on wetlands for food, shelter and migratory habitat. Wetlands provide benefits to humans that are less obvious though no less essential, among them water purification, groundwater storage, flood mitigation, erosion control, seafood nurseries, recreational opportunities and aesthetic experiences.

## SONGBIRDS AND WATERFOWL ROOST AND REST IN NORTHWESTERN OHIO

# Restoration of Lake Erie Wetlands Creates a Birding Hotspot

The Midwest once provided ample wetlands in which songbirds and waterfowl could rest, feed and breed during their seasonal migrations. But as urbanization and agricultural production spread across the landscape, bogs, swamps, marshes and potholes vanished. “Ohio has lost about 90 per cent of its historical wetlands,” says Russ Terry, manager of conservation programs for Ducks Unlimited in Ohio, “and the percentage of wetland loss along Lake Erie’s coast is even greater.”

Why would this concern a duck hunter? “If you don’t have stop-over areas where

migrating ducks can rest and refuel, you don’t have ducks that survive to nest at their destinations,” says Jim Schott, manager of Ohio’s Pickerel Creek Wildlife Area. “In short order, you have no ducks. Plus, when you lose wetlands you also lose their ecological functions, such as water filtration. At Pickerel Creek, that has contributed to degraded water quality and high levels of algae in Lake Erie.”

So when the Ohio Department of Natural Resources (DNR) and a coalition of partners were awarded a grant that facilitated purchasing acreage and restoring wetlands near Lake Erie, they saw

it as a boon to both wildlife and humans. The award was made through the National Coastal Wetlands Conservation (NCWC) grant program, which was established by the Coastal Wetlands Planning, Protection and Restoration Act of 1990 to encourage coastal wetland conservation throughout the country.

### From farmland to wetland

Like so much of Ohio, the acreage, adjacent to the Pickerel Creek Wildlife Area, had been converted from its historical landscape into agricultural production. To design and restore wetlands



Project area immediately after construction.



Project area seven years later.

appropriate to the site, coalition partner Ducks Unlimited contributed its engineering services and scientific expertise. “We used different restoration techniques to maximize the use of our funds and to accommodate the topography of the project area,” says Schott. “On one parcel we dug out small, shallow depressions to mimic prairie potholes and installed drainage controls. On another we built dikes, drilled wells for a water supply and use pumps to regulate water levels. Our goal was to create a mosaic of diverse wetland habitats and manage them as would Mother Nature, with dry years interspersed among years of high water.”

Plants responded quickly to the newly wet conditions. “With management tackling control of invasive species and replanting wet prairie vegetation, different kinds of sedges flourished,” says Schott. Conditions are right for the threatened Eastern Prairie Fringe orchid to take root and Schott watches eagerly for its appearance in the project area.

Avian visitors have flocked to the new wetlands. Not only is there an increase among birds common in the Pickerel Creek area – the American black ducks and mallards, great egrets and blue herons, swamp sparrows and marsh wrens – but there are more frequent appearances of the more rarely sighted yellow-headed blackbird, sandhill crane and endangered trumpeter swan.

Proliferating muskrats indicate marsh health. Although keeping the muskrat population in check can present management challenges, the resurgence of this indigenous species pleases Schott. He quotes an early mentor in saying, “A good ’rat marsh is a good duck marsh.”

“Restoration of even a single acre produces an immediate benefit to waterfowl and wildlife,” says Terry. “Their populations vary as conditions change in the landscape. Providing more acres of healthy habitat helps to safeguard their numbers.”

### Signs of a thriving habitat

In the six years since the project’s completion, the results have delighted trappers, waterfowl hunters, bird watchers and other recreational users of the project area.

“Benefits of the project are two-fold,” says Paul Glander, a biologist with the U.S. Fish and Wildlife Service’s Wildlife and Sport Fish Restoration Program. “The first benefit is to the environment and the wildlife that depends on it – the birds, the animals, the plants.

“The second benefit is to humans. Obviously visitors enjoy access to the area and to the wildlife it attracts. But wetlands’ less visible ecosystem functions, such as water filtration and sediment and nutrient removal, provide more far-reaching social benefits.”

Terry points out that people throughout the country may share the project’s dividends even without setting foot in Ohio: The migratory songbirds and waterfowl they watch flying overhead or clustering around their backyard feeders may have fed, rested or bred in the project’s habitat.

### Links extend restored habitat

Two hundred and eighty acres is a mere speck on the map of wetland loss throughout the country – estimated to be as much as half of the historical wetlands in the continental United States. “Small projects don’t sound like a big deal,” says Terry, “but the benefit is putting them together, linking habitats across the landscape and creating a cumulative benefit. The NCWC grant allowed us to expand connected habitat along the Lake Erie coast, demonstrating that enough smaller projects do make a difference.”

Linking efforts of partners is as essential to wetland restoration and preservation as is linking habitats. “The NCWC grant and the partnerships among the grant coalition made this work possible,” says Terry. “Partners were essential in providing matching funds, loaning equipment, and contributing skills and expertise in landscape restoration.” The completed project, protected in perpetuity, is now managed by Ohio DNR as part of the Pickerel Creek Wildlife Area. 



**PROJECT AWARDED NORTH AMERICAN WETLANDS CONSERVATION ACT GRANT**

## Terracing Increases Habitat for Migrating Waterfowl

**T**he first cold wave of the season brings in the ducks. They settle on grasses on the leeward side of the terraces, where the water is calm. Plentiful nutrition satisfies the hunger of various species, and the fabled fecundity of the Louisiana wetlands returns.

Such is the vision of people working to restore wetlands in the eastern part of Louisiana's Terrebonne Basin. Disruption of natural water-flow patterns has increased the salinity of the basin's waters, causing vegetation to die and the marshes to break apart. On average, one acre of marsh converts to open water every five hours. Wind-generated waves muddy the water, prevent vegetation from flourishing and further erode the marshes.

In 2014 Ducks Unlimited, Inc. was awarded a North Amer-

ican Wetlands Conservation Act (NAWCA) grant to build terraces and install plants on about 800 acres in the basin, adjoining the Point-aux-Chenes Wildlife Management Area and bordered by Island Road. "The primary purpose of terracing is to break up waves and reduce erosion," says Leslie Suazo, coastal restoration coordinator for Ducks Unlimited in Louisiana. "By calming the water and decreasing its turbidity, terraces encourage the growth of submerged aquatic vegetation and provide resting and foraging sites for waterfowl. The NAWCA grant is helping to restore and increase healthy wetland habitat upon which so many migratory birds depend."

Waterfowl are not the exclusive beneficiaries of the project. The advantages of increased vegetative matter in marsh waters reverberate throughout the food chain.

Other wildlife – including fish, shellfish and Neotropical song birds – will populate the terrace habitat along with waterfowl. Local residents will profit from the protection that reducing shoreline erosion provides to their homes and investments; less wave action in the open-water areas adjacent to Island Road diminishes threats to the road's stability, the only vehicular route to Isle de Jean Charles and the Native American community living there.

### Synergy of partnerships

"A unique aspect of receiving a NAWCA grant is the opportunity it presents to leverage funds," says Phil Precht of project partner ConocoPhillips. "Winning a grant validates a project in a way that attracts other partners and compounds its value."

One criterion for evaluating a grant proposal is the degree of community support the project generates. “Island Road terracing could not be accomplished without the contributions of our many partners,” says Suazo. “The financial investments and participation of Terrebonne Parish and the landowner ConocoPhillips (Louisiana Land and Exploration Company LLC) are essential. Other partners, including the United Houma Nation, the coastal advocacy group Restore or Retreat and the community resource organization Bayou Grace, are generous in their pledges of sweat equity.”

In addition to inspiring synergy among partners, the Island Road terracing project will achieve a geographic synergy with other projects in the area, including marsh creation projects funded through the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) and the state of Louisiana. “We share information, coordinate project footprints and integrate our particular areas of expertise with CWPPRA projects,” says Suazo. “The needs of any restoration program are always greater than the resources available. But working together we can build projects that complement one another and increase the efficiency of our combined efforts.” **WM**

## NAWCA grants protect essential waterfowl habitat

From a migrating bird’s point of view, there is only one kind of boundary: between habitat and no habitat. Lines between countries, states or public and private lands simply do not exist. Acknowledging the importance of wetland habitats throughout the continent upon which waterfowl and other migratory birds depend, Congress first passed the North American Wetlands Conservation Act (NAWCA) in 1989. The act, in part, supports activities of the 1986 North American Waterfowl Management Plan, an international agreement for the long-term protection of wetland habitats in North America; and provides matching grants to organizations and individuals to carry out wetland conservation projects benefiting wetland-dependent migratory birds and other wildlife in the United States, Canada, and Mexico.

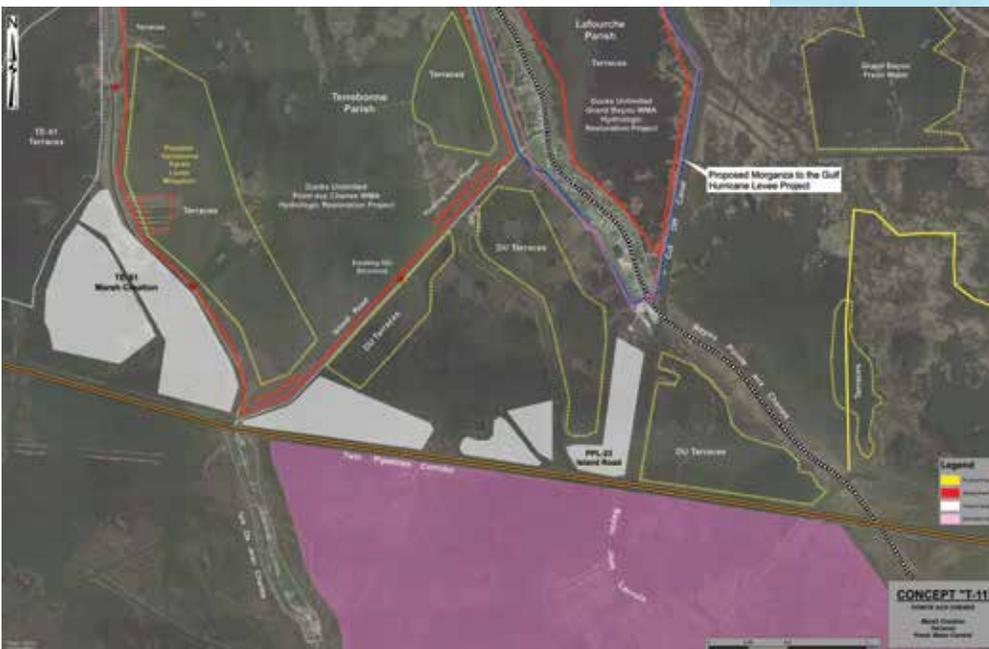
The act provides for two grant programs, both requiring monetary matches from project partners:

- o The Standard Grants Program supports projects in Canada, the United States, and Mexico that involve long-term protection, restoration, and/or enhancement of wetlands and associated upland habitats.
- o The Small Grants Program supports the same type of projects but only in the United States. Projects

are usually smaller in scope than standard grant proposals and grants do not exceed \$75,000.

Grant awards are based on evaluation of criteria specified in the act, including how a proposed project

- conserves waterfowl habitat, wetlands and associated habitats over the long term
- conserves other wetland-associated migratory birds
- conserves habitat for wetland-associated endangered species and other fish and wildlife in the project area
- conserves specified priority wetlands and relates to the national status and trends of wetland types
- achieves the partnership goals of NAWCA



Above: The map shows the project area awarded the North American Wetlands Conservation Act grant in proximity to Island Road and to other restoration and CWPPRA-sponsored projects.

Opposite: Terraces, photographed just after construction, are angled to break wave action and provide still water on the lee side, enhancing erosion control, land accretion and waterfowl habitat development.

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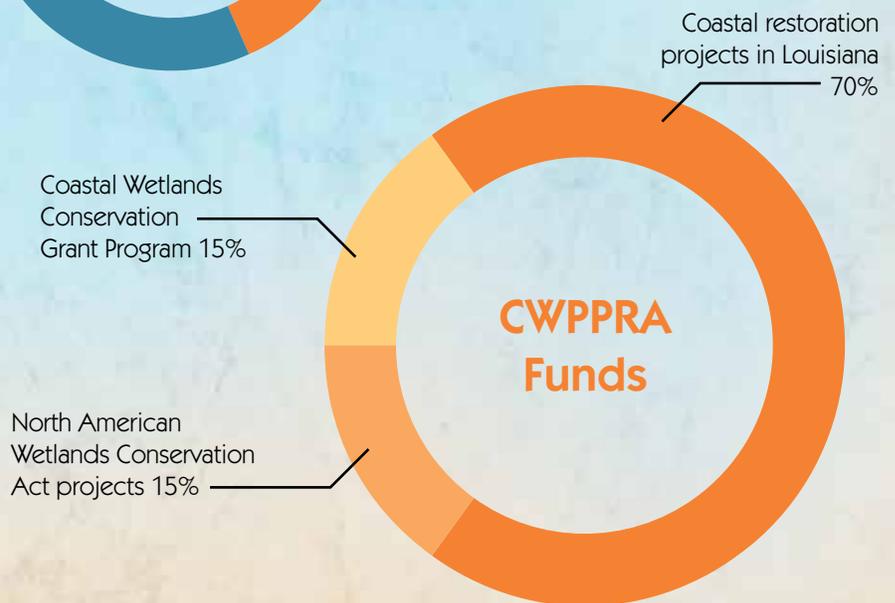
## Funding Coastal Wetland Protection and Restoration

In fiscal year 2015, the U.S. Fish and Wildlife Service will award \$21.1 million in National Coastal Wetlands Conservation (NCWC) grants to 13 coastal states to fund 25 projects that protect, restore, or enhance 11,353 acres of coastal wetlands and associated upland habitat. These funds will be augmented by more than \$31 million non-federal cost-share matches.

In the first part of the fiscal year 2015, the U.S. Fish and Wildlife Service awarded \$24.6 million in North American Wetlands Conservation Act (NAWCA) grants to fund 24 projects in 16 states, benefiting 130,758 acres of habitat. These funds will be augmented by \$57.5 million in matching funds. **WM**



The Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) receives 18.5% of the **Sport Fish Restoration and Boating Trust Fund**, which is derived from excise taxes on fishing equipment, motorboat and small engine fuels, import duties and interest.



All wetland protection and restoration projects funded through the Coastal Wetlands Planning, Protection and Restoration Act require non-federal matching contributions, either as cash or in-kind services, from states and private sources.

