

Bi-weekly Wetland and Stream Corridor Restoration Update

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Welcome to the Bi-weekly Wetland and Stream Corridor Restoration Update. This Web site

- Provides current information on wetland and river corridor restoration projects
- Recognizes outstanding restoration projects
- Offers a forum for information sharing

We welcome the submission of articles and announcements related to your restoration project. Just send your write-up to EPA's contractor at restorationupdate@tetrattech-ffx.com or mail it to Rebecca Schmidt, Bi-weekly Restoration Update Coordinator, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. We will carefully consider your submission for inclusion in a future update. If your submission is selected, please note that it might be edited for length or style before being posted. Because this Web site is meant to be a public forum on restoration information, we cannot post any information that is copyrighted or information that advocates or lobbies for any political, business, or commercial purposes or has the appearance of doing so.

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Feature Article

A Natural Riparian Area Reemerges

With the help of the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, a section of the Santa Clara River is once again flourishing with native plants. Sanger (Sandy) Hedrick, Jr., owner of Hedrick Ranches in Southern California, removed a large area of thick, nonnative *Arundo donax*, a pesky bamboo-like weed that displaces native plants. The weed is almost entirely gone now from 15 acres of Hedrick's 400-acre property along the Santa Clara River, where he grows lemons, oranges, and avocados. Springing up in its place are native grasses and shrubs, which provide food and cover for wildlife. Hedrick, whose grandfather bought the ranch property in 1946, has planted native willows, sycamore trees, wild rose, cottonwoods, and coyote bush. Blackberry bushes have returned as well as creeping wild rye.

He recently sold about 200 acres of adjacent property to the Friends of the Santa Clara River, a nonprofit conservation organization that will permanently protect the site for wildlife conservation. The area is considered a hot spot for birders; many come looking for the yellow warbler, endangered least Bell's vireo, or southwestern willow flycatcher.

Hedrick is a participant in the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program, which supplies funds and technical assistance to landowners who want to restore and enhance wetlands, native grasslands, and other declining habitats, to benefit threatened and endangered species, migratory birds, and other wildlife. Participating in the program since 1998, Hedrick has received funds to remove *arundo* and reintroduce native plants on his property.

Hedrick explains why restoring his land along the Santa Clara River to a more native state is important to him. "I've grown up here and become attached to this part of the earth," he said. "I've seen the impact we've had in developing property along the river. We need to do something to protect these important ecosystems. It helps to have the availability of programs such as Partners for Fish and Wildlife to assist us through it."

Partners for Fish and Wildlife—A History of Helping

Since the Service's Partners for Fish and Wildlife Program began in 1987, it has worked with more than 27,000 landowners to restore or enhance 574,800 acres of wetlands; 884,800 acres of native prairie, grassland, and other upland habitats; and 4,190 miles of riparian and aquatic habitat.

The Partners for Fish and Wildlife Projects in California restore habitat for one or more of the federal- and state-listed threatened and endangered species. The projects include planting native trees, shrubs, and grasslands; restoring historic wetlands; fencing riparian areas from cattle grazing; conducting prescribed burning to remove nonnative species; and restoring stream habitats.

Under the Partners for Fish and Wildlife Program, landowners enter into a cooperative agreement that requires them to maintain the restoration project for a minimum of 10 years. Although it's not a program requirement, the Service seeks a dollar-for-dollar cost share on a project-by-project basis. In California 50 percent of the cost of a project is typically borne by private landowners or other partners, such as state and local government, businesses, or other entities.

This year Partners for Fish and Wildlife has provided cost share funds for the following projects in California's Santa Barbara County:

- \$10,000 to the Land Trust for Santa Barbara County to support the removal of fennel, cape ivy, and other invasive plant species from the 782-acre Arroyo Hondo Ranch preserve along the Gaviota coast. Removing exotic species from Arroyo Hondo Creek and other preserve areas will benefit the endangered least Bell's vireo, southwestern willow flycatcher, tidewater goby, and southern steelhead trout, among other species.
- \$15,000 to Santa Barbara County to support the removal of *Arundo donax* in the Arroyo Burro Creek watershed. Removal of the plant will encourage the regrowth of native riparian plants along the creek. The creek provides habitat for plovers, geese, ducks, and other water birds.
- \$20,000 to the Land Trust for Santa Barbara County to support the removal of invasive weeds such as ice plant, mustard, and castor bean from 39 acres of the 230-acre Carpinteria Salt Marsh. The weeds encroach on the native habitat of rare birds and sensitive plants. The marsh contains intertidal wetlands, uplands, and channels. The project will benefit the federally endangered salt marsh bird's-beak, the state endangered Belding's savannah sparrow, and other plants and wildlife.

The U.S. Fish and Wildlife Service is the principal federal agency responsible for conserving, protecting, and enhancing fish, wildlife, and plants and their habitats for the continuing benefit of the American people. The Service manages the 94-million-acre National Wildlife Refuge System, which encompasses more than 535 national wildlife refuges, thousands of small wetlands, and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices, and 78 ecological services field stations. The agency enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also

oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies.

This article was excerpted from a U.S. Fish and Wildlife Service press release (<http://news.fws.gov/NewsReleases/R1/B780ACAF-1929-419F-B82548606424E1F8.html>). For more information, contact Lois Grunwald at 805-644-1766.

If you'd like your project to appear as our next featured article, e-mail a short description to restorationupdate@tetrattech-ffx.com.

Five-Star Restoration Projects Update

The goal of EPA's Five-Star Restoration Program is to bring together citizen groups, corporations, the Youth Conservation Corps, students, landowners, and government agencies to undertake projects that restore streambanks and wetlands. The program provides challenge grants, technical support, and peer information exchange to enable community-based restoration projects. A few Five-Star restoration projects are being revisited to see if the modest amount of funding (between \$5,000 and \$20,000) has helped the local restoration partners achieve their goals.

Project Title: White River Riparian Restoration
Five-Star Grant: \$9,960
Grant to: Indiana University, Research and Sponsored Programs
Location: Indianapolis, Indiana
Grant Year: 2000

Original Project Description:

In downtown Indianapolis, Indiana University/Purdue University (IUPU) will restore native plant communities along 8½ acres of the White River and create an outdoor classroom to complete the last key component of a conservation corridor through Marion County. Project partners, including the Indiana Department of Environmental Management, the City of Indianapolis Department of Public Works, and others, will work with local students and community members in the planting, maintenance, and monitoring of the project. Teacher workshops will be held to promote the integration of conservation education and experiential learning into middle and high school curricula.

Project Update:

Nature has once again taken control of the White River restoration site. Trees have been planted, and wildlife is moving back into the area. Restoration volunteers planted 12 species of trees on the 8-acre restoration site, which lies along a ½-mile section of the White River in downtown Indianapolis. The restoration team used three different restoration planting strategies—planting containerized trees, planting bare root whips, and implementing weed control strategies. In total, 1,332 trees were planted.

The restoration team encountered multiple challenges throughout the course of the planting project. One main challenge was vine control and removal. A broadleaf herbicide rated for use at aquatic sites was applied to portions of the restoration site before the plantings to reduce the growth of vines and grasses and give small trees an opportunity to establish themselves. Some sections of the restoration area were left untreated, and the results of the treated and untreated areas were compared. After a year of growth, the untreated areas consisted of mostly grasses that did not disrupt sapling growth, while the treated areas were recolonized with a variety of viney species that grew over the small trees and competed with them for light and nutrients.

A second unexpected challenge for the newly planted trees was an unusually dry spring. Several areas of trees wilted and lost their leaves, but later in the summer when the rains returned the trees seemed to recover on their own.

In spring 2001, after a year of monitoring, the containerized trees were growing well. Of the 420 trees planted using this method, only 3 did not survive: one young ash was lost to a large log that snapped it off in a flood event in April 2001, and two cottonwood saplings fell prey to moles. Deer or rodents found other young trees to feed on over the winter, but it looks as if the trees will survive. Additional monitoring revealed an 80 percent survival rate for the bare root whip plantings.

The site exhibits an abundance of wildlife. Volunteer monitoring efforts have recorded 15 species of butterflies, 23 species of birds, 3 species of turtles, and 1 bullfrog at the site. Continued monitoring programs are under way for butterflies, birds, dragonflies, reptiles, and amphibians.

Throughout the planting phase of the site and in the current monitoring phase, a variety of community members have been involved in the project. IUPU students, local high school and middle school students, and corporate and community volunteers have conducted the restoration planting and monitoring. In addition, the project Web site (www.cees.iupui.edu/ARBOR) contains a teacher resource section from which area teachers can download restoration-related presentations and workshops. IUPU also produces periodic reports on the progress of the restoration site, maintains the Web site, and gives presentations about the status of the restoration project at conferences throughout the United States. **[Updated May 2002.]**

Project Title: Norton Creek Wildlife Area Riparian Restoration
Five-Star Grant: \$5,462
Grant to: McKinleyville Parks and Recreation
Location: McKinleyville, California
Grant Year: 2000

Original Project Description:

In Humboldt County, a pilot project has been designed to integrate restored wildlife habitat into a suburban neighborhood setting while enhancing local school and community environmental education programs. McKinleyville Parks and Recreation, in partnership with the California Department of Fish and Game, McKinleyville High School, and others, will conduct on-the-ground restoration activities and create an outdoor classroom in the Norton Creek Wildlife Area, a 1.7-acre tract of emergent wetlands and

riparian forest that provides critical habitat for coastal cutthroat trout and several species of neotropical migratory birds. The enhancement of the area will reinforce the attitudes of the residents of McKinleyville and surrounding communities concerning the significance of habitat restoration, community involvement, and the value of natural open space. The National Marine Fisheries Service's Community-based Restoration Program is providing partial funding for this grant.

Project Update:

McKinleyville Parks and Recreation worked with the California Conservation Corps and other local volunteers to transform Norton Creek Wildlife Area from a neglected area to a frequently visited neighborhood space. Volunteers, working with the project director hired by McKinleyville Parks and Recreation, removed nonnative plants, thinned existing trees to promote new growth, planted native trees and vegetation, and cleaned up debris in the pond. California Conservation Corps volunteers helped build a footpath through the area and constructed a footbridge over the natural drainage area near the pond.

The McKinleyville Parks and Recreation department sponsored outreach programs to educate the community about the benefits of natural areas and to encourage them to report illegal activities in the area, including dumping. The parks and recreation department also oversaw the removal of rundown signage in the area and construction of new signage that encourages users to report illegal activities.

Residents are happy with the improvements. The area is considered an asset to the neighborhood, and residents are petitioning to expand the area in response to new subdivision construction nearby. The Norton Creek Wildlife Area now provides needed open space to the community and opportunities for local children to explore and learn about natural areas. [Updated May, 2002.]

Project Title: North Fork Palouse River Riparian Restoration Project
Five-Star Grant: \$10,000
Grant to: Palouse Clearwater Environmental Institute
Location: Potlatch, Idaho
Grant year: 1999

Original Project Description:

This project involves a cooperative effort among private landowners, Boy Scouts, community volunteers, a logging company, the Idaho Transportation Department, and the Palouse Clearwater Environmental Institute (PCEI) to restore riparian habitat along the North Fork of the Palouse River in an effort to enhance water quality. The partnership will stabilize and revegetate 1,000 linear feet of stream and establish a 100-foot buffer that will be planted with native plants. By involving the community in riparian restoration, this project will provide hands-on education and build awareness of the importance of riparian habitat and the imperative for restoration.

Project Update:

The project partners—private landowners, Boy Scouts, community volunteers, a logging company, the Idaho Transportation Department, and PCEI—worked together to restore riverside habitat along a section of the North Fork of the Palouse River near Potlatch, Idaho. The partnership stabilized and revegetated 1,000 linear feet of stream and established a 100-foot buffer that they planted with native plants.

PCEI planted more than 700 trees, created a trail, installed two interpretive signs off the highway, and mounted bird boxes on the floodplain where State Highway 95 crosses the Palouse River, 3 miles south of Potlatch. Project participants will see the trees grow over the years as they drive by on Highway 95 and will gain a better understanding of the ecology of the Palouse River watershed.

By involving the community in riparian restoration, the project met its goal to provide hands-on education and build awareness of the importance of riparian habitat and the need for restoring it. [Updated May 2002.]

Community-Based Restoration Partnerships

Restored Hall's Pond Provides Sanctuary to Urban Residents

A neglected urban park is benefitting from a sizable donation by a private foundation. The Stoneman Family Foundation donated \$250,000 toward the restoration and care of the Hall's Pond Sanctuary in December 1999. The first \$225,000 of the funds was used to restore wetland areas, implement steps to improve water quality, and plant vegetation to attract wildlife. The remaining \$25,000 will be matched by the Friends of Hall's Pond to create a permanent endowment fund for the sanctuary's care.

The Hall's Pond Sanctuary is in a predominantly urban part of Brookline, Massachusetts. The 6-acre sanctuary contains wetlands, an upland area, a garden area, Amory Woods, and Hall's Pond. The pond is fed predominantly by storm water runoff from its 107-acre watershed. Over the years, the pollutants carried by the storm water degraded the pond's water quality and nearby wetland habitat. The residents of Brookline joined together to form the Friends of Hall's Pond. By working together, they hoped to restore the sanctuary's habitat areas for the benefit of migratory and nonmigratory birds as well turtles, amphibians, and aquatic invertebrates.

The restoration team brought in the Ecological Extension Service of the Massachusetts Audubon Society to help them determine the steps that need to be taken in their restoration project. The Ecological Extension Service proposed a plan that would restore wetland areas, improve water quality in the pond, and revegetate upland areas.

Construction on the pond and marsh areas was completed in late 2001. Restoration included a new marsh, a restored wooded wetland, and a revegetated upland. This conservation land, with its five diverse ecological communities now serves as a nearby sanctuary for area residents and a host of waterfowl and other animals.

For more information on this project, visit the town of Brookline's Web site at www.townofbrooklinemass.com/Conservation/CurrentProjects.html#hallspondsanctuary or contact the Massachusetts Audubon Society at 781-259-9506.

South Carolina's Trout Streams, A Little Known Resource In Need of Restoration

Information for this article was taken from the May/June 2002 issue of *Land and Water* magazine that can be found online at www.landandwater.com/index.html.

When most people think of outdoor activities popular in South Carolina, trout fishing is probably not the first thing that comes to mind. However, trout fishing generates nearly \$17 million a year for the state's economy. The mountainous northwest corner of the state boasts more than 250 miles of trout waters.

These waters are being threatened by development. South Carolina is one of the top 10 states in terms of total acreage developed each year; on a per capita basis, the state ranks number four. Regardless of whether the natural vegetation is replaced by agricultural land or the buildings, roads, and parking lots that characterize urban and suburban development, it is the streams that pay the biggest price. Development near a stream can raise the temperature of the stream, decrease the oxygen content, and increase the amount of sediment and pollutants carried by the stream.

Federal, state, and local agencies recognized the threats faced by South Carolina's valuable trout streams and joined in a partnership to help protect the streams. Those concerned about the state's trout habitat formed a group called Partners for Trout. Member organizations include Eastatoee Valley landowners, the Foothills Resource Conservation and Development Council, South Carolina Department of Natural Resources, Trout Unlimited, U.S. Fish and Wildlife Service, U.S. Forest Service, and USDA Natural Resources Conservation Service (NRCS).

The first successful restoration completed by the partnership focused on two sites along the Eastatoee River in Pickens County. The stream suffered from high temperatures and increased sediment loads when trees and vegetation along the bank were cut down to facilitate agriculture on the surrounding land. Partners for Trout crafted a restoration plan that would recreate a riparian buffer along the stream and install instream structures that would slow bank erosion and enhance trout habitat within the stream. When approached with the restoration plan, landowners along the stream generously agreed to give up a small fraction of their agricultural land to return the areas along the stream to their natural state.

The partnership worked to install Cross-Vane and J-Hook structures to enhance stream habitat. The Cross-Vane structure consists of a series of strategically placed rocks that deflect stream flow away from streambanks while centralizing current in the middle of the channel. The J-hook is a gently sloping structure made of natural materials that decreases stream velocity near the streambank while creating a pool that is ideal for trout habitat. In February 2002 the partnership also completed the establishment of a riparian buffer by planting multiple willow limbs along the stream. Once mature, these trees will shade the stream and naturally lower water temperatures while further stabilizing the streambank with their root growth. "Over time, the restoration work that we have installed will look completely natural and it will be impossible to tell that man altered this natural resource," explains Gene Dobbins, NRCS agricultural engineer.

For more information on this restoration project and the Partners for Trout organization, contact the Foothills Resource Conservation and Development coordinator David Demarest at 864-467-2755 ext. 102 or e-mail dave.demarest@sc.usda.gov.

If you are part of an innovative community-based partnership that is working to restore river corridors or wetlands, we'd like to hear from you. Please send a short description of your partnership to restorationupdate@tetrattech-ffx.com.

Achieving Restoration Results

Conservation District Completes Three Restoration Projects

Nevada's Lahontan Conservation District recently completed three streambank restoration projects. Using funds from a Clean Water Action Plan Grant, the District helped repair rapidly eroding streambanks at three locations on private land. The District implemented similar restoration techniques at all sites. At the second site, the District rebuilt the streambank using compacted earthfill. They then stabilized the regraded area by anchoring large rootwads at the toe of the bank. At the first and third sites, instead of filling in the eroded area the District regraded the existing streambanks, pulling them back to 3:1 and 2:1 slopes, respectively. To help reestablish vegetation at all three sites, the District used a variety of techniques, including placing willow waddles along the toe of the bank and planting willow poles and saltgrass plugs on 4-foot centers along the bank. The District will monitor the success of these projects for the next 5 years. For before and after pictures of the project sites, and for more information, see the Lahontan Conservation District Spring newsletter at www.lahontan.org/newsletter.htm#2002%20River%20Projects%20Completed.

California Urban Stream Restoration Continues After Compromise Reached

Work is beginning anew on a project to restore an important urban river through downtown San José. The goals of the project are to restore damaged areas of the stream, create habitat for threatened fish and riparian wildlife, and protect the heart of Silicon Valley against damage from flooding that could cost the community hundreds of millions of dollars.

On Friday, June 21, 2002, San José Mayor Ron Gonzales and Santa Clara Valley Water District Board Chair Rosemary Kamei joined representatives from the U.S. Army Corps of Engineers for a "get back to work" celebration to complete the Guadalupe River Park and Flood Protection project. The \$227 million project began in 1992 and completed two phases of construction before being halted in 1996 over concerns about the project's ability to provide suitable habitat for steelhead trout and Chinook salmon (threatened species that travel through the river from San Francisco Bay to spawning grounds in the Santa Cruz mountains foothills).

Rather than battle it out in court, the water district, the city, the Redevelopment Agency and the Corps of Engineers invited natural resource agencies, state and local water resource agencies and others worked together to negotiate a compromise. The efforts of these diverse stakeholders yielded a revised project plan that not only provides flood protection, but also enhances the stream for fish and wildlife and improves the quality of water flowing through the Guadalupe River.

Project construction began again last year. When the flood-protection portion of construction is completed by November 2004, the project will feature underground passageways to carry floodwater away from the main stream, widened channels and streambed-erosion controls designed to protect hundreds of homes, schools, and businesses from flooding. Twenty-one acres of native vegetation is being planted along the river to cast shading over the stream to help keep waters cool for young fish.

The entire project is expected to cost \$226.8 million. Of that, \$128.7 million is federally funded, approximately \$83 million is being provided by the water district and \$15 million from the City of San José and the city's Redevelopment Agency. For more information, see www.valleywater.org/News_and_events/News_releases/06-18-2002.shtm or contact Mike Di Marco at the Santa Clara Valley Water District at 408-265-2607, ext. 2423 or by e-mail at mdimarco@valleywater.org.

If you are part of an innovative restoration project that has had positive results, we'd like to hear from you. Please send a short description of your project to restorationupdate@tetrattech-ffx.com.

Funding for Restoration Projects

Maine's Watershed Improvement Financial Assistance Partnership

The Watershed Improvement Financial Assistance Partnership (WIFAP) provides financial assistance to help Maine Soil and Water Conservation Districts conduct nonpoint water pollution projects to restore or protect lakes, streams, or coastal waters that are polluted or considered threatened. WIFAP funding is from the EPA (\$240,000), administered by the Maine Department of Environmental Protection, and State of Maine general fund (\$160,000), administered by the Maine Department of Agriculture, Food, and Rural Resources. EPA-New England and the Maine Association of Conservation Districts are cooperating partners. For more information on the WIFAP projects, contact Norm Marcotte at 207-287-7727 or norm.g.marcotte@state.me.us.

Please send any news you have on funding mechanisms available to local community organizations to restorationupdate@tetrattech-ffx.com.

News and Announcements

Migratory Bird Conservation Commission Approves Wetland Acquisition

On March 21, 2002, the Migratory Bird Conservation Commission approved the acquisition of more than 1,735 acres of important migratory bird habitat on units of the National Wildlife Refuge System in nine states—including 50 acres of wetland habitat within the established boundaries of Trinity River National Wildlife Reserve (NWR) in Liberty County, Texas. The Cabinet-level commission, chaired by Assistant

Secretary for Fish and Wildlife and Parks, Craig Manson, approved funds of \$3 million to acquire the land. All acquisitions had been previously approved by the affected states.

“The land acquisitions approved by the Migratory Bird Conservation Commission will protect important habitat, ensuring that the National Wildlife Refuge System continues to provide vital nesting, breeding, feeding and resting places for migratory bird populations,” said Steven Williams, Director of the U.S. Fish and Wildlife Service, which manages the refuge system. “By working with state, public and private partners, the Commission continues to make sure that the 95-million-acre National Wildlife Refuge System remains the world's premier network of public lands dedicated to wildlife conservation.”

Other National Wildlife Refuge System acquisitions approved by the Conservation Commission are:

- Maryland: Acquisition of 500 acres of marsh and other wetland habitat to protect wintering areas for migratory waterfowl within the boundaries of Blackwater NWR, Dorchester County.
- Arkansas: Acquisition of 50 acres of wetlands to protect waterfowl habitat in Bald Knob NWR, White County.
- Washington: Purchase of 331 acres of waterfowl habitat in Klickitat County within the approved boundaries of Conboy Lake NWR.
- Tennessee: Purchase of 161 acres of waterfowl habitat in Lower Hatchie NWR, Lauderdale and Tipton Counties.
- California: Purchase of a total of 119 acres of wetlands in the approved border of North Central Valley Wildlife Management Area, Colusa NWR, Colusa County.
- New Jersey: Purchase of 78 acres within the boundaries of Wallkill River NWR, Sussex County.
- Wyoming: Lease of 320 acres of riparian habitat within the previously approved boundaries of Cokeville NWR, Lincoln County.
- South Carolina: Exchange and purchase of 227 acres of waterfowl habitat to be added to Savannah NWR, Jasper County.

The Migratory Bird Conservation Commission also approved 30 grants that will foster wetland restoration, protection, and enhancement projects in Mexico and the United States under the auspices of the North American Wetlands Conservation Act. Grant funds of nearly \$21 million will be combined with \$128 million in partnership money. The commission acts as overseer for the North American Wetlands Conservation Act.

The Migratory Bird Conservation Act of 1929 established the Migratory Bird Conservation Commission to approve land to be purchased for the National Wildlife Refuge System with monies from the Migratory Bird Conservation Fund. The fund is supported by revenue collected from Federal Duck

Stamp sales, import duties collected on arms and ammunition, right-of-way payments to the refuge system, and receipts from national wildlife refuge entry fees.

The U.S. Fish and Wildlife Service is the principal federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the continuing benefit of the American people. The Service manages the 95-million-acre National Wildlife Refuge System which encompasses nearly 540 national wildlife refuges, thousands of small wetlands and other special management areas. It also operates 70 national fish hatcheries, 64 fishery resource offices, and 78 ecological services field stations. The agency enforces federal wildlife laws, administers the Endangered Species Act, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid program that distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state fish and wildlife agencies. For more information, see <http://news.fws.gov/NewsReleases/R2/DFE46434-4D04-4E8B-A7E3605A3C8CD764.html>.

The Nature Conservancy and NOAA Partner to Restore Habitat of America's Aquatic Great Places

On June 18, 2002, The Nature Conservancy announced that it has teamed up with the National Oceanic and Atmospheric Administration (NOAA) in a 3-year partnership to restore habitat in some of America's most valuable coastal ecosystems. Projects are under way in such diverse places as California's Santa Clara River, the Chesapeake Bay watershed, Oregon's Siuslaw and Long Island's Peconic and South Shore estuaries, the beaches of Delaware, Texas's Croaker Hole Complex, the Florida Keys, and North Carolina's Pamlico Sound. Project ideas for the partnership's second year are being solicited, with grant money available for eligible communities in states that contain anadromous, estuarine, and marine species, and their habitats.

"This partnership comes at an exciting time in The Nature Conservancy's 50-year history because we are launching new Freshwater and Marine Initiatives in order to more effectively protect aquatic species and habitats," said Steve McCormick, The Nature Conservancy's president. "Although we have enjoyed working with a number of federal agencies, our relationship with NOAA is relatively new and very exciting. We can't wait to grow this partnership, and to explore similar opportunities to work together in the future."

During the partnership's first year, The Nature Conservancy coordinated public and private partners, and local communities, to match and further leverage NOAA's Community-Based Restoration Program \$400,000 challenge grant to jump-start local restoration projects. The total value of this collaboration is expected to exceed \$4 million over its three-year lifespan. Projects, jointly developed by the NOAA Restoration Center and The Nature Conservancy's Freshwater and Marine Initiatives, collectively cover a geographically wide range.

"The Community-Based Restoration Program has proven to be a catalyst for habitat restoration around the nation," said Bill Hogarth, assistant administrator for NOAA Fisheries. "Working with partners like

The Nature Conservancy greatly expands NOAA's ability to enhance habitats critical to sustainable fisheries and the recovery of many threatened and endangered species."

Projects funded in the partnership's first year include:

California—In the Los Angeles—Ventura region, removing invasive species from a segment of the Santa Clara river will contribute toward the passage and survival of migratory species of native resident and anadromous fish such as the threatened steelhead.

Delaware—Incorporating new science into projects on the beaches of Delaware Bay will protect communities from storm damage while improving, habitat for spawning horseshoe crabs.

Florida—Restoring a keystone urchin in the Florida Keys will decrease the abundance of algae, which will ultimately help improve the health of the coral reefs.

New York—Restoring hard clam populations will improve water quality and will increase ecosystem-wide functioning of the Peconic and South Shore estuaries with the hope of eventually reducing harmful algal blooms such as brown tide.

North Carolina—Constructing, restoring and monitoring an interrelated complex of oyster reef habitat within a 50-acre area of Pamlico Sound will enhance estuarine biodiversity.

Oregon—Controlling an invasive marsh reed on Cox Island will restore and protect important habitat in the Siuslaw estuary, and will help to prevent dispersal to other sites and possibly other estuaries where spread is likely.

Texas—Reestablishing historic hydrology within Mustang Island's Croaker Hole Complex will facilitate passage of important marine organisms and will benefit other coastal wetland-dependent species such as waterfowl and wading birds.

Virginia—Restoring eleven miles of reproductive habitat for anadromous fish will eventually increase access to historical fish runs in Virginia's Dragon Run and Cat Point Creek.

"This partnership has provided us with the opportunity to work with stakeholders from around Pamlico Sound to begin thinking about the future of the estuary strategically and cooperatively," said Pamlico Sound Project Director for the Conservancy Jeffrey Smith DeBlieu. "We hope it is the first step towards a much larger restoration vision for the Sound. All of our partners and potential partners have been very responsive, and we are getting a lot of support."

"This grants program is enabling us to take the first steps necessary to not only restore shellfish by increasing hard clam spawning stock, but also to evaluate whether we have found a way to make our coastal waters less susceptible to harmful algal blooms and brown tide," added Dr. Marci Bortman from the Conservancy's Peconic Estuary project.

States and territories containing anadromous, estuarine, and marine species are eligible to compete for grants typically ranging from \$25,000 to \$75,000. For information on guidelines and requirements, visit www.conserveonline.org, or the NOAA Fisheries Restoration Center www.nmfs.noaa.gov/habitat/restoration. To learn more about The Nature Conservancy, visit www.nature.org. To view the original press release see <http://nature.org/aboutus/press/press680.html>.

Cargill Announces Agreement to Help Restore Thousands of Acres of Bay Shoreline

On May 29, 2002, Cargill announced that a historic “framework agreement” has been reached to sell 16,500 acres of Cargill Salt's San Francisco Bay area property to the State of California and the federal government for habitat restoration. “This historic agreement will set in motion the largest wetlands restoration undertaken in California history,” said U.S. Senator Dianne Feinstein (Democrat from California).

The framework agreement, which was announced by Sen. Feinstein, California Governor Gray Davis, and Cargill Chairman and Chief Executive Officer Warren Staley, sets the stage for restoration of a significant amount of the bay front to tidal marsh habitat, which has been decreasing since the California Gold Rush in the mid-1800s. The acquired lands will be permanently preserved as open space and wildlife habitat.

The framework agreement outlines the sale of 16,500 acres of Cargill's ponds, which are currently used for solar salt production, for \$100 million. The property, which spreads across the southern end of San Francisco Bay and along the Napa River, includes lands that Cargill owns in fee and areas within the Don Edwards San Francisco Bay National Wildlife Refuge, on which Cargill owns salt-making rights in perpetuity.

The state and federal governments, as well as four private foundations, including the Richard and Rhoda Goldman Fund, the William and Flora Hewlett Foundation, the David and Lucile Packard Foundation and the Gordon and Betty Moore Foundation, would provide funds to purchase the property. The U.S. Fish and Wildlife Service and the California Wildlife Conservation Board appraised the property at \$243.3 million. Cargill has agreed to donate all value in excess of \$100 million.

Cargill will continue to produce salt at the edge of San Francisco Bay, but on about one-third of its current acreage by using advanced technology and new salt-making techniques. No jobs will be lost as a result of the acquisition. In addition, the ponds used in salt production will continue to provide habitat for least terns, snowy plovers, phalaropes, black-necked stilts, and other species that prefer this type of habitat.

The framework agreement reflects the basic understanding among the parties, but is subject to the development of a purchase agreement and a final phase-out agreement that will specify the schedule for transferring management of the property to the U.S. Fish and Wildlife Service and the State of California, as well as the condition of the property at the time of transfer. The two agreements must be completed by September 16, 2002, and the closing date would occur on or before December 16, 2002. For more information, see www.cargill.com/today/releases/02_05_29salt.htm.

To post your restoration news and announcements, please send information to restorationupdate@tetrattech-ffx.com.

Upcoming Conferences and Events

New Listings

Colorado Watershed Assembly:

Watershed Groups: Moving from Planning to Implementation

September 12–13, 2002

Breckenridge, Colorado

The third annual Colorado Watershed Assembly conference will offer sessions designed to support collaborative efforts to protect and improve the conservation of Colorado Watersheds. Topics currently on the agenda include building sustaining watershed groups, implementing the watershed approach, and technical aspects and tools of watershed protection and restoration. For more information, visit www.coloradowater.org or call 303-312-6356.

National Association of Conservation Districts—57th Annual Meeting

February 9–13, 2003

Orlando, Florida

Conservation leaders, employees, and partners from across the nation are invited to make plans to attend the National Association of Conservation Districts (NACD) 2003 Annual Meeting at Disney's Coronado Springs Resort in Orlando, Florida. Two major issues will be addressed at the meeting—Farm Bill implementation and smart growth. Top government officials will be invited to report on Farm Bill progress and plans that impact conservation district work in the field. A panel of urban growth experts will help identify the major issues that districts need to be aware of in order to achieve a pattern of smart growth in their communities. For more information, see www.nacdnet.org/2003 or e-mail 2003@nacdn.net.

Wetland Training by Environmental Concern Inc.

Environmental Concern Inc. (EC), a non-profit corporation located in St. Michaels, Maryland, offers a series of wetland training opportunities for both educators and environmental professionals. For more information, see www.wetland.org/courses.html. Some of their upcoming educator courses include:

POW!: The Planning of Wetlands

Sep 10–11, 2002, Laurel, Maryland

Oct 04–05, 2002, Chesterfield, Virginia

If you are planning a wetland for use as an outdoor study area or seeking recognition in the Maryland Green Schools program, this course will help you achieve those goals. This 3-day course is designed to

guide educators in the construction, restoration, enhancement, and monitoring of wetlands in or near school yards using natural and/or artificial water sources. Participants will go through the steps of planning and designing a wetland using hands-on activities suitable for students and informal educational groups. Background material will be covered as needed, but most activities will be outside. Each participant will receive a copy of *POW! The Planning of Wetlands*. Cost: \$95

WOW!: The Wonders of Wetlands

Aug 29, 2002 St. Michaels, Maryland

This 1-day course for educators features hands-on multidisciplinary activities from the nationally recognized *WOW! The Wonders of Wetlands*. Outdoor activities with soil, water, and plants (the three critical parameters of wetland habitats) are practiced. All activities are designed to increase understanding of the ecological functions and values of wetlands, and to promote informed decision making regarding wetlands. Educators will experience creative and informative indoor and outdoor activities. Correlations with national and state standards are provided. Each participant will receive a copy of *WOW! The Wonders of Wetlands*. Cost: \$30

To post information about upcoming conferences and events, please e-mail restorationupdate@tetratex.com.

Restoration-Related Web Sites

www.massaudubon.org

Massachusetts Audubon Society. The Massachusetts Audubon Society is the largest conservation organization in New England. The Society offers the Ecological Extension Service to provide assistance to individuals and organizations looking to do restoration projects. *This Web site provides information on past restoration projects, and would be a useful tool for anyone seeking restoration expertise.*

www.eetap.org/checklist.rtf

Guidelines and Checklist for Effective Communication Planning. The Environmental Education Training Partnership (EETAP) hopes to improve the effectiveness of communicating environmental messages through its guide, *Guidelines for Developing and Evaluating Education Tools/Efforts*. EETAP hopes to increase the persuasive power of environmental messages to change attitudes and behaviors by increasing the quality of the communicated message. *This guide offers ideas for who to use improved communication techniques that will help get the public involved in restoration efforts.*

www.greenworks.tv/waterquality/dayinalife/index.htm

A Day in the Life of Pennsylvania's Watersheds. An interactive Web site that highlights watershed restoration and cleanup projects across Pennsylvania. It provides pictures of the work being done by watershed groups and gives contact information for each of the groups. *This Web site would be useful for anyone seeking information on what is being done by local groups to protect watersheds throughout Pennsylvania or for anyone looking for good examples of locally based watershed protection efforts.*

www.state.me.us/dep/blwq/docstream/team/streamteam.htm

Maine Stream Team Programs. This Web site, managed by the Maine Department of Environmental Protection, contains current information on Maine Stream Team programs. It includes links to a quarterly newsletter, contact information for program staff, funding and resource information, and ideas for future projects. *This Web site would be a useful resource for any stream restoration team throughout the country that is looking for restoration information.*

www.vims.edu/ccrm/phragmites

Phragmites australis. The Virginia Institute of Marine Science Center for Coastal Resources Management is actively engaged in the inventory and research of *Phragmites australis*. On this page you will find links to recent VIMS research and a link to the volunteer *Phragmites australis* Inventory Program. *This site contains a link to an informative brochure, produced by the Rappahannock Phragmites Action Committee, on the problems associated with Phragmites australis.*

www.dcr.state.va.us/dnh/invinfo.htm

Invasive Alien Plant Species of Virginia. The Virginia Department of Conservation and Recreation developed this page to educate Virginia residents about the problems associated with invasive alien species in Virginia. Fact sheets are available on 30 common invasive alien species throughout the state. *Fact sheets on species noted to be threats to wetland areas include the common reed (Phragmites australis), purple loosestrife (Lythrum salicaria), giant reed, (Arundo donax), and aneilima (Murdannia keisak).*

www.mainerivers.org

The Maine Rivers Site. Maine Rivers is a network of people who care about rivers systems in Maine including both local and statewide volunteer groups and organizations. The organization's goal is to work together to unite, promote, and strengthen the efforts of citizens and watershed organizations to restore and protect Maine's river systems. *This Web site would be useful for anyone looking for training information and networking opportunities related to stream restoration and conservation.*

www.mywatershed.com

MyWatershed.com. This Web site is dedicated to educating residents about watersheds and nonpoint source pollution and offering new ways for residents to view and improve their surroundings, thereby improving water quality within watersheds. Currently this site focuses on helping residents in the gulf of Maine, southern New England, Pamlico Sound, and New York Bay watersheds. *This Web site contains multiple links to watershed groups and news, information, and journals related to watershed protection and restoration.*

www.wa.gov/wdfw/hab/ahg/strmbank.htm

Aquatic Habitat Guidelines: An Integrated Approach to Marine, Freshwater, and Riparian Habitat Protection and Restoration. This Web site describes Washington State's Aquatic Habitat Guidelines program. The program's aim is to encourage the development of technical assistance for proper management of Washington's marine, freshwater, and riparian ecosystems and to assist in the protection and restoration of fully functioning aquatic and riparian habitat. The site also contains a link to Washington's Aquatic Habitat Guidelines which address marine, freshwater, and riparian habitat

protection and restoration. *This site would be useful for anyone seeking information on aquatic restoration issues.*

<http://kh465a.ag.ohio-state.edu/ORW.html>

The Olentangy River Wetland Research Park. This site, located at Ohio State University, is one of the most comprehensive wetland research and education facilities in the nation. It offers swamp virtual tours, links to articles and other information on wetlands, and wetland-related news. *This site provides an excellent example of how to make wetland research and education available to the public.*

Information Resources

Managing Habitats Guidelines

by the Western Forestry and Conservation Association

The Woodland Fish and Wildlife Project is a cooperative effort between state and federal agencies and universities to provide information on fish and wildlife management to private woodland owners and managers. Organizations involved in this project have cooperatively produced publications that serve as practical guides to woodland owners. Guides are available for download from www.dfw.state.or.us/ODFWhtml/woodland/woodland.html and include *Is There A Place For Fish And Wildlife In Your Woodland?*, *Riparian Areas: Fish and Wildlife Havens*, *Trout In Small Woodland Areas*, *Wetlands As Varied As Our Region*, *Wood Ducks on Small Woodlands*, and *Coastal Douglas Fir Forests and Wildlife*.

Wetland Kit for K–12 Educators

by the Wetlands Restoration & Banking Program Massachusetts Executive Office of Environmental Affairs.

This kit contains a wetlands curriculum that can be used by teachers of students ranging in age from kindergarten to high school. Teachers may request one copy of the curriculum that has reproducible activities to be used in their classrooms. More information and a copy of the curriculum can be obtained by calling Christy Foote-Smith at 617-727-9800, Ext. 213.

Restoring Our Wetlands–Healing Our Watersheds

by the Massachusetts Wetlands Restoration & Banking Program.

This 13 minute video provides educational information about the importance of protecting wetlands, explains how Massachusetts is working to protect wetlands, and describes how residents can get involved in restoration efforts. It is ideal for high school educators but could also be useful for anyone trying to create enthusiasm for wetland restoration projects. It is available by contacting the Massachusetts Audubon Society at lduff@massaudubon.org or at public libraries throughout Massachusetts.

Protecting Nature in Your Community Slide Presentation and Guidebook

by the Northeastern Illinois Planning Commission

The Northeastern Illinois Planning Commission (NIPC), along with a coalition of more than 130 organizations, developed a slide show to accompany *Protecting Nature in Your Community: A Guidebook for Preserving and Enhancing Biodiversity*. The slide show and the text of the guidebook can be downloaded from the Web site www.nipc.org.il.us/protecting_2001%20.htm, or a copy of the guidebook can be obtained by calling NIPC's publication department at 312-454-0400. The guidebook contains a section on stream, lake, and wetland protection that outlines basic strategies and benefits of restoration.