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Refuge Trails

- 🍃 The Refuge System has more than 2,550 miles of foot and water trails.
- 🍃 The Appalachian National Scenic Trail passes through only one wildlife refuge – Wallkill River NWR, NJ.
- 🍃 The water route of the Trail of Tears National Historic Trail passes through six southeastern refuges. Three are in Tennessee: Chickasaw, Lower Hatchie and Tennessee refuges. Two are in Arkansas: Holla Bend and White River refuges. The last is Wheeler NWR, AL.

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Interior Secretary Norton, members of Colorado's Congressional delegation and other guests unveiled the new Rocky Mountain Arsenal NWR, CO, sign April 17, when nearly 5,000 acres were formally transferred from the US Army to the USFWS. (Shattil/Rozinski)

5,000 Acres of Arsenal Formally Transferred

Habitat for Wildlife, Oasis for People

Nearly 5,000 acres of the 17,000-acre former Rocky Mountain Arsenal, used for four decades as a chemical weapons complex, were formally transferred from the US Army to the USFWS to officially establish the Rocky Mountain Arsenal NWR, CO, just 10 minutes from downtown Denver.

"The refuge has a rich past and a promising future," said Interior Secretary Gale A. Norton April 17, when she joined members of the Colorado Congressional delegation, Acting Assistant Secretary of the Army for Installations and Environment Geoffrey Prosch, EPA Deputy Administrator Steve Johnson, and representatives from USFWS, Shell Oil Company and other organizations at the transfer ceremony.

Placed on EPA's National Priorities List in 1987, the land has been undergoing cleanup expected to cost \$2.2 billion. In 1942, the arsenal was built to manufacture chemical weapons to be used as deterrents during World War II. Some facilities were leased in 1946 to private industry for the production of industrial and agricultural chemicals. Since 1985, the arsenal has been undergoing environmental remediation.

"Once used to protect and preserve our freedom, this parcel of land has now been transformed into a national resource and treasure," said Prosch. "The Army is very proud to turn this land over to the Department of the Interior for the public to enjoy its abundant resources for generations to come."



From the Director

We Know This is Important Work

At the opening of the Conservation in Action Summit,

former Director Lynn Greenwalt talked about seeing his old childhood friend Edwin “Drum” Drummond, who has been a maintenance worker at Wichita Mountains Refuge in Oklahoma for 55 years. And he’s still at it. When asked if Drum was considering retiring anytime soon, he said, “No. I’ll keep doing it as long as I can get up into that machine. Because I like what I do and I know it is important.”

This is what success is built on: a love of the job and an understanding of its urgency.

We do our jobs in conservation because we like them – and because we know it is important work. This is the common thread that has allowed us to weave an enormous network of partnerships. We have seen the tremendous benefit to finding common ground with partners along the entire spectrum of conservation causes.

As we build our public use programs, we instill a conservation ethic in others. By providing appropriate recreation, you’ve united hunters, anglers, other outdoor enthusiasts and concerned citizens on behalf of conservation. As an avid sportsman, I know this to be true; it is what got me interested in natural resources in the beginning of my career and it is something I am grateful for now. Each time I enjoy a top-notch hunting experience on one of our refuges, I strongly re-connect to the essential conservation concerns: that our wild places must remain healthy.

Today, the Refuge System offers the public something that no television program or amusement park can replicate or replace: a chance to connect – through rifle or rod or by camera lens and binoculars – to the glory of our outdoor heritage. While refuges must be managed carefully to keep the land and water biologically healthy, they must be managed carefully to keep Americans

engaged by offering compatible wildlife-dependent recreation. Not just because the Refuge Improvement Act requires it, but because engaged citizens are essential to conservation. If we can get people outdoors to appreciate the natural treasury that inspires all of us here, we can effectively share this vision.

The real owners of these Refuge System lands are the American people. As public servants, we owe them hard work, integrity, fairness and a voice in the protection of their trust resources. The Conservation in Action Summit embodied these concepts and moved them forward. I look forward to working with all of you over the next months and the next years to translate your ideas and your ideals into real, on-the-ground achievement for the National Wildlife Refuge System.



Chief’s Corner

A Symbol For the Second Century

Although we have always used the blue goose on our Refuge System logo, we are working to again make that historic symbol the center of our visual imagery, and with good reason.

When we downscaled the blue goose for the Centennial year logo, we never intended to minimize the symbol itself. It is part of our history and heritage, having been used for more than half the Refuge System’s life.

Its creator, Ding Darling, was not only Chief of the US Biological Survey – the forerunner of the USFWS. He embodied the conservation ideals that

drive us today. While Chief, he jump-started the effort to purchase and restore habitat for waterfowl and other wildlife, using proceeds from the Duck Stamp Act of 1934. Like all good leaders, he assembled the best talent he could hire, including J. Clark Salyer, a legend among conservation giants.

As the first Chief of Refuges, Salyer drove across the country, evaluating habitat for purchase. He guided the restoration and development of new refuges. He often stayed in the homes of refuge managers, inaugurating the sense of family that is part of our Refuge System culture today.

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RefugeUpdate

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Caddo Lake Adds Lifeline for Migratory Birds

More than 5,000 acres of land that was formerly owned by the Department of the Army as part of the Longhorn Army Ammunition Plant was formally transferred to the Refuge System May 5 as part of Caddo Lake NWR, TX.

Alligators, turtles, snakes and frogs share the wetlands with more than 200 species of songbirds and waterfowl. The refuge was established in 2000 to protect important wildlife habitat in its forests and wetlands.

The area contains “wetlands of international importance,” as designated by the Ramsar Convention on Wetlands, one of just a handful of such sites in the U.S. The USFWS has been managing this high-quality bottomland hardwood forest and wetlands for migratory birds and other wildlife while the Army completed cleanup of environmental contaminants on site. EPA certified the acreage as suitable for transfer and use as a wildlife refuge.

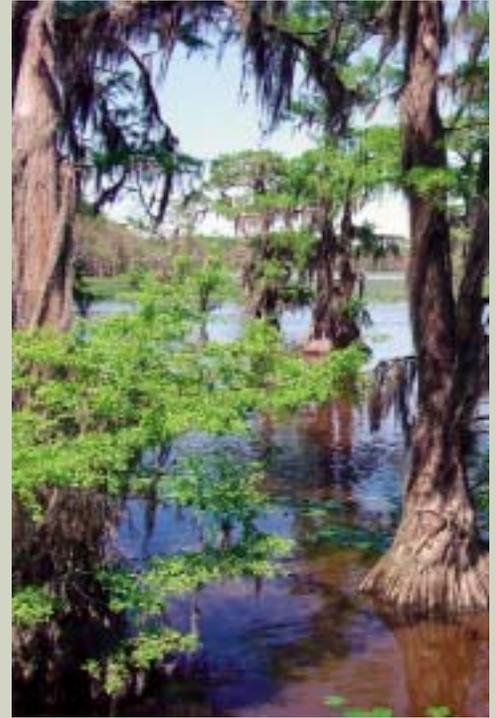
Among the dignitaries attending the ceremony were Assistant Secretary of the Interior for Fish, Wildlife and Parks Craig Manson, Army Col. Douglas S. Baker, Chief, Base Realignment and

Closure Office; Dwight Shellman, president of Caddo Lake Institute, Inc.; and Mike Berger, Wildlife Division Director with the Texas Parks and Wildlife Department.

Caddo Lake Institute facilitated the transfer by leasing critical portions of the site from the Army and initiated the agreement that led to designation of the site

Approximately 2,000 additional acres are expected to be transferred to the refuge in the next few years. Caddo Lake, the only naturally formed lake in Texas until it was dammed in the early 1900s, contains one of the few areas of virgin bottomland hardwood in the state. The upland forests are home to such species as the red-cockaded woodpecker, brown-headed nuthatch, Bachman’s sparrow and other migratory songbirds.

“East Texas is a strategic location along the routes of migrating birds,” said Dale Hall, director of the USFWS’ Southwest Region. “Caddo Lake’s excellent habitat serves birds using the central flyway. The Refuge System strategically adds lands in order to form a lifeline for migrating birds.” ♦



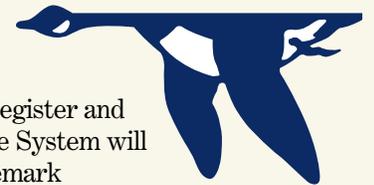
Caddo Lake, the only naturally formed lake in Texas until it was dammed in the early 1900s, contains one of the few areas of virgin bottomland hardwood in the state. (Dom Ciccone/USFWS)

5,000 Acres—*from pg 1*

Nestled at the foot of the Rocky Mountains with commanding views of the city, the 5,000 acres are dotted with small lakes and traversed by walking trails that will give people access to about 2,000 acres. Tram tours will take visitors to the other 3,000 acres. The site is vital habitat for nearly 300 species, including coyotes, bald eagles and white pelicans, and an oasis of open space in the increasingly urban Denver suburbs.

Once cleanup is complete, an additional 10,000 acres are slated to become part of the refuge by 2011. The Army will retain control over approximately 1,000 acres of arsenal land, where landfills have been constructed to contain the site’s more contaminated material. ♦

Blue Goose Flies Again



The blue goose, designed by J.N. “Ding” Darling when he was chief of the US Biological Survey – the forerunner of the USFWS – will again be the sole graphic symbol of the Refuge System.

For its Centennial celebration, the Refuge System had a special logo adopted, which included a small depiction of the blue goose. “Now, we are going back to our roots,” said Refuge System Communications Branch Chief Dick Cole. The Refuge System used the blue goose logo for most of its 101-year life.

The return to the blue goose logo has been approved by Assistant Secretary for Fish, Wildlife and Parks Craig Manson. The National Business Center must approve the logo. Then notice will be posted in the

Federal Register and the Refuge System will seek trademark protection for the symbol designed by the Pulitzer Prize winning editorial cartoonist, Darling, who served as chief of the Biological Survey from 1934-35.

“Whenever you meet this sign, respect it,” said *Silent Spring* author and former USFWS employee Rachel Carson. “It means that the land behind the sign has been dedicated by the American people to preserving, for themselves and their children, as much of our native wildlife as can be retained along with modern civilization.”

The blue goose is already seen on refuge boundary signs, entry signs, vehicles and publications. ♦

Recreation Fees Change the Face of Refuges

Improvements Evident Coast to Coast



A young hunter's wide grin demonstrates the benefits of recreation fees, which assisted in covering some costs associated with hunts at Washita NWR, OK. The refuge hosts both waterfowl and deer hunts annually, attracting hunters of all ages. (USFWS)

Recreation fees have proven to be a net sum gain for everyone interested in wildlife dependent recreation.

The \$3.8 million collected by the 108 national wildlife refuges and one fish hatchery that participated in the recreation fee demonstration project in fiscal year 2003 brought fishing and hunting programs, environmental education, facilities for the disabled, information kiosks, boat docks, wildlife observation towers and new trails guides – improvements on the ground – to thousands of people across the country.

“From coast to coast, the Refuge System has used nearly all of the fees to upgrade programs and facilities that people use everyday,” noted Allyson Rowell, chief of the Division of Visitor Services and Communications, which has monitored the demonstration project.

Participating refuges collected both entrance fees and fees for use of boat launches, guided tours, photo and hunting blinds and meeting rooms, among others. The fees are quite reasonable. Among the 35 refuges in the Southeast that participated in the program, they charged on average \$12.50 for a quota or general hunt, \$10 per

person/day for use of a wilderness canoe trail, \$10 for annual entrance, and \$2 for use of a boat ramp launch.

Four regions – Alaska, Pacific Northwest, Upper Midwest and Mountain States – give back all revenues collected for improvements at collection sites. In the Southwest, Southeast and Northeast, refuges get back 80 percent of the collected revenues, while the other 20 percent is distributed to other refuges in the regions, following a competitive grant process.

The Refuge System's participation in the fee demonstration program – which also includes the US Forest Service, the Bureau of Land Management and the National Park Service — was extended through December 2005, but requires Congressional legislation for further extension.

The National Park Service, which has collected fees since 1908, is the only Department of the Interior land management agency whose fee collection authority is proposed by a Senate bill (S. 1107) to be extended beyond December 2005. The bill has passed committee markup and awaits action by the full Senate. All four agencies plus the Bureau



Entrance fee money collected at A.R.M. Loxahatchee NWR, FL, has helped support a “cookiecutter,” or floating mechanical trail cutter. It maintains 5.5 miles of canoe trail. Its two rotating blades cut the submerged and floating vegetation, clearing the trail for paddlers. (USFWS)

How Fees Are Used on One Refuge

The range of services and staff positions funded by recreation fees collected at A.R.M. Loxahatchee NWR, FL, is a solid insight into what nominal payments can mean to a community.

Those driving into the refuge pay \$5 per vehicle. Commercial groups are charged \$25 for 25 or fewer visitors; vehicles carrying 26 or more people pay \$50. Those who enter the refuge by foot or bicycle pay \$1.

Fee dollars returned to the refuge help pay for printing of refuge map and

brochures, including those with information about hunting and bird species. Interpretive signs around the refuge are replaced by using fee money.

An aluminum 54-foot walking bridge that spans the center canal – connecting various impoundments and trails near the observation tower – was purchased with fee dollars and may not have been funded otherwise. From the observation tower, people can see into two impoundments with American alligators, turtles and a host of birds, including



Aransas NWR, TX, used recreation fee revenues to build a new boardwalk, but also used the monies for a range of activities, including the Third Annual Aransas NWR Celebration in October 2003, which drew more than 2,500 people. The refuge offered a duck calling contest, bass fish tank, and an environmental education area. The refuge also hosted its first annual Creatures of the Night event that same month, helped to educate the public about nocturnal wildlife. (USFWS)

of Reclamation are covered under HR 3283, introduced October 2003. It had its committee hearing May 6.

Visitor Satisfaction is High

In a Summer 2002 survey, an extensive visitor satisfaction survey found people overwhelmingly positive about the program. Indeed, 94 percent of respondents who paid fees thought they were at the proper level or even too low in light of the services or facilities provided. Nearly 90 percent of respondents felt strongly that refuges provided an excellent value.

At least one surveyor reported that several visitors said that refuges did not charge enough for all they offered. In fact, the survey contractor recommended that the USFWS consider expanding the number of refuges in the fee demonstration program in light of

the high acceptance rate among respondents.

Fees apparently did not dampen visitor enthusiasm for refuges. Visitation at the fee demonstration sites increased by 18 percent – to 18.4 million visits – between fiscal years 2002-2003. The improvements that resulted from fees ranged in their focus:

- In Washington, Nisqually NWR partnered with the Washington Services Agency to hire an Americorps member as a full-time environmental education coordinator, running a program that serves more than 6,000 students each year, including field trips and teacher workshops. In the same state, Turnbull NWR established the Centennial Legacy Riparian Grove of native trees and shrubs, planted by volunteers to re-establish riparian

ped-billed grebe, great blue heron, snowy and great egrets and roseate spoonbill, among others. They can also see the newly-created Loxahatchee Impoundment Landscape Assessment impounds that will be used to study and mimic various Everglades landscapes.

The information kiosks near trailheads and parking lots get fee funding, which also paid for the materials used by volunteers to build benches around various trails.

This year, the refuge plans to use fee money to improve interpretive signs and information kiosks on the canoe trail, marsh trail and at the new 20-mile Bend entrance and boat ramp.

In fiscal year 2004, the refuge expects to spend about \$20,000 on refuge improvements, just a little less than last fiscal year. ♦



vegetation to benefit migratory song birds.

- Anahuac NWR, TX, hired a biological technician for the waterfowl season to coordinate a youth-only waterfowl hunt and collect biological data on wintering waterfowl and lead shot ingestion by the resident mottled ducks. Additionally, the refuge built an accessible ramp to enable the disabled to participate in the hunting season.
- In Oklahoma, Washita NWR supported its annual and hugely popular waterfowl and deer hunts that attract sports enthusiasts of all ages.
- Mid-Columbia River NWR Complex, OR, used fees to cut and maintain trails, improvement restroom facilities and hire two seasonal park rangers to assist waterfowl hunters and other visitors.

“When we launched the fee program, we were determined that fees would be low enough not to discourage participation, but just high enough that refuges could make visible improvements,” said Rowell. “By all indications, we hit the mark on both points. I’d call that a complete success.” ♦



J.N. “Ding” Darling NWR, FL, used fee monies to build an observation tower, redesigned to help comply with the Americans with Disabilities Act. The main level platform was expanded and an ADA-compliant ramp was installed. The refuge also completed rehabilitation on the Indigo Trail, installing a boardwalk with recycled plastic lumber and two rest benches. (USFWS)

Great Swamp Refuge Takes Pride in Habitat Restoration



The Great Swamp NWR, NJ, began large-scale ecological restoration in 2002, funded by a court settlement over natural resource damages at a former asbestos dump, operating before the refuge was established. (Michael Horne/USFWS)

By Michael Horne

When the staff at Great Swamp NWR, NJ, took on the remediation and restoration of a former Superfund site – where asbestos and other contaminated wastes were dumped years before the six-acre swath became part of the refuge – few could have anticipated the zeal and thoroughness they brought to the project.

Fewer still would have expected the extent of habitat restoration completed for the \$4.2 million the USFWS received from a court-ordered settlement in 1993 that ensured the waste generator paid for degradation of natural resources.

“Usually, you can stretch these settlement dollars to restore about two acres for every acre damaged,” noted Refuge Manager Bill Koch. “Instead of the 12 acres you might have expected, we restored more than 10 times that much land. It’s all due to the pride and passion that 11 staff members brought to this project.”

In some ways, the story begins in 1984, when the six acres, part of the Great Swamp Refuge since 1968, were declared

part of a Superfund site. The USFWS Division of Engineering, supported by the Central Hazardous Materials Fund, completed remediation of the six acres in 1998. Today, they are productive grassland and emergent wetlands, home to river otters, spotted turtles, wood ducks, pintails, widgeons, great blue herons and other species.

But that was just the start of much broader restoration, launched in December 2000, when Great Swamp Refuge and the New Jersey Ecological Services Field Office – armed with the court settlement – developed a broad-scale restoration plan.

The plan stressed land acquisition, invasive plant species control, enhancement of vernal pools and replacement of habitat and public access that had been lost. As a result, nearly 120 acres of grassland, “old field” that had once been farmed, and forested and emergent wetland habitats are being purchased from adjacent landowners and added to the refuge. All land purchases will be finished this year.

Just 26 Miles from Times Square

To date, refuge staff has removed more than 640 tons of asphalt, six houses, 18 sheds, three barns, and two swimming pools from eight sites as part of the restoration plan. Approximately 15 acres of land that had been closed to the public due to contamination were reopened. About 2.5 miles of trails were added to the wilderness area. More than a half-mile of new boardwalks was built, expanding public use and wildlife viewing opportunities at a refuge that lies just 26 miles west of New York City’s Times Square.

Additionally, more than 10 acres of Japanese barberry and Japanese knotweed have been controlled. Thousands of beetles were bought to help biological control work on 60 acres of purple loosestrife. More than 100 vernal pools were located, mapped, and evaluated for habitat improvement to benefit such species as wood frogs and blue spotted salamanders.

Most important to the project has been the pride and team spirit. Biologists operated bulldozers when more people were needed to move earth. Staff removed asphalt at a fraction of the \$250,000 that one contractor bid. In fact, staff and volunteers picked up pieces of asphalt by hand when the heavy equipment couldn’t get them.

“We saved thousands and thousands of dollars by recycling the asphalt – which cost us just \$6 a ton for recycling disposal instead of \$80 per ton to go to a landfill,” recalled Koch. “In fact, the recycling people commended us for how clean the asphalt was.

“It’s been a real team effort,” he continued. “Everyone on the refuge staff – from biologists to the office assistant, wage grade professionals and the outdoor recreation planner – we’ve all brought our expertise to bear on this project. New Jersey Field Office biologists even pitched in to help on a couple of sites.”

More work remains for the summer. The refuge will continue to put its muscle behind invasive plant species control, more vernal pool restoration, and restoration of wetland and upland habitat on a 22-acre developed property. Two houses and five sheds and outbuildings will be dismantled. More than an acre of impervious cover will be removed.

“To see the pride and passion that staff and some volunteers brought to this project has been heartwarming,” stressed Koch. “Our staff and volunteers were raking sites clean as though they were their own gardens. We’re well on our way to bringing back habitats. Of course, restoration is an ongoing process, but the growing list of positive outcomes bodes well for our ultimate success.” ♦

Dr. Michael Horne is a watershed biologist at Great Swamp Refuge, responsible for working with partners to preserve the ecological integrity of the refuge and its watershed.

Around the Refuge System

❖ The endangered Fender's blue butterfly, native to the oak savanna prairies of western Oregon's Willamette Valley, is enjoying its highest population level in a decade. Baskette Slough NWR, OR, saw 1,236 Fender's blues in 2003, 64 percent more than a year earlier. The refuge had the largest population across the butterfly's entire range in 2003. Some of the upswing is undoubtedly due to favorable weather conditions, but the refuge's aggressive habitat improvement work also deserves credit. Baskett Slough has been using prescribed fire to restore butterfly habitat, which is threatened by invasive species such as Himalayan blackberry and Scotch broom. The species was declared endangered by the USFWS in January 2000.

❖ Great Dismal Swamp NWR has become one of two areas in Virginia designated an Important Bird Area (IBA) by the Virginia Audubon Council, which sponsors the program in cooperation with the Virginia Society of Ornithology and the Virginia Department of Game and

Inland Fisheries. The refuge supports an abundance of bird species of conservation concern, including Swainson's warbler, prothonotary warbler, Louisiana waterthrush, Kentucky warbler, wood thrush and rusty blackbird. The Virginia IBA Technical Committee specifically hailed the refuge's stewardship on behalf of birds.

❖ Mark McGee, a leader in Region 5 law enforcement for more than 10 years, was named Region 5 Refuge Officer of the Year. Supervisory refuge officer at Chincoteague NWR, VA, he is responsible for a refuge that gets more than 1.5 million visitors annually. He has served as the lead firearms instructor and simmunitions instructor. He is a defensive tactics instructor and a field training officer. Respected throughout the region, Mark teaches regularly at Refuge Officer Basic School.

❖ The small, high desert crossroads town of Dubois, ID, kicked off its second annual Grouse Days Festival April 16, raising money for grouse conservation, habitat improvement and public education. Field trips were conducted to habitat of sage grouse and Columbian sharp-tailed grouse strutting leks and nearby Camas NWR. The USFWS, Bureau of Land Management, Forest Service, Idaho Department of Fish and Game, The Nature Conservancy of Idaho, the Clark County Stock Growers and the



North American Grouse Partnership of Idaho were among the sponsors. First described by Lewis and Clark during their expedition that began in 1804, the sage grouse depends almost entirely on sagebrush for food and protection from predators. They are found in Washington, Oregon, Idaho, Montana, North Dakota, eastern California, Nevada, Utah, western Colorado, South Dakota, and the Canadian province of Alberta. The USFWS is conducting a more in-depth status review of the greater sage grouse for potential listing under the Endangered Species Act. ♦



❖ Three Alaska refuges – Arctic, Kanuti and Yukon Flats – recruited Benjamin and Melanie Firth, world-renowned ice sculptors, and their daughter, Aurora, to create an ice sculpture for display at the World Ice Art Championship in mid-March as a means to raise awareness of the Refuge System in the land of permafrost and long winters. The ice sculpture of a muskox and blue goose

greeted visitors in Children's Park, one of three areas when international competitors display their sculptures. One interpretive panel described how Alaska's refuges contribute to the Fairbanks community, home to the world's largest ice sculpting competition. The world-class sculptures last until the temperatures finally rise above freezing, usually in mid-April. ♦

FOCUS ...On Cultural Resources

Cultural Artifacts Show Who We Are, How We Lived

To date, more than 12,000 cultural and historical sites have been identified on refuges. Thousands more remain uninvestigated.

Widely known as a leader in preserving the nation's wildlife and natural wonders, the National Wildlife Refuge System is less renowned for its protection of archaeological and historic sites. It shouldn't be.

To date, more than 12,000 cultural and historical sites have been identified on refuges. Thousands more remain uninvestigated.

Indeed, the Refuge System conserves some of the country's most important artifacts – from 11,000-year-old paleo-indian sites containing evidence of our hemisphere's earliest inhabitants, and remains of prehistoric seafaring communities in Alaska's remote Aleutian

Islands to more recent 19th century sites telling the story of America's frontier.

The cultural legacies people left behind – their footprints on the landscape – give fascinating insights into our past. Examples abound.

In Colorado, the Spanish settlers constructed irrigation ditches across the valley that became Alamosa NWR. These ditches are still used today for wildlife management. Thousands of settlers in wagon trains traveling westward along the Oregon and Mormon trails stopped for rest and water at the Green River on what became Seedskaadee NWR, WY.

The 1804-06 Lewis and Clark expedition passed through areas that became

Sunken Treasure at DeSoto Refuge

By Jennifer Stafford

DeSoto NWR – 7,800 acres that lie across the Iowa and Nebraska border – has a treasure like no other.

The Bertrand carried delicacies as well as necessities. Among the items found were bottles of brandied cherries and Superior Bird Pepper Sauce. The bottles are among the 200,000 artifacts in the Bertrand Collection. (Jennifer Stafford/USFWS)



The refuge is home to the Bertrand Collection, about 200,000 artifacts used on the western frontier around the Civil War. The items were recovered from the hold of the steamboat *Bertrand*, which sank April 1, 1865, after hitting a snag in the Missouri River on its way to the gold fields of Montana. The steamboat sank in a spot that 90 years later became DeSoto Refuge.

Carrying 250-450 tons of cargo – including whiskey, gold and mercury – the *Bertrand* was buried under 30 feet of mud and clay when excavation began inland from DeSoto Lake, which originally was the DeSoto

Bend of the Missouri River.

Entrepreneurs Sam Corbino and Jesse Pursell and archaeologists with the National Park Service and the Bureau of Sports Fisheries and Wildlife, now the USFWS, formed a collaboration to excavate the remains in 1968-70.

Corbino and Pursell came up nearly empty handed in their search for some marketable items. They found just nine carboys of mercury rather than the hundreds they hoped for. On the other hand, the Refuge System gained a piece of history.

Certainly, the *Bertrand* carried the mundane: picks and shovels for the mines, paint, tools and hardware to build towns, plows and clothing, and food for settlers. But much of the seemingly ordinary has become rare. Indeed, a professional conservator traveled in early February to treat a rare mountain howitzer sabot, deemed too fragile to be shipped for conservation. The *Bertrand's* sabot is one

refuges, documenting hundreds of fish, wildlife and plant species unknown to Western science. The story on page 10, "Recreating What Lewis and Clark May Have Seen," illustrates how studying and protecting cultural resources can be used to build community support and Friends groups for the Refuge System. The Cathlapotle Plankhouse project is rapidly becoming a focal point for the Lewis and Clark Bicentennial along the Lower Columbia River and will create new chances to talk about the Refuge System to people who otherwise might not know about refuges in their communities.

Protecting valuable museum collections memorializes the events and achievements of people pivotal in the Refuge System's history, as shown by the story on page 12 about the Patuxent Research Refuge, MD. The preservation and study of museum collections and

archives – including historic records and objects, photographs, refuge narrative reports and artwork – tells an important story about the nation's conservation legacy.

"Managing our cultural resources isn't just about preserving our nation's distant past," noted Branch of Visitor Services Chief Kevin Kilcullen. "Cultural resources are living parts of our society. They contribute valuable scientific information, help maintain important traditions and identities, and build meaningful community relationships that benefit the Refuge System.

"Interpreting refuge cultural resources helps educate millions of visitors about how humans have interacted with the national environment over hundreds – even thousands – of years," he concluded. ♦



The Civilian Conservation Corps (CCC) in the 1930s put millions of unemployed men to work on refuges as well as national forests, national parks, state parks and other locations. Former USFWS Director Ira Gabrielson called it an "epochal" event in conservation history. The CCC built the infrastructure of nearly 50 refuges and restored thousands of acres – accomplishments that still stand and shed light on an important story about the nation's past. (USFWS Archives)

of only a few Civil War-era munitions known to exist.

At the same time, the steamboat carried a surprising variety of the luxuries people craved: silk fabrics, fancy hobnail boots, embellished doorknobs, pocket knives with Stanhope lenses and tasty treats like French champagne and mustard, instant coffee, lemonade, brandied peaches and cherries, pickles and pepper sauce.

The collection, exhibited at the refuge visitor center since it opened in 1981, is a time capsule of a momentous historic period. The Civil War ended less than two weeks after the ship sank. Westward expansion began transforming the countryside, with transitory wealth seekers replaced by more permanent towns and settlement. About 125,000 people go through the visitor center each year.

The collection also has significant research value. Specimens help determine the chronology of other historic archaeological finds, including food containers, shipping crates, fish and pig bones, tools, hardware and clothing.

Caring for the collection has been a continuous concern. Representative pieces of the collection are displayed in "open storage" behind glass walls, with temperature, humidity and light carefully controlled. The rest of the collection is stored on shelves, racks and cabinets.

The museum staff continues to catalog the collection and provide conservation procedures as needed. In 2001, for example, storage housings for three-dozen rain slickers and leggings were improved, important since the *Bertrand's* slickers are among the earliest known commercially manufactured rubber garments in existence. In the last few years, conservators with the Gerald R. Ford Center in Omaha, NE, have conducted comprehensive surveys of the collection, identifying objects that need special attention or housing, among other tasks.

The *Bertrand* Collection can be viewed online at <http://refuges.fws.gov/general/interest/steamBoatBertrand.html>. ♦

Jennifer Stafford is museum technician of the Steamboat Bertrand Collection at DeSoto Refuge.



With excavation about half completed in 1969, the forward part of the Bertrand had been made visible and the mud had been cleared. The decking over the midsection was still in place. Cargo can be seen in the boat's hold below the edge of decking. The Bertrand sank April 1, 1865, after hitting a snag in the Missouri River on its way to the gold fields of Montana. (Photo by Leland A. Larson, courtesy of Woodmen of the World magazine)

Recreating What Lewis and Clark May Have Seen

Plankhouse Recalls Chinookan Village

By Virginia Parks

On the morning of Nov. 5, 1805, Captain William Clark woke up grumpy and wrote in his diary:

"I slept but verry little last night, for the noise kept up dureing the whole of the night by the Swans, Geese, white and Grey Brant Ducks etc.... they were emensely noumerous, and their noise horid."

Some things haven't changed. A seasonal procession of migratory birds still visit the land where the Lewis and Clark expedition camped beside Post Office Lake, now part of Ridgefield NWR, WA. The refuge is located along the Lower Columbia River, where Chinookan-speaking peoples thrived for centuries before being decimated by disease in the early 1800s. Later, Cowlitz and Klickitat peoples lived in the area before settlers

arrived. It became migratory waterfowl refuge in 1965.

Now, the area's rich cultural and natural history is being preserved and interpreted as the USFWS and several partners work to complete by November the Cathlapotle Plankhouse Project, a 78-foot-long building that recreates the economic and residential centers of Chinookan households.

The plankhouse will resemble one of the 14 cedar buildings that were part of the 900-person Cathlapotle Chinookan village encountered by Lewis and Clark as they traveled the Columbia River. It will illustrate the area's history without harming other resources. More than 25 subsurface archaeological sites are preserved on the refuge, but not open to public examination.

Design and planning for the plankhouse began in 2002. Construction activities

The refuge is a popular destination because it is on the Lewis and Clark National Historical Trail.

Restored Ranch Commemorates Malheur History

An Empire of Wetlands and Wildlife

By Susan Saul

In 1872, Peter French, a short, wiry young man, rode north out of the Sacramento

Valley in search of grass and water for cattle. In southeast Oregon's Blitzen Valley, he found an oasis in the northern Great Basin desert: a watery world of wetlands and lush meadows fed by the Blitzen River. By the time French died in

1897, he managed the largest cattle empire operating solely on private property in the West.

Today, French's cattle kingdom is part of Malheur NWR, OR – an empire of wetlands and wildlife. The federal government purchased the former ranch lands in 1935 to gain desperately needed water rights to keep Malheur Lake filled.

The USFWS re-opened the historic 1880s ranch to the public in October 2003. It had been closed since 1990 when flood damaged the buildings. Emergency stabilization of the long barn, on the verge of falling over, began in 1999. The

Malheur Refuge Manager Donna Stovall, left, the Blue Goose, and Pacific Regional Director David Allen cut the ribbon for the opening of the Centennial Trail and the Sod House Ranch Long Barn Oct. 18, 2003. (Karl Smith)





The Cathlapotle Plankhouse will cost approximately \$500,000 to build. More than 50 volunteers have put in more than 2,000 hours so far building a 78-foot-long plankhouse that recreates the economic and residential centers of Chinookan households. Volunteers Ginger May (left), Larry Siewert (center; rear), Tom Laidlaw and Becky Railey used wooden wedges and lots of trial and error to split a 3-inch-thick plank from a donated cedar log. (Virginia Parks/USFWS)

started in Fall 2003. Each weekend, an old refuge shop comes alive as volunteers use both traditional and modern tools to split planks, carve posts and beams, and ponder how the original builders accomplished feats of engineering without the aid of cranes, chainsaws and other implements of technology. More than 50 volunteers have put in more than 2,000 hours so far.

The plankhouse, which will cost approximately \$500,000 to build, has received grants from the Meyer Memorial Trust, Ferguson Foundation, M.J. Murdock Charitable Trust, the National Park Service and USFWS Challenge Cost Share. Individuals and nearby national forests have donated valuable logs.

It is part of the larger Cathlapotle Archaeological Project initiated in the early 1990s to promote research and education about one of the few intact Chinookan sites on the lower Columbia. The project grew from a partnership among the USFWS, the Chinook Tribe, which shares its cultural expertise, and Portland State University, which provides scientific background.

The non-profit Lewis and Clark Bicentennial Committee of Vancouver and Clark County named the Cathlapotle Plankhouse Project as one of its "Legacy Projects" for focusing on native cultures of the area.

"The refuge is a popular destination because it is on the Lewis and Clark National Historical Trail," said Refuge Assistant Manager Tom Melanson, who notes that the 5,200-acre refuge gets about 165,000 visits annually. "People can see the land's connection to native cultures, just as the explorers did. But long after we stop celebrating the Lewis and Clark expedition bicentennial, the plankhouse will highlight the history of this area and this refuge." ♦

Virginia Parks is an archaeologist with the Region 1 Cultural Resources Team. She began working for the USFWS in 1987.

stabilization and restoration of the long barn and partial restoration of other buildings took four years.

Now, the public can explore the ranch buildings, learn from volunteers the history of ranching in the Blitzen Valley, and celebrate Harney Basin's ranching heritage. Sod House Ranch, the northern headquarters for French's 140,000-acre domain, will be open each year from Aug. 15-Oct. 31.

The ranch retains eight original buildings, including the long barn, homestead house, two-room office, stone cellar and two-story bunkhouse. The buildings were designed by French and constructed by

his ranch hands using materials from a mill owned by the ranch.

A new Centennial Trail takes visitors past the stabilized and restored ranch buildings. Interpretive panels tell the story of 19th century ranch life, explain why the refuge acquired the ranch and illustrate how the refuge uses ranching techniques to manage the land for wildlife.

Many partners were involved in the project, including the University of Oregon Architectural Field School, Oregon State Parks, the National Park Service, AmeriCorps volunteers, Harney County Historical Society, Oregon State Historic Preservation Office, neighboring

ranches, Harney County Cattlewomen, the refuge's Friends group and Pilgrim's Progress Preservation Services.

Funding was obtained through grants from Preserving Oregon, the National Fish and Wildlife Foundation, and two USFWS Challenge Cost Share grants. Grants and matching funds from partners and from the USFWS totaled \$187,000. Creative use of materials, donated materials and volunteer labor helped to keep expenses below the \$250,000 estimated cost. ♦

Susan Saul is with External Affairs office in Region 1.

Patuxent: Wildlife Research, Conservation, Education, and History

by Denise Tammany

An ongoing inventory that began in May 2003 at Patuxent Research Refuge, MD, is uncovering a treasure trove of fascinating artifacts and preserving for the first time the history and experiments of the nation's only research refuge.

The discoveries have been dazzling: 70 species of bird eggs dating back a century that could be worth hundreds of thousands of dollars; an authentic cartoon by J.N. "Ding" Darling, Pulitzer Prize winner and first director of the US Biological Survey; the largest North American herbarium collection; original illustrations from Robert Hines' *Waterfowl Tomorrow*; "sex-changed" mounted pheasants; food from bird gizzards; and pick-axes from FDR's Civilian Conservation Corps.

Found in basements, attics, hallways, closets and offices of the 50 buildings at the research refuge, the 386 collections tell the story of the American wildlife conservation movement.

The 12,750-acre facility, which houses both the Patuxent Research Refuge and the US Geological Survey's Patuxent Wildlife Research Center, was the nation's first national wildlife experiment station when it opened in 1936. Most of the collections' material was accumulated as a byproduct of Patuxent's research activities.

Employees and volunteers at Patuxent have contributed to wildlife research, education and preservation by squirreling away historical objects for decades, including, for example:

🍃 The Food Habits Study, composed of dried plant and animal samples taken out of bird gizzards from the 1890s to the 1940s. Initiated to detect the damage birds inflict on the agricultural economy, the study provided the first information about where birds travel and what they eat.

- 🍃 Original mounts from the 1960s used to brood and feed endangered whooping cranes chicks that were to be reintroduced into the wild.
- 🍃 Birding records and photographic glass plates from the 19th century.
- 🍃 Original documentation on endangered species, including film footage, slides and photographs.

As the inventorying task grows, so do the discussions about dealing with these one-of-a-kind collections. Patuxent, the USFWS and the US Geological Survey, having established the Museum Property Committee, are contemplating how the collections can be both secured out of harm's way and made instructive for research. Discussions about permanent housing are underway as are considerations of public access.



Ding Darling cartoon (USFWS Archives)

Some of the more fragile and valuable items – like the Darling cartoon, worth perhaps \$10,000, and the historic eggs – have been moved to secure locations. Space is becoming a concern.

“Preserving the collections calls for improving the documentation – cataloging

Found in basements, attics, hallways, closets and offices of the 50 buildings at the research refuge, the 386 collections tell the story of the American wildlife

and annually accounting for the items,” observed Shelley Hight, FWS Region 5 museum property coordinator. “The storage environment needs to be improved, with museum cabinets, archival housing, monitored and controlled temperature, light and relative humidity and increased security, from both theft and fire.”

There are other considerations as well: Organic zoological and botanical species are the most fragile, although research specimens are also extremely fragile, all subject to harm by careless handling, too much light, air pollution and mold, among other hazards. For example, the collections need an integrated pest management program to guard against damage from insects and other pests. Routine housekeeping is needed to protect the collections from dirt. Even temporary storage must address such needs.

Accessible But Secure

Some suggest the collections could become museum property at Patuxent Refuge, where items would be conserved or loaned out to organizations like the Smithsonian Institution. The collections could be turned over to the National Conservation Training Center in Shepherdstown, WV, for exhibition and conservation. Among other alternatives, official records could be sent to the National Archives, or research archives could be established at Patuxent Refuge to complement the Fish and Wildlife National Visitor Center in Laurel, MD.

The Museum Property Committee is just beginning to evaluate the inventory, deciphering the collection’s historic, monetary and scientific value and discussing how and what to open to public access. Some funds and guidance have been provided by the USFWS Museum Property Program, with advice and material assistance from the Department of the Interior Museum Program, the National Conservation Training Center curator and the USGS Museum Property Program.

“Ideally, making the material accessible to a wide variety of professional and student



Both scales found in Snowden Hall’s basement are historical treasures. Not only are they antiques, but they illustrate the evolution of biological technology. Patuxent, the USFWS and the US Geological Survey established the Museum Property Committee to propose how Patuxent’s collections can be both secured and made instructive for research. (USFWS)

researchers would be part of the archiving process,” noted Hight, who believes few researchers know about the collections. Moreover, there is no catalogue to steer researchers to the materials. Yet, their value has already been established.

Information has been used to help prepare testimony on the potential impact of windmills on bird migration, to determine historical ranges of birds and to identify declines in neo-tropical migrant bird populations.

For now, one accomplishment is clear: For the first time, the USFWS and the USGS are united in their determination to preserve the gems that came from generations of research.

For more information about the Patuxent collections, contact Shelley Hight at 413-253-8554. Questions about general collections care can be directed to Eugene Marino, USFWS archaeologist, 703-358-2173. ♦

Denise Tammany completed her internship with the USFWS in May and will attend school on Long Island, NY, in the fall. A new intern will begin working at Patuxent in the summer.



C. Hart Merriam was an early chief of the Bureau of Biological Survey and namesake of a laboratory at Patuxent Wildlife Research Center. The US Geological Survey’s Patuxent Wildlife Research Center was the nation’s first national wildlife experiment station when it opened in 1936. (USFWS)

Friends Flock to Regional Workshops

Expanding Enthusiasm and Skills

Friends groups provide a critical support for refuges. By giving them the chance to build their organizational capacity, the Refuge Association and the Fish and Wildlife Service are helping to invigorate a growing community.

A record number of people representing more than 150 nonprofit Friends groups came together for seven hugely successful regional workshops that strengthened the most visible support network of the Refuge System.

The workshops, held across the country during weekends in May 2003 through April 2004, reinforced the skills and enthusiasm that Friends bring to community outreach, fundraising, media relations, environmental education programs and advocacy, among other issues. The National Wildlife Refuge Association (NWRA) and the USFWS presented the sessions.

The Refuge System has more than 230 Friends groups, whose combined membership exceeds 30,000 people.

“As a newly formed Friends group, we found the regional conference in Rapid City, SD, very useful,” said Land Tawney, a member of the Friends of the Lee Metcalf NWR, MT. “Learning what has worked for other groups and innovative ways to fund raise and increase membership is already impacting our fledgling organization.”

The NWRA assembled a team of experts to speak at the workshops, including Molly Krival, founder of the “Ding” Darling Wildlife Society and mentor to dozens of Friends groups, who spoke frequently about board development. David Houghton, head of New Hampshire Audubon and member of NWRA’s board of directors, covered fundraising at several workshops, while Nancy Marshall of the Marshall Foundation provided insights on membership development to several groups.

USFWS National Community Partnerships, Friends and Volunteer Coordinator Trevor Needham and Maeve Taylor, assistant manager of Parker River NWR, MA, covered grant writing and development of environmental education programs on several occasions. A number of other USFWS staffers, including Deputy Director Marshall Jones, spoke at the gatherings. NWRA President Evan Hirsche covered both fundraising and advocacy issues at several workshops.

“Friends groups provide a critical support for refuges. By giving them the chance to build their organizational capacity, the Refuge Association and the Fish and Wildlife Service are helping to invigorate a growing community,” said Needham.

Contact Trevor Needham, 703-348-2392, for more information about training opportunities for Friends groups. ♦



Members of Friends organizations that participated in the Region 1 Portland, OR, workshop concluded the session by planting trees at Tualatin River NWR, OR. More than 40 Friends representatives and FWS staff joined the refuge tour. Joam Patterson (left), president of Friends of the Tualatin River NWR joined Max Schenk (center), director of friends and constituent outreach for the National Wildlife Refuge Association, and two other participants. (Marquerite Hills/ USFWS)

“Ambassadorship” on Santa Ana Refuge

Taking a Little Extra Time with Visitors

The “ambassador program” is thriving on Santa Ana NWR, TX, even if the formal training hasn’t been around for years.

“I talk to staff at least every month about ambassadorship,” noted Ken Merritt, project manager of the South Texas Refuge Complex. “That means taking a little extra time to stop and talk with visitors at any particular point during your daily work. It goes beyond answering questions at the Visitor Center’s front desk. It’s about going out of your way to say ‘hello’ or ‘can I help you’ as you meet visitors during the daily work routine.”

The staff has really gotten on board, said Merritt. “People have frequently come back to me to compliment staff. That contact is the most important part of the ambassador program. Talking takes just a little extra time, and the benefits are great!”

The Ambassador Program was introduced around 1995 to Region 2 refuges to put customer service front and center. The program, which brought volunteer and staff training to every refuge in the region by 2001, included such components as training in outreach and



Ecologist Chris Best points out a flower to visitors during a plant walk at the Santa Ana Refuge, TX. “People have frequently come back to me to compliment staff,” said Refuge Manager Ken Merritt. (Patty Alexander/USFWS)



Lower Rio Grande Valley NWR Biologist Mitch Sternberg discussed turtles during the Centennial celebration last year. “Our community is discovering the refuge and all that it has to offer,” Refuge Manager Ken Merritt concluded. “I believe that’s because this has become a welcoming place.” (Patty Alexander/USFWS)

media relations, production of localized radio public service announcements and participation in community meetings and events – all in an effort to connect with communities that sometimes viewed refuges as outsiders.

In the past seven years since Merritt became project leader, the staff of Santa Ana Refuge has upgraded its facilities and enhanced the refuge’s image in a community beset by poverty. It is one of three refuges in the South Texas Complex that is working to conserve and restore the wildlife resources of the Lower Rio Grande Valley. It has become acclaimed for its birding resources and the diversity of butterflies that visitors can see.

Under the Ambassador Program, Santa Ana Refuge was one of the first five field stations to bridge the language barrier by producing its radio public service announcements in Spanish as well as English – a move that brought an upsurge in visitors and opened communications with a community that did not know the refuge and therefore stayed distant.

Santa Ana Refuge, one of the first recreation fee pilot projects, spent nearly \$5,000 for its fee collection booth. There, the refuge created a welcoming area where volunteers, also trained as ambassadors, and staff could greet and meet almost everyone who came to the refuge. No one has ever complained about the fees.

In the end, it may well be the sense of ambassadorship that most resonates with the community. “Our community is discovering the refuge and all that it has to offer,” Merritt concluded. “I believe that’s because this has become a welcoming place. When visitors leave the refuge, they remember the wildlife, but a very important part of their memory is their interaction with the staff.” ♦



Arrow Rock Mayor Tom Beamer calls the trail “a bonus for the town,” a historic community that saw the Missouri River move away from the town limits as floods cut the link. Friends of Big Muddy Volunteers Peter Ironwood, left, and Troy Gordon installed a bench along the trail as construction moved forward in November 2003. (Janine Gordon)

Volunteers Add Their Might

The Lewis and Clark Trail of Discovery on the Jameson Island Unit of Big Muddy National Fish and Wildlife Refuge, MO, is closer to completion thanks to more than 30 dedicated volunteers, ages 8-68. The mile-long trail, to be complete this spring, will end along the shore of the Missouri River.

Volunteers included Scout Troop 67 of Boonville, MO, this year, and Troop 707 of Columbia, MO, which last year brushed the trail open. “This trail is really going to be a bonus for town,” said Arrow Rock Mayor Tom Beamer, one of the volunteers. Members of Friends of Big Muddy, Student Conservation Association and Helias High School students also gave their muscle.

A historic community, Arrow Rock grew because of its location on a bluff directly

above the Missouri River. Through channelization and land accretion, the river moved a mile away from town. Floods in 1993 and 1995 cut the link that still connected the town to the river. The bottomlands below Arrow Rock were allowed to return to their natural state after the refuge was established in 1995, finally severing the town’s last link to the river. In Fall 2002, Friends of Big Muddy, Friends of Arrow Rock and refuge staff began to rebuild the river connection with the Lewis and Clark Trail of Discovery.

Re-enactment crews used the trail June 9, commemorating when the explorers passed the point 200 years ago. Volunteers cut away brush and trees and placed geo-textile, covered by a fine rock chat, to make the trail accessible to all. ♦

“This was a great chance to show visitors how to reduce their pollution into the bay while providing habitat for wildlife.”

—Meg Walkup

BayScaping: Conserving Views and Habitats

By Kathy Reshetiloff

When hundreds of people gather in September for “The Big B,” one of the most popular events on the calendar of Eastern Neck NWR, MD, they can see for themselves how to preserve the Chesapeake Bay watershed through “BayScaping,” conservation landscaping that emphasizes native plantings in environmentally-sound decorative gardens that can protect the Chesapeake Bay ecosystem.

The refuge, having received \$5,000 from the Chesapeake Bay Trust and funding from other partners, converted its headquarters’ waterfront lawn in June 2001 into a BayScape Demonstration Area. Washington College and the Friends of Eastern Neck each contributed \$1,000, while Ramsar U.S. National Committee provided \$3,000. Other groups donated gloves, loaned equipment and provided discounts on plants and materials.



Without losing the magnificent view of the Chesapeake, the BayScape features 37 species of woodland, meadow and wetland native plants, wildflower and water gardens, a split-rail fence laced with black-eyed susans and such climbing species as native honeysuckle, and a forest transition zone, a large meadow of plants between the BayScape and the nearby woods. At the wood’s end, dogwood, redbud and other native species of shorter trees give way to taller hardwoods.

“This was a great chance to show visitors how to reduce their pollution into the bay while providing habitat for wildlife,” said Meg Walkup, the project’s coordinator at Eastern Neck Refuge, which sees about 70,000 visitors yearly.



More than 30 dedicated volunteers, ages 8-68, gave their energy and dedication to creating a mile long trail along the shore of the Missouri River. Jessica Spivey, a Student Conservation Association volunteer, mowed the trail open in June 2003. (Clifford Berger)

Photographers and painters use the garden for artistic inspiration. Eastern Neck NWR, MD, will hold an art contest this summer, featuring paintings and photographs that highlight the beauty of the BayScape and the resources it protects. "More Than a View, A Vision," the art show will be co-sponsored by the Kent County Arts Council. (Joan Bellanger)

Refuge volunteers, who prepared and planted the site, maintained it for two years and have helped with interpretative events. College students and youth from Outward Bound, Youth Service America, Living Classrooms, Boy Scouts of America and AmeriCorps added their muscle during the planting stage.

The BayScape provides food and habitat for butterflies, songbirds and small mammals. A small pond area not only supplies water, but also a natural home and breeding area for such amphibians as the southern leopard frog. Shrubs like inkberry and lowbush blueberry provide food for songbirds and small mammals. To attract butterflies, butterflyweed, swamp milkweed and gayfeather, among others, were planted. In addition to butterflies, the eastern columbine and coral honeysuckle draw hummingbirds.

The garden shows visitors how to conserve water through rainwater

collection, drip-tube irrigation, and xeriscaping. "During the severe drought of 2002," noted Walkup, "the BayScape was a living testimony to the hardiness of native plants. Conservation gardening makes economic sense as well as environmental sense." The BayScape uses solar-powered water pumping and lighting systems.

Moreover, educational programs and events have been built around the BayScape. During the annual "The Big B", for example, visitors tag migrating monarch butterflies. Photographers and painters use the garden for artistic

During "The Big B", an annual public event highlighting the monarch butterfly, volunteers demonstrate how to tag monarch butterflies. BayScape provides excellent habitat for monarch butterflies, which feed on the flowers and use milkweed as a host. The BayScape is the site of "The Big B." (Meg Walkup/USFWS)

inspiration. Working with the Kent County Arts Council, the refuge will host an art contest this summer, featuring paintings and photographs that highlight the beauty of the BayScape and the resources it protects.

For more details on Eastern Neck National Wildlife Refuge's BayScapes Demonstration Area contact Meg Walkup at 410-639-7056 or go to <http://easternneck.fws.gov/Bayscape.htm>. For more information about BayScaping, go to www.fws.gov/r5cbfo. ♦

Kathy Reshetiloff is a writer-editor at the Chesapeake Bay Field Office, MD.



“He is an astute hands-on engineer with a strong customer-oriented attitude.”

—David Allen



More than 2,000 people walked through decorative bull kelp doors that opened to a lobby with two-story-high windows that looked upon dramatic Kachemak Bay when the Islands & Ocean Visitor Center at Alaska Maritime NWR opened Dec. 13, 2003. John Harris, project manager for the Visitor Center won USFWS' Engineer of the Year designation for his extraordinary work on the center. (USFWS)

Harris Awarded Engineer of the Year

John Harris, project manager for the Islands & Ocean Visitor Center that opened Dec. 13, 2003, at Alaska Maritime NWR, has been named the USFWS' Engineer of the Year for his exceptionally high level of performance as chief of construction in the Region 7 Office. He has been nominated for the Federal Engineer of the Year Award, given by the National Society of Professional Engineers (NSPE).

Harris, who joined the Region 7 engineering office in 1991, has been chief of construction since 1995. Harris worked on the Islands & Ocean Visitor Center for two years, supervising one of the most complex visitor facilities built in Alaska.

When the center opened in December 2003, more than 2,000 people walked

through decorative bull kelp doors that opened to a lobby with two-story-high windows that looked upon dramatic Kachemak Bay. Visitors found some of the USFWS' most innovative designs. Indeed, area artists created most of the center's marine-themed artwork, engrained throughout the building's walls, floors, windows, columns, exhibits. Thousands of school children will benefit from environmental programs offered at the center's labs and classrooms.

Harris was able to reduce construction costs, partially by negotiating with the design contractor after the design phase had begun. The center is also home base for the Kachemak Bay Research Reserve.

In addition to major capital improvement projects, Harris is responsible for numerous smaller projects and oversees construction on roads, parking lots, visitor facilities, maintenance shops and other buildings. “He is an astute hands-on engineer with a strong customer-oriented attitude,” said then Region 7 Director David Allen. “His expertise and dedication continue to play a major role in development and rehabilitation of the infrastructure necessary to support the Service's mission in Alaska.” ♦

John Harris, project manager for the Islands & Ocean Visitor Center at Alaska Maritime NWR, joined the Region 7 engineering office in 1991 and has been chief of construction since 1995. (Michael Zobel)

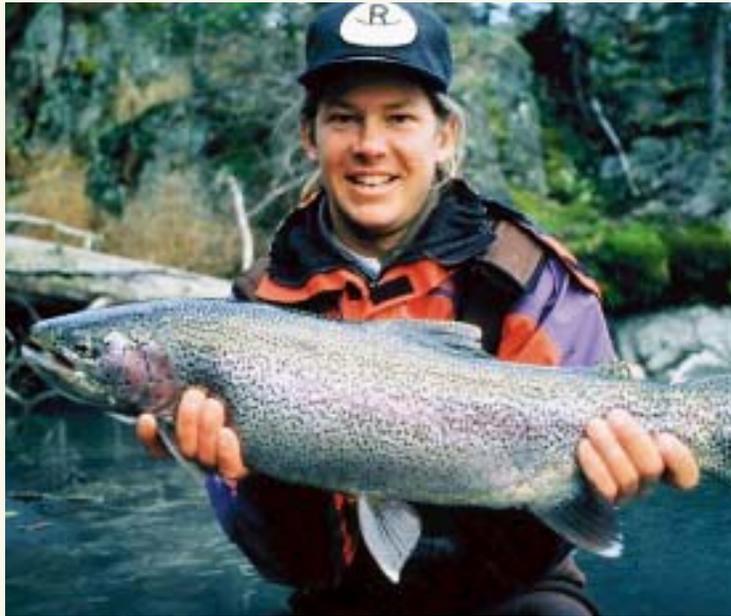


Fishing Guide To Be Updated

For those who feel that nothing compares to wetting a line as the sun rises over the ridge of a refuge just before a feisty largemouth bass takes the bait, the Refuge System is working with the Bass Anglers Sportsman Society to update *Your Guide to Fishing on National Wildlife Refuges*, first produced in 1992.

From Alaska to Alabama and from Maine to Hawaii, refuges are home to thousands of prime fishing holes. The updated guide will provide anglers with a description of the resources available, the various types of fish available, the best time to cast a line, and a description of fishing ethics, among other information.

Your Guide to Fishing on National Wildlife Refuges is expected to be completed in the fall. ♦



Your Guide to Fishing on National Wildlife Refuges will include information on where to snag anything from a small mouth bass to steelheads. (USFWS)

Trout are Jumping Again

For the first time in decades, trout anglers will be throwing their lines into Coles Creek this spring, thanks to the Coles Creek Partnership, which included Necedah NWR, WI. The USFWS' Partners for Fish and Wildlife provided habitat restoration assistance to private landowners.

The refuge, a nearby neighbor, provided nearly \$71,000 in Challenge Cost Share grants and other funding – about a quarter of the project's cost – and technical expertise to restore 5.6 miles of native brook trout stream on private land. The restoration raised the waterway's classification to Class 1 Trout Stream.

Degraded by decades of poor land use, the stream had been reduced to a shallow, muddy waterway with highly eroded banks although remnant populations of native brook trout had persisted.

Work began in 1999 when the Monroe County Land Conservation Department contacted the USFWS about the project. The Partners for Fish and Wildlife Program at Necedah Refuge helped to narrow and deepen the creek, install fish habitat structures, and stabilize the banks. Comprehensive stream surveys next year will verify water quality improvement.

Partners ranged from the Natural Resource Conservation Service and the county land conservation department, which provided the remainder of the project's \$289,000 cost, to the Wisconsin Department of Natural Resources, which purchased conservation easements from the 18 willing private landowners. The Monroe County Justice Department provided inmates to build the fish habitat structures. Other partners included Sparta Rod and Gun Club and National Wild Turkey Federation. ♦



Restoration upgraded Coles Creek to a top-rated Class 1 brook trout stream after decades of degradation. Restoration work began in 1999 when the Monroe County Land Conservation Department contacted the USFWS about the project. (Bill Peterson/USFWS)

Chief's Corner— from pg 2

When we look at the blue goose logo, we remember and honor those individuals whose passion and single-minded focus laid the foundation for the growth we've cultivated in more recent decades.

When Rachel Carson in the late 1940s told the public to watch for "the sign of the flying goose – the emblem of the national wildlife refuges," she well understood two basic principals of marketing: repetition and symbolism. Our goal is to get some of the public to recognize the meaning of the blue goose and stop by to enjoy opportunities to hunt, fish, observe, photograph, or learn more about our native wildlife.

With the blue goose flying in front of wildlife refuges, on boundary signs, Refuge System brochures and Web pages, the public will eventually associate the blue goose with solid conservation methods, quality wildlife-dependent recreation, places where families can enjoy wildlife observation and a chance to connect with nature.



The Waterfowl Are Back on Kern

Record numbers of ducks, ibises, egrets and other waterfowl wintered in Kern NWR, CA, this year because the refuge's 6,500 acres of wetlands were fully flooded for the first time since it was established in 1960.

The refuge not only attracted mallards, white-billed black coots and the common moorehen to its lush marshland, but also more than 6,000 white-faced ibises, a bird hardly seen in the California's Central Valley a decade ago. Rare tri-colored blackbirds also were seen. "If you worked at it, you could spot 150 species in a day," said Refuge Manager David Hardt.

At least partial credit can be given to the Central Valley Project Improvement Act, passed in 1992, which directed the US Bureau of Reclamation (BOR) to secure a reliable water source and build waterways to supply eight wildlife refuges, including Kern, and five state wildlife areas and duck clubs in Merced County. BOR pays market price for the water. ♦



Kern Refuge, CA, saw a record number of ducks, ibises, egrets and other waterfowl wintering on its 6,500 acres of wetlands, which were fully flooded for the first time in more than four decades. (David Hall/USFWS)

Send Us Your Comments

Letters to the Editor or suggestions about *Refuge Update* can be e-mailed to RefugeUpdate@fws.gov or mailed to *Refuge Update*, USFWS-NWRS, 4401 North Fairfax Dr., Room 634C, Arlington, VA 22203-1610.



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