



U.S. Fish & Wildlife Service

Fish & Wildlife News

January/February/March 2001

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**Special Section:
A Look
Ahead**



Norton Becomes Interior Secretary



Gale A. Norton was confirmed as Secretary of the Interior on January 30 and took the oath of office the following day. She is the first woman to serve as secretary in the Interior Department's 151-year history.

In her testimony before Congress during her January confirmation hearing, Norton told the Senate Energy and Natural Resources Committee, "Americans are proud of the many exquisite national treasures within our

shores... The top priority of the Department of the Interior must be to conserve those natural treasures."

Norton served as Attorney General of Colorado from 1991 to 1999. During her tenure as attorney general she worked to clean up hazardous wastes at Rocky Flats and the Rocky Mountain Arsenal near Denver. The Service acquired Rocky Mountain Arsenal several years ago and manages the site as part of the national wildlife refuge system.

Norton served as the chair of the environment committee for the National Association of Attorneys General. She also participated in a number of conservation policy groups such as the environment committee of the Republican National Lawyers Association and the Western Water Policy Commission.

Prior to her election as Colorado Attorney General, Norton served as associate solicitor for the Interior Department, overseeing endangered species and public lands legal issues for the Fish and Wildlife Service and the National Park Service. She also worked as assistant to the deputy secretary of Agriculture, and as a senior attorney for the Mountain States Legal Foundation.

*Rachel F. Levin, Public Affairs,
Washington, D.C.*

Police Chiefs Say Refuge Law Enforcement Needs Expanding

The law enforcement needs of the National Wildlife Refuge System are expanding, according to an independent assessment conducted for the Service by the International Association of Chiefs of Police. The report calls for stronger centralized leadership of the program and an increase in the number of full-time refuge officers, and recommends additional improvements to operations, training, and recruitment to meet the challenges posed by rapidly increasing visitation and encroaching urbanization on national wildlife refuges across the country.

The full text of the report, *Protecting the National Wildlife Refuge System: Law Enforcement Requirements for the 21st Century*, is available online at [<http://bluegoose.arw.r9.fws.gov/new.html.>](http://bluegoose.arw.r9.fws.gov/new.html)

Refuge law enforcement officers have broad responsibilities to investigate crime and apprehend criminals on and adjacent to refuges. They are responsible for protecting facilities and natural resources, ensuring visitor safety, and ensuring compliance with state and federal laws on the more than 530 national wildlife refuges across the country.

Although violent crime on refuges continues to be rare and visitors to America's refuges are extremely safe, law enforcement officers on national wildlife refuges increasingly confront the same problems as urban police: drug trafficking and abuse, gang activity, drunkenness, weapons violations, illegal alien activity, vandalism, traffic accidents and medical emergencies.

The increased need for law enforcement is linked directly to refuge visitation—which is expanding by almost 7 percent each year.

"Like residents of communities across the country," the report says, "visitors expect refuge law enforcement to close cases, bring offenders to justice, and return property."

On the Cover:

Wood storks at Harris Neck NWR. *Management of manmade freshwater impoundments enhances this Georgia refuge's importance as a rookery site for migratory birds including the endangered wood stork. Wood storks are large, long-legged wading birds, about 50 inches tall, with wingspans of more than 5 feet; biologists estimate an adult population of about fewer than 5,000 breeding pairs in the United States, down from 20,000 pairs in the 1930s. FWS photo: John and Karen Hollingsworth.*

Attention *Fish and Wildlife News* readers:

Beginning with this issue, *Fish and Wildlife News* will be a quarterly publication instead of bimonthly. Please check the back cover for new copy deadlines. Thank you.

Experts Agree on Recommendations for Hatchery System

After reviewing a large amount of data, interviewing almost 550 refuge officers and managers, and visiting 27 field stations, the association made 50 recommendations, including establishing a more powerful executive voice at the national level, increasingly unified system-wide practices, better central support for the law enforcement function and intensified law enforcement training.

Only 62 of the 602 refuge officers are full time. The rest have other duties in addition to law enforcement, a practice known as collateral duty. The IACP acknowledges that many refuges could not justify full-time officers, but recommends adding additional full-time officers to rotate among groups of nearby refuges, to bring "greater law enforcement interest, intensity, and experience."

The report was prepared at the request of former Director Jamie Rappaport Clark and the Department of the Interior's Office of the Inspector General. In 1998, a national gathering of refuge system employees and partners drafted a vision document for the refuge system, known as *Fulfilling the Promise*, which recognized the changing environment for refuge law enforcement and called for a thorough assessment with recommendations to improve the "status of public safety and resource protection provided by refuge law enforcement officers."

Although outside the scope of this report, refuge law enforcement officers work closely with officers from the Service's Division of Law Enforcement, who enforce federal wildlife laws, such as the Lacey Act, the Endangered Species Act and the Migratory Bird Treaty Act, all across the country and not just within refuge boundaries.

*Eric Eckl, Public Affairs,
Washington, D.C.*



Experts agree. Fisheries experts recommended steps to strengthen the hatchery system. FWS photo.

Fisheries experts from a wide variety of backgrounds agree significant changes and clarifications about funding, focus and management are needed to strengthen the National Fish Hatchery System. This unprecedented consensus within the fisheries community was reached after a year-long effort by the Sport Fishing and Boating Partnership Council.

Service Assistant Director for Fisheries and Habitat Conservation Cathleen Short called the council's recently released report, "Saving a System in Peril," a significant document.

"Although there have been previous national efforts to coalesce stakeholders' views about the National Fish Hatchery System, none has been as inclusive nor as consensus-driven as this effort by the council," Short said. "The report is a critical document that will be used as the Service creates a strategic plan for the system."

The report was developed by a steering committee composed of fisheries professionals from organizations as diverse as the Bass Anglers Sportsman Society, Trout Unlimited, American Sportfishing Association, Native American Fish and Wildlife Society, National Aquaculture Association, and state and federal agencies.

The council's involvement in the project stemmed from a May 1999 letter from 10 members of Congress who asked the Service to "convene a diverse committee that includes a broad spectrum of views regarding the hatchery system's future role..." In August 1999, the Service asked the council to "build consensus among natural resource stakeholders to provide recommendations to assist in the development of the Service's National Fish Hatchery System strategic plan."

Short said the council will be invited to continue to advise the Service as the strategic plan is developed.

Council Chair Helen Sevier praised the report.

"I am deeply proud of the perseverance and vision the council's hatchery project steering committee demonstrated throughout the entire process," said Sevier, who is also the president of the Bass Anglers Sportsman Society. "Steering committee members and their employers donated many days of diligent work to cultivate the remarkable consensus achieved by the group. These experienced and committed fisheries leaders embraced the objective of instigating meaningful change for the National Fish Hatchery System. We look forward to working with the Service as it develops the strategic plan."

Recommendations for Hatchery System (continued)

Funding for maintenance and operations for the hatchery system—comprising 70 national fish hatcheries, seven fish technology centers and nine fish health centers—dropped 15 percent in constant dollars since 1992; the system has a maintenance backlog that exceeds \$300 million and one in four hatchery personnel positions is vacant. This erosion of support has left the system incapable of keeping pace with rapid evolutionary changes in fisheries science and technology.

In its report, the council says that the overriding considerations for fisheries conservation and management are:

Maintaining healthy wild fish populations through habitat conservation and improved harvest management,

Maintaining genetic diversity, and

Proper use of hatchery stocks to achieve fishery management objectives.

In addition, the report emphasizes the need for the Service to create a national strategy not only for the hatchery system but for its entire fisheries program.

“It is essential that the FWS move aggressively to ensure that the National Fish Hatchery System and the products it produces fit within a publicly reviewed national strategy developed with state and tribal partners and stakeholders,” the report says. “The FWS must commit to implementing the plan it produces and the FWS, the Administration and Congress must be prepared to fund adequately the activities outlined by this plan.”

The Sport Fishing and Boating Partnership Council was formed in January 1993 to advise the Secretary of the Interior, through the Service Director, about sport fishing and boating issues. The council represents the interests of the public and private sectors of the sport fishing and boating communities and is organized to enhance partnerships among industry, constituency groups and government.

Laury Parramore, Sportfishing and Boating Partnership Council, Arlington, Virginia

Light Goose Harvest Offers Hope



New hope. Special hunting seasons and other measures have helped lower dangerously high populations of light geese such as snow geese. FWS photo: Will Roach.

For more than 60 years, hunters have supported conservation, advocating stronger protection for wildlife as well as providing a steady stream of revenue to build the National Wildlife Refuge System and restore waterfowl habitat on millions of acres of public and private lands. This year, thanks to the continued efforts of hunters, the Service and its partners may be on the road to averting a looming environmental catastrophe in the Canadian Arctic that threatens the health of dozens of migratory bird species.

Preliminary harvest data for mid-continent light geese compiled by the Service suggest that U.S. hunters harvested more than 1.3 million birds during the 1999-2000 hunting season and as the result of a special conservation measure allowing additional harvest after the traditional close of the season.

Combined with the expected harvest by Canadian hunters, the total harvest of mid-continent light geese will likely exceed 1.4 million birds, the level many researchers believe is needed to reduce overabundant light goose populations and begin to halt destruction of the birds' overgrazed arctic breeding grounds. Last year's U.S. harvest is a sizeable increase from the 1998-99 U.S. mid-continent harvest of slightly more than 1 million light geese.

It also represents an 80-percent increase over the 730,000 birds harvested in the United States during the 1997-98 season, the last season that special conservation measures were not taken.

These increasing harvest levels are good news for the long-term health of the mid-continent light goose (lesser snow goose and Ross' goose) populations, as well as dozens of other migratory bird species that depend on arctic breeding grounds and migrate through or winter in the United States.

A 1997 report by the Arctic Goose Habitat Working Group of the Arctic Goose Joint Venture recommended that the number of mid-continent light geese be reduced by approximately 50 percent by 2005 in order to halt the destruction of arctic breeding habitat caused by overgrazing and grubbing.

In 1999, the Service allowed 24 Midwestern and Southern states to take conservation measures aimed at reducing the population of mid-continent light geese. Designed to halt widening destruction of fragile arctic breeding habitat caused by exploding populations of lesser snow and Ross' geese, the measures were implemented in February 1999 but were subsequently challenged in court. The regulations were withdrawn in May 1999 to prevent further litigation.

Guidelines Aim to Reduce Fatal Bird Collisions with Communications Towers

The measures gave states in the Central and Mississippi flyways the flexibility to allow the use of normally prohibited electronic goose calls and unplugged shotguns during the remaining weeks of their light goose seasons in the spring, provided that other waterfowl and crane seasons had been closed. States were also given the authority to implement a conservation order under the Migratory Bird Treaty Act that would allow hunters to take light geese outside of traditional migratory bird hunting season frameworks—especially after March 10, when seasons typically close.

After withdrawing the rules, the Service began compiling an environmental impact statement that will determine its long-term management strategy for overabundant lesser snow and Ross' goose populations, as well as the rapidly increasing greater snow goose population. A draft EIS is expected to be completed in early spring.

In 1999, Rep. Jim Saxton of New Jersey, chair of the House Resources Subcommittee on Fisheries and Wildlife, introduced legislation reinstating the measures. The legislation, which expires May 15, gives states the ability to implement the rules pending completion of the EIS, thus preventing a delay that compounds the problem.

*Chris Tollefson, Public Affairs,
Washington, D.C.*

The Service estimates that between 4 million and 5 million birds are killed every year in the United States after collisions with communications towers. Though the full extent of this problem is not yet known, new interim guidelines will help Service employees evaluate tower proposals as the Service continues to work with the industry to devise additional, more effective measures for avoiding bird strikes.

Millions of migratory birds use the cover of night to travel thousands of miles across North America, flying to breeding and wintering grounds across the hemisphere; a significant number of those birds collide with one of the 80,000 lighted communication towers that now dot the American landscape transmitting wireless telephone conversations, television and radio broadcasts, and other signals.

These towers pose a special danger to some 350 species of night-migrating songbirds, especially on foggy nights with low cloud cover. Under these conditions, birds appear to be attracted for unknown reasons to towers with pilot warning lights, which are required by the Federal Aviation Administration for towers taller than 199 feet and for all towers within 3.8 miles of an airport.

After consulting with the telecommunications industry, academic researchers, other federal and state agency representatives, and bird conservation groups, the Service developed the interim guidelines.

The guidelines include recommendations to co-locate proposed new antenna arrays on existing towers or other structures whenever possible; build towers as short as possible and without guy wires or lighting; site new towers in "antenna farms" away from wetlands or other known bird concentration areas; and use white strobe lights, which appear to be less attractive to birds than solid or pulsating red lights, on towers that must be lighted for aviation safety.

Researchers have observed bird kills at communications towers for decades, with a 1979 study placing the number of birds killed at 1.3 million per year based on a survey of some 500 of the 1,010 tall towers then in existence. Today, more than 79,000 towers are registered with the Federal Communications Commission, of which some 52,000 are lighted. Industry projections indicate as many as 100,000 new towers may be built in the next decade.

Because of a Congressional mandate to digitize all television stations by 2003, an estimated 1,000 of these new towers will exceed 1,000 feet in height, creating a potentially serious threat to migrating birds.

Service field stations have been involved in evaluating tower effects on birds and identifying ways to minimize losses since 1996. In June 1999, a Communication Tower Working Group, chaired by the Service and including 42 industry, academic, private conservation and government stakeholders, was formed to develop, help fund, and implement a nationwide research protocol assessing causes of the collision problem and researching solutions.

In August 1999, the Service co-chaired a public workshop, "Avian Mortality at Communications Towers," at Cornell University, giving researchers and policy makers a forum to assess and discuss the scope of the problem. This past summer, the working group reviewed and approved a nationwide research protocol that sets parameters and goals for future studies.

The wireless telephone industry supports efforts to examine the problem. Southwestern Bell Wireless is discussing funding pilot studies that could begin as early as next spring. The Cellular Telecommunications Industry Association has suggested that the working group submit a full research proposal for a 3- to-5-year nationwide monitoring effort to their board of directors for consideration.

*Chris Tollefson, Public Affairs,
Washington, D.C.*

Coastal Grants Help Restore Disappearing Wetlands

When they approached the Texas Parks and Wildlife Department for help, members of the West Galveston Island Property Owners' Association may not have known the long-term ecological implications of eroding shorelines along West Galveston Bay.

What they did know was that the marshes and wetlands that once characterized their neighborhood along Delehide Cove, adjacent to Galveston Island State Park, were quickly giving way to encroaching bay waters, and their once familiar neighbors—willets, clapper rails and roseate spoonbills—were disappearing.

Fortunately, the Service recently awarded Texas two matching grants totaling more than \$1 million to help stop the clock on erosion in West Galveston Bay.

The Service annually awards competitive grants for wetland conservation projects through the National Coastal Wetlands Conservation Grant Program. Funding comes from a portion of the Sport Fish Restoration program, which collects tax on fishing equipment, pleasure boats, yachts and a percentage of the federal fuel tax on motor boats and small engines.

This year, the National Coastal Wetlands Conservation Grant Program awarded more than \$15 million in grants for 22 projects in 11 states, including the two in Texas. Coastal states and those bordering the Great Lakes may apply and grants require at least 25 percent matching funds from the state government or their private partners. The 2001 grants will be supplemented by more than \$33 million in funds from states and partners.

Because of erosion and subsidence (sinking of land), the disappearance of wetlands and marshes on Galveston Island has become an unwelcome trend resulting in more than just decreased property values for some homeowners. Tidal marshes are critical for the entire bay ecosystem and its inhabitants, including colonial waterbirds, shorebirds, migratory songbirds, several imperiled species, and numerous marine species that sustain the local seafood industry.

Tidal marshes also help remove pollutants and buffer nutrient levels in bay and coastal waters. It's not just backyards that are threatened—the loss of these marshes poses serious long-term threats to hundreds of species, including humans.

That's why the two grants are so critical, and why Texas Parks and Wildlife was so responsive when the property owners' association approached. The parks and wildlife agency joined with Texas General Land Office and submitted two grant proposals. Both were approved last November.

The project is also an example of what may become a new trend—land owners and local residents coming forward to request habitat restoration in their neighborhoods.

The restoration project at Delehide Cove will protect more than 1,400 acres of estuarine marsh from erosion. Additionally, a breakwater will shield and enable biologists to restore 50 acres of estuarine intertidal emergent marsh and an acre of seagrass. These cooperative efforts, which will be undertaken by contractors and consultants under the advisement of Service and state biologists, will improve shorebird nesting habitat, tidal pools and flats, lagoons, freshwater wetlands, and foraging areas for upland and aquatic species.

The project is also an example of what may become a new trend—land owners and local residents coming forward to request habitat restoration in their neighborhoods.

"The unique thing about this particular project," said Will Roach, the Service's Texas Coastal Program coordinator, "is that the local people came forward and really wanted to make this happen. Their initiative, and the collaboration of many partners, will have direct benefits to the entire Galveston Bay ecosystem."

Partners for the Delehide Cove project include Texas Parks and Wildlife, the Texas General Land Office, the West Galveston Island Property Owners' Association, the Service's Texas Coastal Program and Division of Federal Aid, Reliant Energy, the Galveston Bay Foundation, and the Galveston Bay Estuary Program.

Many of the same partners—along with the Texas Audubon Society and the National Fish and Wildlife Foundation—will also work together on the second grant project, protecting the most important rookery island in Galveston Bay.

Located five miles northeast of Delehide Cove, North Deer Island is home to endangered brown pelicans, threatened reddish egrets and white-faced ibis, and 16 other colonial waterbird species. The restoration and protection project will conserve shoreline and estuarine intertidal marshes, benefitting 147 acres of coastal habitat including 103 acres of wetlands.

As the saying goes, "One good thing leads to another." The seeds for the idea of restoring Delehide Cove were planted when members of the West Galveston Island Property Owners' Association saw activities on nearby Galveston Island State Park, where biologists staved off shoreline erosion by planting marsh terraces behind breakwaters. These initial efforts were made possible through a 1996 Coastal Wetlands Restoration Grant.

*Ben Ikenson, External Affairs,
Albuquerque, New Mexico*

Salmon in the City

Campbell Creek rises in the western foothills of Alaska's Chugach Range, tumbling through alpine tundra frequented by Dall sheep and brown bears; descending into mixed forests and spruce bogs used by moose, black bear, and the occasional wolf; and eventually emptying into Cook Inlet—home to sea otters and beluga whales.

With three major tributaries, the creek provides spawning and rearing habitat for coho, sockeye, chinook and pink salmon, as well as Dolly Varden char.

Campbell Creek doesn't flow through a vast wilderness watershed, but traverses Alaska's largest city, Anchorage—home to more than 260,000 people. Along the way, Campbell Creek is spanned by dozens of bridges, lined by bike paths and manicured lawns, and armored along its banks by rock. Far from untouched, it has experienced the same affronts—channelization, improperly installed culverts, untreated runoff and loss of riparian vegetation—as an urban stream in any mid-sized city in the lower 48 states.

Anchorage has lost more than half of its freshwater wetlands in the last century and the city continues to grow, putting additional stresses on local watersheds, including streams that support a popular nearby salmon fishery. Each year, returning salmon encounter additional barriers, less rearing habitat and more water quality problems.

Fortunately, biologists such as Mark Schroder of the Anchorage Ecological Services field office have stepped in to help rehabilitate some of these problem areas, often working with a number of government and private partners through the Service's Partners for Fish and Wildlife Program.

"Everyone I talk to knows how special it is to have a healthy salmon stream like Campbell Creek running through Anchorage," Schroeder said. "My role has been to identify some of the problem areas where habitats are degraded, to work with the resource agencies to design long-term solutions, and to coordinate the activities of all the people and groups interested in getting the projects accomplished."



On-the-ground, in-the-water. *Biological technician Joe Connor secures a coconut fiber log over willow plantings at Campbell Creek. FWS photo.*

The future is looking brighter for fish in Campbell Creek, thanks to a series of Partners for Fish and Wildlife restoration projects undertaken over the past few years—some of the more than 200 Partners for Fish and Wildlife projects completed in Alaska since the program's inception in 1995, most targeting riparian and instream habitats important to these five species of Pacific salmon.

The first cooperative project with the Municipality of Anchorage, the local natural gas utility, and a popular restaurant, removed some 500 sandbags protecting the streamside restaurant from severe erosion. In place of the bags, Schroeder and his partners used more than 140 feet of spruce rootwads, willow-studded brush layers and riparian vegetation to stabilize the eroding bank, creating productive stream habitats.

Three miles downstream, another site on Campbell Creek had become severely degraded from trampling by hundreds of people using a streamside bike and foot trail. Biologists restored this area to ecological health using financial contributions from three local non-government organizations, technical and on-site assistance from six state and federal agencies and more than 400 hours of labor by community volunteers.

As a result of a third project, residents of a creekside subdivision withdrew their application to rip-rap streambanks, instead teaming with the Service to stabilize the banks with coconut fiber logs, live willow cuttings and small spruce trees carefully cabled to the bank.

Eight Partners for Fish and Wildlife projects have been completed in the Anchorage area since 1995. Projects in the works for next year include a major effort to restore Westchester Lagoon, an estuary at the mouth of nearby Chester Creek. Once prime habitat for coho salmon, construction of an ill-placed dam, a non-functional fishway, and a railroad trestle in the 1960's hampered the return of salmon to traditional spawning grounds. After the project is complete, fish will no longer run a gauntlet of 300-foot-long culverts 25 feet below the water surface but will swim unrestricted from Cook Inlet to upstream spawning grounds.

Mike Roy, Partners for Fish and Wildlife/Coastal programs, Anchorage, Alaska

Conducting a Great Experiment



Successful. Part of the experimental area at Aransas NWR. About 6 to 10 percent of the unit was not roller-chopped in order to save oak mottes and some individual trees. FWS photo.

Summer visitors at Texas' Aransas National Wildlife Refuge watched curiously from the auto tour loop as a bulldozer moved through the brush, pulling what appeared to be a big metal drum with teeth.

What visitors saw was the first step in a pilot project designed to restore prairie habitat and increase biological diversity along the Texas coast. The project entails a combination of habitat management techniques—roller-chopping, prescribed fire and seeding—to convert an area dominated by woody plants into grassland mixed with groves of trees—ideal habitat for the migratory birds and other wildlife that use the refuge.

Located on the refuge's Blackjack Peninsula, the 200-acre experimental project unit is a mix of woody thickets and grassy openings. The groves of large trees are important habitat for neotropical migrants, white-tailed deer and javelina but woody thickets have replaced grassland habitat critical to prairie species like the Le Conte's sparrow.

Aransas has used a variety of methods to try to tame areas that have become overgrown with woody plants because of fire suppression, climate change and overgrazing. For example, the refuge burned 16,000 acres in 1999 as part of an aggressive prescribed fire program to maintain habitat

for the endangered whooping crane and other wildlife. On some portions of the refuge, however, prescribed fire alone has not been sufficient to reduce woody plant density and revive coastal prairie. This is where the bulldozer and the big metal drum come in.

The bulldozer pulled a roller chopper, a heavy metal drum equipped with blades to knock down the brush and chop the woody stems as it is pulled along. Although most of the 200 acres were roller-chopped, operators spared groves of large trees important to migrating birds and resident wildlife. Roller-chopping the brush makes prescribed fires safer and more effective. It will also create new plant growth as the chopped oaks resprout.

The new plant growth will be more susceptible to damage by fire, which leads to the second step in the experiment.

When conditions are favorable, staff will conduct a prescribed fire on this area using two different treatments. Half of the area will be ignited with a fire that moves the same direction the wind is blowing, and half will be ignited with a fire that moves against the wind. Staff will evaluate the two ignition strategies and their effects on woody plant mortality and vegetation recovery.

To speed the conversion of woody plants to grassland, in the third step in the research project biologists will evaluate different revegetation techniques. Although the experimental area will revegetate on its own, manually seeding the unit after a burn can give the grasses a competitive edge over woody plants that can shade the grasses out. One third of the unit, approximately 65 acres, will be allowed to revegetate naturally after burning, one third will be planted with native grass seeds and the remaining third unit will be seeded with hay baled from another part of the refuge.

Essential to any good experiment is evaluation and monitoring, the fourth step in the research project. Changes in plant composition and plant cover on the unit will be evaluated using photography and transects. Monitoring will continue after the first year to determine when the unit should be treated again and which techniques are appropriate.

New Refuge Features Outstanding Wetlands



Wetlands of distinction. The new Caddo Lake National Wildlife Refuge brings more than 7,000 acres under the protection of the National Wildlife Refuge System. FWS photo.

With a free land transfer from the Army's Longhorn Ammunition Plant in Harrison County, Texas, the Service established the 532nd national wildlife refuge in October.

Caddo Lake NWR—named after the only natural lake in Texas—adds to the National Wildlife Refuge System more than 7,000 acres of some of the Lone Star State's finest wetlands, old-growth bottomland hardwood forests and sprawling cypress swamps.

The abundant wetlands at Caddo Lake are an important stopover for neotropical migratory birds and as many as 224 species of birds have been counted. The surrounding wetlands are acknowledged as wetlands of international importance by the RAMSAR Convention on Wetlands, an international treaty that recognizes wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. Only 17 wetlands in the United States are on this list of more than 1,000 worldwide.

Initially, the Service will manage the refuge in cooperation with the Army as an overlay refuge not open to the public.

Elizabeth Slown, External Affairs, Albuquerque, New Mexico

Navy Seabees Lend Helping Hands



In the Navy. U.S. Navy Seabees lent a hand at Pearl Harbor NWR. FWS photo.

The Service has a strong partnership with the U.S. Navy in Hawaii, particularly at Pearl Harbor National Wildlife Refuge, which the Service manages on Navy land. Sailors and their families have spent numerous hours volunteering at the refuge to improve conditions for the four endangered waterbirds, as well as migratory shorebirds and waterfowl that use the refuge, located on the island of Oahu.

Recently, Navy personnel helped build upon this partnership by joining forces with refuge staff to undertake an unusual project: restoring a pond at the Honouliuli Unit that for years provided little value to waterbirds because of a mammoth overgrowth of invasive plants and weeds. Refuge maintenance staff was able to clear about five acres of stubborn vegetation at the unit.

Once the vegetation was removed, however, additional work was required before the pond would be suitable for waterbirds. Many mounds in the pond were too large and too high to be affected by water level manipulations that could create conditions favorable for certain plants, insects and other organisms that provide food for the birds.

In August, Navy Construction Battalion Unit 413 responded to the refuge manager's request for assistance. A bulldozer, grader and two operators, Michael Bradley and Charles Stinson, arrived at the Honouliuli Unit and quickly got to work applying their Navy engineering skills by sculpting the bottom of the pond based on a rough sketch. They removed many of the mounds, reshaped some of the mounds into islands, and built a drainage system, creating critical

mudflats for birds to forage, islands necessary for stilt nesting and channels to easily direct water to all parts of the pond.

Bradley recognized the project benefitted more than just birds.

"This project was a win-win situation for all," he said. "The Seabees were given the opportunity to use heavy equipment that they don't normally use in Hawaii, and the native and migratory birds got some new habitat."

Five acres of additional habitat may not seem like a big deal but on Oahu most of the natural freshwater wetlands have been destroyed. To put the size in perspective, the adjacent 13-acre pond—the most productive natural wetland on Oahu for stilts—fledged 51 endangered Hawaiian stilt chicks this past year. The additional five acres at the Honouliuli Unit will mean these numbers will climb even higher.

The birds responded immediately, hardly waiting for the water to accumulate. There has also been a tremendous crop of all sorts of new insects and larvae that the birds quickly gobble up.

With the pond restoration now complete and fresh water pumped in, ideal habitat is available for the many migratory waterbirds returning to Hawaii for the winter as well as for kama'aina (local) waterbirds.

Donna Stovall, Oahu NWR Complex, Haliewa, Hawaii

Bill Roome, Public Affairs, Navy Region Hawaii

Sweeping HCP Protects Species in Las Vegas Area

More than 100 people gathered at the Red Rock National Conservation Area near Las Vegas in November to celebrate the culmination of 10 years of work as then-Interior Secretary Bruce Babbitt signed the Clark County Multi Species Habitat Conservation Plan.

"I'm here simply to salute your efforts; it's really extraordinary," Babbitt told the crowd at the signing ceremony. "Clark County is a model that must continue throughout the West."

One of the most far-reaching habitat conservation plans in the nation, it covers 78 species, 11 ecosystems and 145,000 acres of land subject to development over the next 30 years.

The Service has been working with the county, state and other federal agencies as well as several private organizations for more than a decade to conserve the desert around Las Vegas and protect the endangered desert tortoise. After the Desert Conservation Plan was signed in 1995, Clark County initiated the multi-species habitat conservation process, broadening the desert plan to include not only the tortoise but 77 other sensitive species that could be affected by urban development.

The goal of the Clark County plan is to conserve healthy functioning ecosystems and the species they support. One of the most far-reaching habitat conservation plans in the nation, it covers 78 species, 11 ecosystems and 145,000 acres of land subject to development over the next 30 years.

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Sweeping HCP Protects Species in Las Vegas Area (continued)

An implementation and monitoring committee helped get the Clark County Multi-Species Habitat Conservation Plan off the ground. This group was composed of representatives from federal, state and local government agencies; environmental groups such as The Nature Conservancy; university and independent scientists; and resource users including the Southern Nevada Home Builders Association, Southern Nevada Water Authority, and mining, grazing, and off-highway vehicle users.

To meet the goals of the plan, all lands—federal and non-federal—are incorporated in a reserve design. The Bureau of Land Management, National Park Service, U.S. Forest Service, and the Fish and Wildlife Service, through its Division of Refuges, are critical participants in the process and signed the implementing agreement along.

Clark County will continue to collect a \$550 per-acre fee established under the Desert Conservation Plan and will use these funds—approximately \$2 million a year—to minimize and mitigate the effects of incidental take under the multi-species habitat conservation plan.

*Randi Thompson, Public Affairs,
Las Vegas, Nevada*

Special Hunt Provides Special Opportunities



Anticipation. Donald's father and brother help get his deer stand ready. FWS photo: Chuck Traxler.

For four years, Rydell National Wildlife Refuge in northwestern Minnesota has hosted a deer hunt for hunters with physical disabilities. Refuge Manager Rick Julian has worked closely with the refuge's Friends Association and other partners to develop more than three miles of paved, disabled-accessible trails throughout the refuge, establishing Rydell as an ideal setting for this kind of hunt, which becomes more popular every year.

In addition to providing recreational opportunities, the hunt is also a valuable management tool for the refuge, which is only open to deer hunting during this special three-day event.

"This event is really a win-win situation," said Julian. "It's good for the hunters and good for the refuge and helps us maintain a healthy deer population."

The event is coordinated by Options: Resource Center for Independent Living Inc., a nonprofit group from East Grand Forks, Minnesota. Each year, Options staff create safe and accessible deer hunting stands throughout the refuge and select eligible hunters. The refuge can safely handle about 20 disabled hunters; this year more than 40 applied to hunt, showing how popular the program has become.

"It is really hard to choose," said Options Executive Director Jay Johnson. "I try to select people who haven't had the opportunity to hunt before or who have special circumstances that really make them a good candidate. I wish we had enough resources so everyone who wanted to hunt could. I hate turning anyone away."

Upon arriving at Rydell for the event this fall, participants were given a welcome and orientation briefing by refuge staff. After the briefing, Donald Tompkins of Bemidji, Minnesota, was ready to go hunting.

This was 15-year-old Donald's first time at the Rydell hunt. He had hunted once last year but did not get a deer. He was convinced this time he would be successful.

Donald was confined to a wheelchair after falling off a ski lift when he was six years old. After the accident, he had several operations and a lot of physical therapy. In fact, he just had another operation last summer—but he wasn't letting that slow him down.

"He still does everything he wants to do," said his father, Gary, before they went in to the field. "He just does them a little differently than before. He still skis, plays baseball, and now he is going to get his first deer."

This trip was more than just an opportunity for Donald to go hunting.

"This is really a nice event," said Gary Tompkins. "I have a hard time getting out hunting anymore and Donald really loves to go. Because of the way this is set up, I can go out with him. It's a great opportunity for us to spend time together doing something we both enjoy."

Study Shows Lead Shot Ban Saves Waterfowl

Donald's assigned deer stand was situated along a dirt trail; a row of apple trees stood on the right and a thick stand of mixed trees on the left. Donald's brother and father helped him get his wheelchair situated and set up camouflage netting. The rest was all up to him.

About an hour later, a deer slowly crossed the trail 100 yards in front of the stand. Although it was a legal deer and an easy shot, Donald showed control over his enthusiasm—and good hunting ethics—as he let the young doe approach his stand unharmed. The young deer came within 20 feet of Donald before a pair of red squirrels began a loud argument in the nearby apple trees and she finally moved away.

Time passed and several more deer move across the trail, always out of range, too small or behind trees. Ruffed grouse walked past and red squirrels continued their periodic battles around the blind. Eventually dusk approached and this day of deer hunting was over.

Donald was not disappointed. He had two more days to hunt and wasn't going to quit that easily. He excitedly went over every detail of the deer he'd seen and his brother offered advice on what he can do to change his luck for tomorrow.

"I'll get one tomorrow," he said.

Donald did get a deer on Sunday, the last day of the hunt. Like other things in his life, it didn't come easily. But he didn't give up. And in the end, he was successful.

*Chuck Traxler, External Affairs,
Minneapolis, Minnesota*



Unleaded saves lives. *A study shows that banning lead shot had made a difference in the health of America's waterfowl and other wildlife. FWS photo: Wyman Meinzer.*

When lead shot was phased out for waterfowl hunting in 1991 because of its toxic effects on waterfowl that ingest spent shot pellets, the only alternative was steel. Hunters faced a sometimes difficult adjustment to using a shot with a far different ballistic performance than lead, and they worried that the added expense of developing and producing new shot types couldn't be justified by what many expected would be marginal benefits to waterfowl.

Today, those fears are easing. Hunters now have a choice of seven different nontoxic shot types, and evidence suggests that the switch away from lead shot has made a dramatic difference in the health of North America's wildlife.

A study, "Ingestion of Lead and Nontoxic Shotgun Pellets by Ducks in the Mississippi Flyway," funded in part by the Service's Great Lakes-Big Rivers and Southeast regional offices and published last summer in the *Journal of Wildlife Management*, estimates that hunters have spared millions of waterfowl from lead-poisoning deaths by using nontoxic shot.

To measure the effect of the lead shot ban, researchers examined thousands of ducks harvested in the Mississippi Flyway during the 1996 and 1997 waterfowl seasons, the fifth and sixth seasons after the ban on lead shot.

Based on the survey's findings, researchers William L. Anderson of the Illinois Department of Natural Resources and Stephen P. Havera and Bradley W. Zercher of the Illinois Natural History Survey estimate that the use of nontoxic shot reduced lead poisoning deaths of Mississippi Flyway mallards by 64 percent while overall ingestion of toxic pellets declined by 78 percent.

The report concludes that by significantly reducing lead shot ingestion in waterfowl, the ban prevented the lead poisoning deaths of approximately 1.4 million ducks in the 1997 fall flight of 90 million ducks. Approximately 462,000 to 615,000 acres of breeding habitat would have been required to produce the same number of birds that were saved by nontoxic shot regulations that year. With the ban now entering its ninth year, ingestion of lead shot has probably continued to decline, the study says.

"The results of this important report suggest that the ban on lead shot has been a resounding success for the health of waterfowl populations and has almost certainly contributed to the record numbers of waterfowl we have seen in recent years," said acting Service Director Marshall Jones.

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Study Shows Lead Shot Ban Saves Waterfowl (continued)

In 2000, the Service gave permanent approval to tungsten-nickel-iron shot and tungsten-matrix shot while extending temporary approval of tin shot for the 2000-2001 hunting season. In addition to steel, tin, tungsten-nickel-iron and tungsten-matrix shot, hunters may also use tungsten-iron, tungsten-polymer and bismuth-tin shot.

Jones pointed out the ban on lead shot has probably also benefitted nearly 30 other bird species in which lead poisoning has been documented, including bald eagles. Bald eagles have been found to be particularly vulnerable to lead poisoning because they often feed on the carcasses of hunter-crippled and lead-poisoned waterfowl.

"This study demonstrates what we've known for some time: that the vast majority of hunters have acted responsibly and ethically to reduce lead poisoning in waterfowl by complying with the law," said Jones, noting that only 1.1 percent of examined ducks showed evidence of being shot with lead.

Efforts to phase out lead shot began in the 1970s but a nationwide ban on lead shot for all waterfowl hunting was not completed until 1991. Canada instituted a complete ban on the use of lead shot in 1999 after banning its use near bodies of water and on national wildlife areas earlier.

*Chris Tollefson, Public Affairs,
Washington, D.C.*

Grants Support Coastal Restoration Efforts in South Florida



Hard work. Community-based efforts to remove an invasive exotic plant in Palm Beach County. FWS photo: Brad Rieck.

The South Florida Ecological Services Field Office recently announced the recipients of grants through the South Florida Coastal Ecosystem Program. More than \$250,000 was awarded this year for 12 cooperative projects that will focus on controlling non-native invasive species, re-establishing native plant species and natural surface water flows, and improving environmental education. The restoration efforts will enhance habitat for fish and wildlife—including threatened and endangered species and migratory birds—on 1,000 acres of public and private lands.

South Florida is one of 15 priority regions in the country receiving special attention from the Service for coastal conservation. The grant program emphasizes identifying coastal habitat problems and solutions and implementing on-the-ground actions through partnerships. Grant money is allocated through general appropriations to those ecological services field offices with coastal programs.

Between 1995 and 2000, the South Florida Coastal Ecosystem Program has awarded grants ranging from \$1,000 to \$50,000 to 43 projects. To date, the program has matched more than \$1 million in program funds with

\$5 million in total project costs. Partners in the projects include state agencies, county and local governments, non-profit organizations, businesses, and universities.

Projects have entailed such activities as exotic and invasive vegetation eradication, native vegetation establishment, hydrological and topographic restoration, water quality enhancement, studies and research, and environmental education. Ecological communities that have benefitted from the projects have included nearshore reef; mangrove; salt and freshwater marsh; prairie, flatwoods; hammock; dune; and scrub.

Grant recipients and projects for the 2000 South Florida Coastal Ecosystem Program are:

City of Sanibel: Restore 57 acres of West Indian tropical hardwood hammock including the eradication of exotic vegetation, mainly Brazilian pepper, which will improve nesting and foraging habitat for the bald eagle, indigo snake and the state-listed gopher tortoise. The effort will also help neotropical migratory birds such as the white-eyed vireo, scarlet tanager, painted bunting and a variety of warblers.

Bird-Friendly Brew Wings into the Interior Cafeteria

Gasparilla State Recreation Area: Restore and revegetate habitat with native plants on this 7-mile-long barrier island that is home to many endangered and threatened species, including the loggerhead sea turtle and West Indian manatee, and the gopher tortoise and least tern.

The Nature Conservancy of Southwest Florida: Work with 50 private land owners to enhance the shoreline on the Naples Bay residential canal system by establishing a fringe of mangroves that will help stabilize shorelines and improve habitat for the manatee and many estuarine fish, including snapper and grouper.

Eckerd College: Enhance fresh and saltwater marsh habitat for the federally-listed Lower Keys marsh rabbit and silver rice rat on Boca Chica, Saddlebunch and Big Pine keys. Efforts will focus on the eradication of Australian pine and Brazilian pepper so that native grasses can grow back to provide food and cover for these species.

Environmental Learning Center: Restore mangrove shorelines in Brevard, Indian River, St. Lucie and Martin counties using a unique planting system involving PVC pipes. Restoration of these mangroves will improve habitat for the manatee, numerous wading and migratory birds, and many species of fish.

Sanibel-Captiva Conservation Foundation: Eradicate Brazilian pepper and Australian pine on Frannie's Preserve along the Sanibel River in Lee County. This area is a critical resting and foraging site for neo-tropical migratory birds that move through southwest Florida during spring and fall. Other species that will benefit from this effort include the roseate spoonbill, white ibis, snowy egret and gopher tortoise. Signage along a bike route through the preserve will educate the public about habitat and species.

Florida Keys Environmental Restoration Trust: Restore wetlands and freshwater slough hydrology on Big Pine Key by installing culverts through an existing bisecting fill roadway. Restoration effort will aid in the recovery of the Key deer and marsh rabbit.

Florida Oceanographic Society: Restore mangrove salt marsh mosquito impoundments and reconnect this habitat with the Indian River Lagoon. Numerous fish and bird species will benefit from this effort including mangrove snapper, tarpon, great blue heron, great egret and white ibis.

Marine Resource Council: To eradicate Brazilian pepper on private lands adjacent to the St. Sebastian River and replant with native species, benefitting species such as opossum pipefish, big mouth sleeper, slash cheek goby, bald eagle and indigo snake. This project was selected to highlight the Service's Coastal Program on an Information Television Network documentary on invasive species to be aired on CNBC this spring.

Habitat Specialists Inc.: Educate the public about coastal ecosystems, emphasizing the impacts of invasive plants and demonstrating their removal and replanting of natives. Demonstration programs will be conducted at Spanish River Park, Ocean Reef Park and John U. Lloyd Beach State Recreation Area.

St. Lucie County Commissioners: Create a coastal maritime hammock within a new county park adjacent to Ft. Pierce Inlet State Park. Signs will educate the public about the problems associated with non-native invasive plants. Neotropical migratory birds will benefit from the project.

Southwest Florida Water Management District: Restore freshwater wetlands within the Alligator Creek watershed, benefitting wading birds such as the wood stork and providing foraging opportunities for bald eagles.

*Brad Rieck, Ecological Services,
Vero Beach, Florida*

The sound of birds singing had more than one patron wondering whether the Main Interior Building cafeteria had attracted avian visitors. Indeed, mid-morning on November 28, 2000, an extraordinarily large and friendly Baltimore oriole was spotted in the cafeteria posing for photographs and holding a coffee mug.

The sound effects and guest appearance by a Major League Baseball mascot—as well as decorations, free coffee samples, and door prizes—were all part of a gala kick-off for the introduction of new, environmentally-friendly coffee in the cafeteria. Café Rojas, a brand of coffee produced in a manner beneficial to birds, the tropical forest, and traditional farmers, is now available by the cup or by the bag in the Interior cafeteria by agreement between concessioner Guest Services Incorporated and Boyd's Coffee Company.

Shade-grown coffee such as Café Rojas is produced under a canopy of natural or planted trees in which migratory birds and other wildlife can find food and shelter. Unfortunately, the industrialization of coffee farming has resulted in a significant conversion to "sun" plantations, producing higher yields but lacking trees and wildlife diversity.

Growing availability—and the increasing recognition of the benefits of shade-grown coffee—makes it an ideal theme for International Migratory Bird Day. Celebrated annually on the second Saturday in May, IMBD promotes awareness of migratory birds and the problems they face. The educational and promotional materials developed for IMBD 2001 focus on shade-grown coffee and public outreach staff at national wildlife refuges, national parks, and other public facilities are encouraged to adopt the coffee theme in their celebrations.

To learn more about shade-grown coffee and International Migratory Bird Day visit <<http://birds.fws.gov/imbd.html>> or contact the IMBD information center at 703/358 2318 or <IMBD@fws.gov>.

*Jennifer Wheeler, Division of Migratory
Bird Management, Arlington, Virginia*

Preserving A Legacy



History lesson. *Protecting and restoring the nation's first national wildlife refuge is just one project in the Service's Centennial Campaign. Centennial outreach team members listen to Paul Tritaik as they toured the Paul Kroegel homestead last December. For more information on the activities in your region, contact your regional centennial coordinator. FWS photo: Rachel F. Levin.*

The smell of burning citrus would be cause for concern in most locales. But if you're Paul Tritaik the aroma is cause for celebration. He's bulldozed acres and acres of grapefruit trees and set a match to them.

And next year Tritaik, manager of Pelican Island and Archie Carr national wildlife refuges, will do it again.

The singed citrus in question is the famous Indian River grapefruit. Delicious? Yes, but in this case it is also nothing more than another exotic plant crowding out the mangrove and cabbage palms naturally associated with the nation's first national wildlife refuge—Pelican Island, located in the Indian River Lagoon on Florida's Atlantic coast.

The sunny, warm temperatures and abundant moisture of the Indian River Lagoon make the area nearly ideal for growing oranges and grapefruit, which in December hang ripe and heavy. Indeed, the small grapefruit trees seem overmatched against gravity and the jumbo fruit, which strain toward the rich soil.

For centuries, these same climatic conditions combined to draw crustaceans, fish and birds to the mangrove thickets and fertile waters of the Indian River Lagoon. People followed, and the Ais Indians called the lagoon "home" for centuries. They were followed by commercial fisherman and hunters, the latter of which found in Pelican Island a source for the fashionable feather plumes all the rage in the late 1800s.

There was money to be made in feathers and the boom of shotguns echoed across the lagoon year-round. Birds were shot—for plumes and for sport—until few remained on Florida's eastern shore. But help was on the way.

One of those hearing the shotgun blasts was a German immigrant named Paul Kroegel, who had settled on the shores of the lagoon within sight of Pelican Island. Along with other like-minded conservationists, Kroegel urged that something be done to protect the island's avian inhabitants.

Those pleas fell on receptive ears in Washington, D.C., and in 1903 President Theodore Roosevelt established Pelican Island as a national wildlife refuge. It would be the first of more than 530 refuges now spread across all 50 states.

Along with the establishment of Pelican Island NWR came the nation's first federal game warden, Paul Kroegel, whose homestead on the lagoon still exists today.

Nearly 100 years later, much has changed in the Indian River Lagoon. While Kroegel would set sail across the lagoon to reach Pelican Island, today you hop in a motorboat at a public launch several miles away, wind your way between numerous islands built from dredge spoil, through the protective "manatee zone," around crab pot markers, and finally past a handful of refuge boundary signs. Despite the circuitous route, it's not hard to pick out Pelican Island—it's the one with all the birds.

Today, as was the case 50, 100 and likely 1,000 years ago, the birds—brown and white pelicans, cormorants, wood storks and ibises—prefer Pelican Island over all the rest. Only the birds could tell you precisely why.

Once six acres in size, the wind and waves have ground the little island down to just over two, and it's in danger of disappearing altogether. But help is on the way once again.

As part of a comprehensive improvement plan, Refuge Manager Tritaik has begun a shoreline stabilization project on its shores, using native cordgrass and mangrove plants. And he's reestablishing a protective natural reef made of oyster shell.

Slowly, the landscape surrounding Pelican Island is being reclaimed; citrus groves and thickets of invasive Brazilian pepper are being burned, invasive Australian pines toppled. Although it will never again be the same as it was in 1903, in time the land will once again resemble a jungle rather than a commercial fruit operation. And palm trees will dominate the landscape and provide a backdrop for this little island refuge and its residents.

*Dan Sobieck, External Affairs,
Minneapolis, Minnesota*

Spread the Word About the Conservation Library

The Conservation Library at the National Conservation Training Center is one of the Service's greatest assets, putting a variety of agency information and data at our fingertips. It can also save employees' time by minimizing inquiries from students working on term papers, reports and other projects with wildlife topics.

Located at the training center in Shepherdstown, West Virginia, the Conservation Library contains materials the issues discussed in training courses and serves as a comprehensive source of information relevant to all Service staff—and our customers. The library houses a wide range of material including books, magazines and reports dating back to the agency's first days. The library's "cyber-branch," located on the Web at <http://library.fws.gov>, features electronic files of reports, journals, newsletters and other publications that can be downloaded using Adobe Acrobat.

The Service's Web sites will soon be searchable just like a standard American library—anyone who knows how to use a library catalogue can find information on Service Web sites. Thousands of school systems and county libraries can serve as a "help desk" for the Service, and we can enlist their support by just alerting them that popular Service information is now available online.

College, high school and secondary students, trained already to look for information in the library, can use the Conservation Library to do their own research. Steering student inquiries to the library also discourages them from sending e-mails directly to Service employees asking for our help in answering basic questions.

Making sure students head first toward the Conservation Library's resources will require assistance from school and county librarians, most of whom are unfamiliar with the Service and unaware of our online material. So this year the Service will conduct outreach to librarians—and all employees can pitch in.

The next time you are at your local school or county library, stop by the reference desk and show the specialists there our Web site at <http://www.fws.gov>. Librarians are data hounds; once you show them the home of the data, they will be able to help inquiring students—and others—to sniff out specific information related to fish and wildlife conservation.

For further information on Service resources online, contact your Web Publishing Council representative (find a list of them at http://ncc.fws.gov/Web_Services/Web_Council.cfm) or Charlie Grymes at charlie_grymes@fws.gov.

Anne Post Roy, National Conservation Training Center, Shepherdstown, West Virginia

Deliberate Acts of Outreach

Caught Red-handed and Dutifully Reported by Anita Noguera, National Outreach Coordinator

What's New?

The U.S. Fish and Wildlife Service Employee Pocket Guide for 2001 should be on your desk already! You'll find some changes based on the terrific suggestions and ideas from Service employees who wrote in to give their valuable "two cents worth." Thanks to all who sent comments!

The first thing you'll notice about the 2001 Pocket Guide is the size...it's not quite as long as last year's version. A number of people who wear the Service uniform said the guide is very helpful but they couldn't fit it into their shirt pockets! We struggled with this dilemma...even considered renaming it the "Un-Pocket Guide," but we couldn't let the field folks down. So, there you have it—the guide is 5/8" shorter. Now, this is a challenge to you...carry it well, use it often...and **BUTTON UP THAT SHIRT POCKET!**

Other Pocket Guide features include:

- valuable information from the Permits Reform Initiative team regarding Service permits, along with regional permit contacts;

- helpful information about listservers and the Service internal internet;

- addresses and phone numbers for more field stations; and

- the ultimate word on the dos and don'ts of lobbying and advertising.

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Deliberate Acts of Outreach

(continued)

Also on the Horizon...

The U.S. Fish and Wildlife Service outreach handbook is complete and now in the hands of professional designers who will transform it into the Service print standards. We should see the finished product in late spring. With the help of Bruce Batten, a recent Service retiree from External Affairs in Region 7, and other sharp outreach and public affairs folks across the country, we have compiled a comprehensive document filled with helpful information and useful tools for the Service outreach professional.

Designed in a looseleaf notebook format, it is intended to serve as a one-stop, quick reference guide on outreach and as a central location for:

- step-by-step directions for preparing an outreach plan;

- a practical overview of key components of good outreach;

- regulations, policies and directives regarding the practice of outreach; and

- suggestions and tips to help make your outreach effective and creative.

The notebook is designed so you can update and tailor it as needed. You will be able to customize it by adding articles, other outreach guidance, or your own material to keep it up to date. The current plan is to provide all outreach personnel with a handbook.

After 10 Years, a Dream Becomes Reality



"Catch-and-release classroom." Steve Van Riper of DeSoto NWR (far left) and retired Special Agent Cleveland Vaughn (far right) enjoy the success of their efforts to unite several partners to create the Marquardt Pond Environmental Learning Site. FWS photo.

After more than a decade of planning, a partnership effort at DeSoto National Wildlife Refuge recently met its goal: opening an environmental learning site and a 1-acre fishing pond. The Marquardt Pond Environmental Learning Site will be available to any sponsored youth group.

Establishing a dedicated fishing pond at DeSoto was an idea whose time had come. Refuge Manager George Gage and Special Agent Cleveland Vaughn, both now retired, envisioned such a site more than 10 years ago and both were instrumental in securing a major partner to develop the pond and surrounding facilities. Refuge Operations Specialist Steve Van Riper continued the project until its completion.

Partners in the project include the Omaha New Era State Laymen's Alliance, the Omaha and Winnebago tribes, and the American Family Insurance Corporation.

Straddling the Missouri River near the Iowa-Nebraska border, DeSoto NWR encompasses more than 7,800 acres, including an oxbow lake. Annual visitation averages 250,000 people and fishing is quite popular. The renovated pond, complete with a disabled-accessible fishing pier and shelter, has been stocked with largemouth bass, crappie, blue-gill and channel catfish and is the perfect place for a youngster to have a memorable experience fishing this "catch-and-release classroom."

With hundreds of youth using this site each year, the young people of inner-city Omaha, local Native Americans and other youth in the local communities will be the long-term beneficiaries.

Outdoor activities at the Marquardt Environmental Learning Center have included casting and equipment use, knot-tying, fish handling and identification, safety, fishing ethics and techniques.

*Bill Lutz, DeSoto NWR,
Missouri Valley, Iowa*

Special Section: A Look Ahead

(Pages 17–31)

Jones Reflects on the Service's Past Achievements, Future Challenges

by Marshall Jones, Acting Service Director, Deputy Director, former Assistant Director for International Affairs

Although International Affairs might seem in some ways a bit distant from the other things the Service does, in fact, our goal was to keep the program connected to the rest of the Service. For me, working in international affairs, I had the opportunity to get an overview of the entire Service and this has really helped me in moving into the position of Deputy Director. Nevertheless, the fact is that every day I learn not just one new thing, but fair to say, lots of new things about the agency. I think this is absolutely the most diverse, complex organization anywhere in government. We may not be large as government agencies go, in terms of the number of employees or our budget, but we are huge in terms of the scope and effect of our actions. You cannot pick up a newspaper any day, anywhere in the country without reading about something that is the result of our activities.

The really astounding thing that I've learned to appreciate in the short time I have been in this position is that the Service may be the only agency in government that is so deeply involved in all three of the major things government does. Government manages land and natural resources owned by all the people on behalf of all U.S. citizens; it regulates people's activities through permits, regulations, and law enforcement; and it provides assistance to and helps people.

The Service does all three things. There is no other federal land managing agency that has that kind of breadth. We manage more than 93 million acres which makes us one of the largest land managing agencies. Through a number of laws, we are responsible for regulating people's activities for the benefit of endangered species, migratory birds, marine mammals in particular and our trust wildlife resources in general. We are one

of the largest domestic grant-making and technical assistance providers in the government. We provide these services through everything from our federal aid in wildlife and sport fish programs, our partners programs, coastal programs and so on. We work with the states, conservation organizations, private landowners to achieve partnerships for the benefit of species and ecosystem conservation.

All this makes the Service a really exciting place to work. Because we have it all, because all the things a government agency can do, we do and we are doing it to help wildlife resources.

Over the last several years, we've worked to strengthen both our traditional responsibilities and to move into new areas like invasive species where there is an international consensus that the problem must be addressed. The Service has been on the cutting edge of that effort, even while we have been working to build and strengthen our relationships with the states. More than ever it is clear that we can't do it all from the federal government nor should we. We need to partner with the states where there are lots of talented, sincere, dedicated and highly professional people who have their own missions which complement ours.

In International Affairs, several years ago we determined that we had a serious disconnect where we were making decisions which had huge impacts on the states but where we had no input from them in our decision making process. Not only were the states losing out, but so were we. So we sat down with them and, in 1997–98, built a new partnership where the states became as important as our own staff and as any other federal agency in the decision making process. State representatives were invited to participate in all our internal meetings, review our drafts, and provide input before we developed proposals. We now have a special power-sharing arrangement.

The Service is responsible for making the ultimate decision—that's what the law says—but, now we are doing that in a new way which has the states at the table. We now make better decisions and almost always reach consensus. Even when we don't agree, the states know that their voice will be fully heard and when the next issue comes around, their voice will be heard again. We should look for more opportunities to do this in other areas of the Service.

More than ever it is clear that we can't do it all from the federal government nor should we. We need to partner with the states where there are lots of talented, sincere, dedicated and highly professional people who have their own missions which complement ours.

Accomplishments Highlight Conservation, Cooperation

During the past decade, the Service has led a major effort to conserve the nation's wildlife for the enjoyment of future generations. Looking back reminds us of the accomplishments we are making.

Making the Endangered Species Act Work Better

In June 1994 the Interior and Commerce departments announced a series of administrative policy reforms and legislative ideas designed to improve the act's effectiveness while making it easier to understand and work with the act. One of the major efforts associated with implementation of this "10-Point Plan" was an increased emphasis on habitat conservation plans, which include permits for incidental take of listed species.

To address private landowners' concerns about having listed species on their property, the Administration developed the "No Surprises" rule. This policy assures landowners who enter into voluntary habitat conservation plans that, as long as they implement their conservation plans properly, the government will not require any additional compensation for covered species.

The Fish and Wildlife Service and National Marine Fisheries Service also published joint final policies for "Safe Harbor" and "Candidate Conservation Agreements with Assurances" under the Endangered Species Act.

The Service also made progress recovering species. Nine species of plants and animals were removed from the Endangered Species list; seven species have been proposed for delisting, including the bald eagle; seven species improved enough to be reclassified from endangered to threatened; and six more have been proposed for reclassification to threatened.

The most notable proposed reclassification is that for the gray wolf, which has benefitted from reintroductions into the Yellowstone Ecosystem and the Frank Church-River of No Return Wilderness. Other major efforts to reintroduce species to their historic ranges included black-footed ferrets, California condors and whooping cranes.

A joint Secretarial order clarified the responsibilities of the departments of Commerce and the Interior when actions taken under authority of the act involve tribal land, tribal trust resources or tribal rights. The order not only gives tribes a seat at the table during planning and consultation, but provides them opportunity to lend their expertise and traditional knowledge to conserve and improve recovery for species with habitat on Indian lands.

Strengthening the National Wildlife Refuge System

Responding to continuing funding shortfalls, representatives from a diverse group of conservation and recreation organizations came together in 1997 to educate Congress and the American people about various challenges facing the system. This Cooperative Alliance for Refuge Enhancement developed a plan for modest but steady budget increases for operations and maintenance and supported legislation strengthening the system.

Representatives from such organizations as the Wildlife Management Institute, Defenders of Wildlife, the National Rifle Association, Ducks Unlimited, and the National Wildlife Federation aggressively pursued a plan to help the refuge system fulfill its conservation mission by its 100th anniversary in 2003. Congress responded by passing significant budget increases in 1997, 1998 and 1999.

On October 9, 1997, the National Wildlife Refuge System Improvement Act was signed into law, building on the National Wildlife Refuge System Administration Act of 1966, providing an "Organic Act" to ensure that the system is managed as a national system of related lands, waters, and interests for the protection and conservation of our nation's wildlife resources. The act clarified the process for determining compatible uses and established planning processes to ensure improved public participation in the growth and management of the National Wildlife Refuge System. A critical new element mandates that the Service develop comprehensive conservation plans for each refuge by 2012.

In October 1998, the National Wildlife Refuge System Volunteer and Community Partnership Enhancement Act encouraged new avenues for partnership projects and enabled the Service to expand a volunteer network that already accounts for 20 percent of all work performed on refuges and is worth \$14 million.

With these new priorities in place, the Service held its first-ever conference of refuge managers. They, along with many partners from the Service and federal, state, and non-governmental organizations met in October 1998 to produce *Fulfilling the Promise*, a blueprint for the future of the refuge system.

Congress demonstrated additional support for the refuge system in May 2000 with the National Wildlife Refuge System Centennial Act, intended to strengthen and highlight the 93-million-acre refuge system for its 100th birthday. The bill will establish a high-ranking commission, including the Secretary of the Interior, the Service director, and up to 10 others, to build public awareness and secure new resources to manage the system.

Bringing Migratory Bird Conservation to a New Level

For much of the past decade, the Service has paid closer attention to human-caused factors that kill birds, including collisions with communication towers, electric power lines, wind turbine generators, and glass windows; encounters with cats, aircraft, and cars; poisoning from pesticides, contaminants, and oil spills; the effects of global climate change; and loss or degradation of habitats.

In 1996, the Service and its partners instituted International Migratory Bird Day, a national program to focus attention on declining populations of neotropical migratory songbirds and raise public awareness of the contributing factors as well as strategies to reverse the trend.

Duck habitat and populations declined considerably during the 1980s and early 1990s. As a result, the Service issued hunting regulations designed to reduce harvest rates of ducks. Duck populations finally began to recover in 1993 when habitat conditions in important North American nesting areas began to improve.

The improved conditions, coupled with the more conservative hunting regulations, stimulated the growth of duck populations and in 1995, hunting regulations were liberalized. Populations remained high in 1996 through 2000.

Not all increases in bird populations were welcome, however. Populations of light geese, particularly lesser snow and Ross' for example, were expanding beyond the carrying capacity of spring habitat. In the winter of 1998, the Service instituted population control measures, including more liberal hunting regulations, for mid-continent light geese. Designed to halt widening destruction of fragile arctic breeding habitat, the measures were implemented in February 1998 but withdrawn that May after a legal challenge. Finally reinstated in 1999, the Service is addressing the long-term management of some light geese through an environmental impact statement.

In 1999, the Service gave states greater flexibility to cope with resident Canada geese, a species that has increased dramatically in recent years. It has also begun to develop a nationwide management strategy for resident Canada geese and announced a new rule that will enable states to design their own management programs and control specific populations without having to seek a separate permit for each action.

Increases in some bird species were mirrored by decreases in other species. To help address this situation, the Service played a lead role in establishing the North American Bird Conservation Initiative in late 1999. Many of the bird conservation work plans the Service and its partners put together, from Partners in Flight to the North American Waterfowl Management Plan, are being incorporated into this



Invasive species. *Zebra mussels encrust a native mussel.* FWS photo.

initiative, making possible on-the-ground projects that will provide habitat for all bird species from the Yucatan to the Arctic.

In 1995, the Service instituted Adaptive Harvest Management to help wildlife managers better understand the effects of hunting while providing maximum harvest opportunities consistent with waterfowl populations. An essential feature of the process is a set of alternatives, including framework dates, season lengths, and bag limits, that balance hunting opportunities with efforts to achieve waterfowl populations identified in the North American Waterfowl Management Plan.

To further improve the regulatory process, the Service and states developed the Harvest Information Program to obtain more reliable estimates of the number of migratory birds harvested throughout the country and to make sound decisions on seasons, bag limits, and population management. All states except Hawaii have participated in this program since the 1998 hunting season.

In recognition and support of the crucial role that urban communities play in migratory bird conservation, the Service launched the Urban Conservation Treaty for Migratory Birds program in 1999. Treaty cities develop an action plan that includes work in four areas: habitat creation, protection and

restoration; education and outreach; reduction of hazards; and management of invasive, exotic, or nuisance species. The Service provides challenge-grant funding and technical assistance. The treaty city develops and implements bird conservation projects and programs, provides matching funds and in-kind support, and develops additional partnerships. Programs have begun in New Orleans and Chicago.

The Service also has launched a major effort in conjunction with the telecommunications industry to protect birds from a growing number of tower collisions, and led the initiative at the United Nations' Food and Agriculture Organization to get unanimous approval of an "International Plan of Action to Reduce the Incidental Catch of Seabirds in Longline Fisheries."

Combating Invasive Species

Invasive species in the United States inflict damage now estimated at \$138 billion each year and contribute to the declines of nearly half of all endangered species. Experts estimate that invasive plants already exist on more than 100 million acres of land and continue to increase at a rate of 8 to 20 percent a year, annually consuming an area twice the size of Delaware,

In February 1999, Executive Order 13112 established a coordinated federal effort to curtail the growing environmental and economic threat posed by non-native plants and animals. Many scientists believe the spread of invasive exotic species is one of the most serious, yet least known, threats to biodiversity. The Service played a key role in implementing Executive Order 13112.

That effort dovetails with the work of the Aquatic Nuisance Species Task Force, a committee of representatives from seven federal agencies dedicated to preventing and controlling aquatic nuisance species. The task force, established by the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 and co-chaired by the Service, addresses all new nonindigenous aquatic species activities conducted, funded, or authorized by the federal government, except those involving intentional introductions.

Accomplishments Highlight Conservation, Cooperation

(continued)

Conserving Aquatic Resources

Executive Order 12962 on Recreational Fisheries, signed in June 1995, directed federal agencies to work with others to increase recreational fishing opportunities. To help the agencies accomplish that task, it established the National Recreational Fisheries Coordination Council with representatives from the departments of Agriculture, Commerce, Defense, Energy, Interior, and Transportation and from the Environmental Protection Agency.

Responding to the executive order, the Service spearheaded two major multi-agency fisheries initiatives. The first was the joint Fish and Wildlife Service-National Marine Fisheries Service policy to improve administration of the Endangered Species Act as it relates to recreational fisheries. The new policy ensures consistent and effective administration of the act while giving full consideration to fish species and habitats important to anglers.

The Service also took the lead in developing the Recreational Fishery Resources Conservation Plan outlining strategies to improve recreational fisheries within the context of their programs and responsibilities. The conservation plan identified federal contributions to improve water quality, habitats, population management, access, education and outreach, and partnership.

The Sportfishing and Boating Safety Act of 1998 directed the Interior Secretary to develop, in cooperation with the federally chartered Sport Fishing and Boating Partnership Council, a national outreach plan to encourage greater public interest and participation in boating and fishing. The plan also aims to provide more information about recreational boating and angling opportunities, reduce barriers to participation, and promote conservation and the responsible use of aquatic resources.

The 5-year, \$36 million campaign will be administered by the Recreational Boating and Fishing Foundation under a cooperative agreement with the Service.

Some 23,000 acres of riparian, streambank, and wetland habitats were restored and 1,000 miles of river were improved or reopened to spawning and rearing habitat. At least 50 species of fish and wildlife benefitted, including 10 listed fish and freshwater mussels. In 2000, the Service budgeted \$900,000 for fish passage projects in 7 watersheds in 12 states, removing 4 dams and other impediments and restoring access to more than 1,000 miles of habitat for fish and other aquatic species.

In the summer of 2000, the General Accounting Office completed an audit of the National Fish Hatchery System and released its final report, entitled "National Fish Hatcheries: Authority Needed to Better Align Operations with Priorities."

The General Accounting Office recommended that Congress provide direction on which programs it wants the hatcheries to emphasize; authorize the Service to open, close, change, move and consolidate hatcheries to allow more efficient and effective alignment of its operations with Congressionally directed priorities; and provide clear authority for the Service to seek reimbursement from federal water development agencies and/or project beneficiaries for all hatchery operation and maintenance expenses associated with mitigation projects.

The Sportfishing and Boating Partnership Council's Hatchery Steering Committee, composed of representatives from diverse stakeholder groups, recommended fulfilling mitigation obligations; restoring and maintaining native fisheries; improving recreational fisheries; strengthening cooperation with states, tribes, and other partners; and improving accountability with Congress, stakeholders, and the general public.

The voluntary Partners for Fish and Wildlife Program is critical to meeting habitat protection and restoration goals and has a waiting list of more than 2,000 landowners interested in working with the Service to improve habitat on their lands. Since the program began in 1987, the Service has entered into partnership agreements



Inspection. A law enforcement agent at a port of entry inspects a traveler's baggage for wildlife souvenirs: carved elephant tusks and a loggerhead sea turtle shell. FWS photo: John and Karen Hollingsworth.

with more than 21,500 landowners and restored nearly a million acres of wetlands and uplands.

Focus on Wetlands

The Service issued a "Final Policy on the National Wildlife Refuge System and Compensatory Mitigation under the Rivers and Harbors Act and the Clean Water Act" in September 1999. The policy does not allow compensatory wetlands mitigation for water resources development projects permitted by the Army on refuge lands. These lands are already protected and targeted for restoration in accordance with refuge management plans.

Since 1994, the Service has provided digital wetland data over the Internet and users have downloaded more than one million data files. To better meet public demand, the Service implemented a Web-based browser-driven mapper in September 1999. This Wetlands Interactive Mapper has enabled Internet users to produce more than 250,000 custom maps using their desk-top computers. These maps and digital

information have been applied to myriad resource management efforts ranging from project siting and transportation routing to habitat protection to locating recreational opportunities.

Reaching Beyond Our Borders

Representatives from the 150 member nations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora meet approximately every 2 years to review and vote on proposed resolutions and decisions to improve the effectiveness of CITES, and also on proposed amendments to the listings of protected species in the CITES Appendices.

At recent Conferences of the Parties, important issues on the table included the proposed re-opening of commercial trade in whales and sea turtles, and allowing trade in African elephant ivory.

Global concern about overharvesting of sturgeon for the caviar trade prompted CITES member nations to extend new protections to these fish in 1997. The United States and Germany, two of the world's leading caviar-consuming countries, spearheaded the proposal to impose trade controls on all sturgeon species and products, bringing the high-volume, high-profit caviar industry under Service regulation and worldwide scrutiny for the first time.

The new trade controls require U.S. caviar importers to declare their shipments and obtain CITES export permits from the country of origin properly identifying the species involved and verifying that trade represented no threat to sturgeon populations in the wild.

Before the controls took effect April 1, 2000, the Service informed the industry of the new requirements, developed procedures for dealing with existing caviar stocks, and pioneered a DNA technique for identifying sturgeon species—a forensics capability essential for effective trade monitoring.

From 1997 to 1999, Service law enforcement staff inspected more than 200 tons of caviar, intercepting significant quantities of black market roe and breaking up several major smuggling operations.

The United States, through the Service, manages a small grants fund established by the Rhinoceros and Tiger Conservation Act of 1994 to support conservation efforts in nations whose activities directly affect rhinoceros and tiger populations. A 1998 amendment to the act led to prohibition of sale, importation, and exportation of products labeled as containing rhinoceros or tiger parts, whether these products actually contained the species or not.

Bringing Law Enforcement to the Forefront

In August 1999, Service law enforcement staff also secured the first federal felony conviction for coral smuggling in a Florida case involving illegal trafficking in corals plundered from reefs in the Philippines. The Service also led the North American Wildlife Enforcement Group in planning, coordinating, and conducting a November 1999 marine invertebrate identification workshop for U.S., Mexican, and Canadian wildlife law enforcement officers.

The Clark R. Bavin National Fish & Wildlife Forensics Laboratory assumed an increasingly important role in the investigation and prosecution of wildlife crimes. The number of federal, state, and international cases handled by Service forensic experts more than doubled in the 1990s.

During this period, lab scientists also developed many of the analytical techniques needed to help solve wildlife crimes. By the end of the decade, wildlife forensics had gained global recognition as a new field of science.

Rethinking Federal Aid

In 1999, the House Resources Committee initiated a GAO audit of the Service's program administering funds generated by the Federal Aid in Wildlife and Sport Fish Restoration Acts. The accounting office found poor management and record-keeping practices in the Service's administration of the Federal Aid program but did not issue an official report of the findings.

The Service disputed some of the findings but acknowledged management weaknesses, took the audit results seriously, and initiated a series of administrative reforms. Congressional hearings served as a platform to air allegations of illegality and diversion of funds. These allegations were repeated, distributed by several organizations, and reported in some news articles.

After more than a year of scrutiny by legislators, the General Accounting Office, private and public sector auditors, consultants and others, Congress provided the Service with clear guidance on administering the costs of the Federal Aid program.

All Federal Aid management funds are to be spent only for 12 specific grants-related activities, and personnel funding is restricted to employees who work a minimum of 20 hours a week for Federal Aid.

Training Center Becomes the Service's "Home"

During the 1990s, the National Conservation Training Center was developed and built near Shepherdstown, West Virginia. The \$143 million campus, which opened in 1997, offers more than 250 courses in all aspects of natural resource management. It anchors America's conservation community by providing a research center for the history of American conservation as well as a site for learning and consensus-building.

Reaching Out Across the World Wide Web

During the past decade, the Service has created nearly 25,000 Web pages so the public can access fish and wildlife information via the Internet Home Page at <<http://www.fws.gov>>. In an effort to improve public access to its information, all Service news releases are distributed via listservers and historic news releases dating back to 1914 have been posted. Endangered Species Act listings, plans, and species profiles are accessible via the Web, as are many of the Service's publications, in an online library.

The Endangered Species Program: Where We've Been, Where We're Going

by Gary Frazer, Assistant Director for Endangered Species

The Service has made great strides in more effectively and consistently implementing the Endangered Species Act during the past few years. This progress has moved us past the days when we used to have "train wrecks" to a new era when the Service is working in partnership with states, tribes, corporations, conservation groups and private landowners to conserve and recover species while allowing economic development to continue.

We have particularly made progress in two areas. First, we have developed policies and tools to more fully implement the flexibility Congress built into the act. Habitat conservation plans are a good example. Under these plans, landowners agree to take conservation measures to protect listed species; if the plan meets the act's conservation requirements, the Service issues a permit to allow the landowners to incidentally take some individuals of a species during otherwise lawful activities. Until 1994, the Service had only entered into 14 of these agreements. Today the number is above 300 and counting.

Likewise, the Service has entered into 40 safe harbor agreements that encourage landowners to conserve habitat for listed species on their property and 78 candidate conservation agreements in which we work with landowners and others to conserve species before they are listed. So far, we have avoided the need to list 21 species. Using these tools, we have moved from confrontation to cooperation and proved the Endangered Species Act can meet the needs of imperiled species without impairing economic development.

The second area in which we have made great progress is the consistent implementation of the act throughout the Service. We now have handbooks for habitat conservation planning and Section 7 consultation—both developed through a process of public notice and comment—that provide comprehensive guidance of value to both Service employees and the other parties we work with through these programs. Service employees now have the guidance to implement the act the same way whether



Back in the wild. *The Service reintroduced Mexican wolves to the wild in Arizona and New Mexico. FWS photo: Richard Forbes.*

they are in Hawaii or Maine. Likewise, those who do business with the Service now know exactly what to expect when they are developing a habitat conservation plan or engaging in a consultation.

As we look to the future, our biggest challenge will be to continue to build support for endangered species conservation. We need to make sure we have the resources, both in staff and funding, to better meet the goal of the Endangered Species Act to recover species so they are no longer threatened or endangered. We also need Congress to reauthorize the act, codifying the administrative policies we have developed into the law, addressing the role of critical habitat, and otherwise bringing it up to date with present day endangered species conservation needs and opportunities. Then we will be able to take an Endangered Species Act that already works well for threatened and endangered species and their habitats—and make it work even better.

Quietly, Administration Keeps the Service Moving

by Paul Henne, Assistant Director for Business Management and Operations

Although the six divisions and branches that make up Administration are not biological programs, we provide the functional foundation for the Service. We keep the doors open, the lights on and the engines running. What we do happens behind the scenes. We like to keep our customers satisfied. When nobody notices that we are there, that means we're doing our job.

The National Performance Review and Reinventing Government, which began in the 1990s, targeted many of our functions for streamlining and downsizing. We accomplished a lot of this through automation. We've automated several contracting functions and downsized Engineering from 80 employees to 23 over the past few years. At that time, none of the bureaus in Interior were prepared for automation initiatives.

Although it may not always seem like it, the Service has become a departmental leader in the arena of automation. We're the most geographically dispersed organization in the Department of the Interior. We have about 700 offices, and they all are Internet and Intranet capable, with the latest in e-mail technology.

With changes in technology and increased use of credit cards as financial management and purchasing tools, we decentralized many functions and brought them to the field level. That means we have delegated many operational responsibilities that used to be national or regional to the field stations. Project leaders can now make many more decisions about contracting, purchasing and payment than they could in the past.

At the same time we were making these changes, the Chief Financial Officers Act came in to play. The Service has received five "clean" audit opinions from the Department's Inspector General and we're working on our sixth. Now the department is redirecting their efforts and instructing each

Budget, Planning and Human Resources Advances Steadily Toward the Future

bureau to do so as well using a private firm. That means that the Department's Inspector General staff will have more time to do program audits.

We see growing interest in what we do, how we do it and what we accomplish. That's what brought Federal Aid program management to the attention of the House Resources Committee. The Inspector General and General Accounting Office are now taking close looks at our Endangered Species and Refuge programs. As we saw with the Federal Aid program, full cost recovery is the wave of the future.

The trend is being established for us—either manage or be managed.

"We stand now where two roads diverge... The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress at great speed, but at its end lies destruction. The other fork of the road... offers our last hope, our only chance to reach a destination that assumes the preservation of our earth."

—Rachel Carson

In the Service, we work hard to manage the changing natural landscapes in which we live. People—the demographic landscape—play an integral part of the ecosystem. Supporting the well-being of employees and their families through responsible and flexible "worklife management" is essential to accomplishing the Service mission goals. We must attract, and, more importantly, retain the brightest and most productive employees from a highly competitive marketplace.

Assistant Director Denise Sheehan and the employees working in the division of Budget, Planning and Human Resources use the most current demographic and sociological information to promote healthy management practices and employee worklife policies.

"As the demographic landscape has become more diverse, and as we've gained more knowledge," says Sheehan, "it is now recognized that the functions of diversity and civil rights, personnel, and diversity-aware programmatic management are inextricably intertwined. Everything is related to everything else."

With the passage of the Government Performance and Results Act of 1993, the federal government—and the Service in particular—have become more sensitive not only to the critical importance of efficient and effective performance, but also to the needs of measuring results and accountability to the people for our actions as public servants. The Division of Budget, Planning and Human Resources has made significant advances in the Service's accessibility to the public through the Internet.

People can now fill in forms and submit applications for employment over the Web, see how our agency is organized, and call program managers directly. The latest technology is used to help the Service communicate its message to individuals inside and outside government, to forge enduring partnerships, and now to measure the results of our efforts and modify our actions in an informed way.

As the Service has been given more numerous and complex programmatic responsibilities, it has grown in total budgetary resources.

"Because we have the duty to protect the public purse as foremost in our priorities," says Sheehan, "we have learned to manage our budgetary resources with great attention to the important details of cost and have used Servicewide formulation and allocation systems to budget with maximum consistency and fairness.

"Accordingly," she concludes, "our support programs of Budget, Personnel, Planning and Evaluation, Diversity and Civil Rights, and Policy and Directives Management are staffed with a highly professional cadre of employees."

Anita Noguera, Public Affairs,
Washington, D.C.

Refuge System Bounds Toward Its Centennial

Dan Ashe, chief of the National Wildlife Refuge System, recently sat down with Fish & Wildlife News to discuss the system's recent growth and the challenges that lie ahead as the system moves toward its 100th birthday in 2003.

How much progress has made on strengthening the National Wildlife Refuge System?

We followed up on the landmark Keystone Conference, a gathering of refuge employees and stakeholders from around the nation, by developing the system's vision document, Fulfilling the Promise. We identified a number of action items that we most needed to accomplish.

We also recently released the results of a refuge law enforcement survey, finalized the Biological Diversity, Integrity, and Ecological Health Policy, and opened a public comment period on a number of other policies to complete implementation of the 1997 Refuge System Improvement Act.

Our Centennial Campaign is well underway, as well, putting us on the course for a major celebration of the refuge system's 100th birthday in 2003. The National Wildlife Refuge System Centennial Act was signed into law in November and we are looking forward to working with the new administration to implement its major requirements, including a Centennial Commission that will oversee the major events planned in commemoration of the centennial.

What do you think will be the top concern for the National Wildlife Refuge System in five years?

Water. There's just not enough water to go around anymore, especially in the Southwest and parts of the Southeast. In the coming years, the refuge system will have to really step up its efforts to define



Helper. Each year, volunteers contribute thousands of hours of work at Service field stations nationwide. FWS photo.

and defend its water needs. We've taken steps to prepare for that already—we have a water rights coordinator at refuge headquarters in Arlington, and we have arranged for a full time water rights attorney to work on our behalf in the Department's solicitor's office.

Approach Guides the Service into the New Century

During the 1990's, a new phrase made its debut into the vocabulary of Service employees: the ecosystem approach.

In 1994, the Service adopted the ecosystem approach to fish and wildlife conservation, answering Aldo Leopold's decades-old call to treat the landscape as a community, a whole much greater than the sum of its parts. The ecosystem approach achieves landscape-level conservation of fish, wildlife, plants and their habitats through cross-program coordination within the Service and partnership with external organizations and individuals.

The Service established 53 ecosystem units based on U.S. Geological Survey watersheds. The Directorate envisioned ecosystem teams as the forum for communication and cooperation among refuges, hatcheries, fisheries and ecological services field stations as well as other components of the Service.

We've seen some successes, including restoring of scrub jay habitat by refuges, fisheries and ecological services employees in Florida; saving native freshwater mussels from the invasive zebra mussel in the Ohio River; and working with the Bureau of Land Management to restore part of the Wood River in Oregon.

Embracing the ecosystem approach has been a challenge for the Service. Today there is a renewed emphasis on the ecosystem teams. Each team is expected to have a resource-driven, biologically-based plan of action that identifies the conservation challenges facing each ecosystem and prioritizes specific actions to meet those challenges. Programs are expected to collaborate and synchronize their efforts according to these plans so that the Service's diverse expertise can focus on the landscape-level challenges the plans identify.

Migratory Bird Conservation Surges Ahead

The Ecosystem Implementation Team, which advises the Directorate on the challenges and obstacles to achieving an ecosystem approach, is helping meet those challenges. The team recently restructured after the retirement of Deputy Director John Rogers, and under the leadership of Deputy Director and Ecosystem Implementation Team Chair Marshall Jones, new members were brought on board to continually evolve the process and move it forward.

Last year, the Ecosystem Implementation Team made recommendations to the Directorate to establish guidance for ecosystem team development and reevaluated the effectiveness of the GARD/PARD concept, an effort that resulted in the Service's reorganization and the hiring of regional special assistants for ecosystems.

Scott Johnston, the Service's national ecosystem coordinator, has great expectations for the future of the ecosystem approach and all the employees dedicated to making it happen.

"The regional special assistants are fulfilling the crucial need to the ecosystem teams, in addition to advocating their priorities through facilitating cross-program efforts in the regional offices," Johnston says. "They will facilitate and emphasize that the ecosystem approach is the Service's way of doing business, and not an outside component."

Anita Noguera, Public Affairs, Washington, D.C.

The Service continues to move ahead with increased emphasis on migratory bird conservation. For Tom Melius, the Service's assistant director for Migratory Birds and State Programs, the need to be an advocate for the Service's traditional hunting constituency and implement a new vision of migratory bird conservation has been paramount.

"The challenge we face as an agency is to preserve and expand waterfowl hunting opportunities, while at the same time broadening our conservation efforts to include non-game migratory birds to a greater degree than we've been able to in the past," said Melius.

Melius noted that the Service has continued to improve opportunities for hunters, opening dozens of national wildlife refuges to hunting, improving its waterfowl survey methods and continuing habitat restoration partnerships that have contributed to record waterfowl populations over the past five years.

The key to improving migratory bird conservation over the next decade, he said, will be the North American Bird Conservation Initiative, an international effort among the United States, Canada and Mexico to coordinate local, regional and species-specific conservation planning. The framework provided by the initiative should enable agencies to reduce bureaucracy and duplication of efforts, while also expanding conservation to include all migratory birds in all habitats.

The Service also faces the challenge of managing potentially overabundant species like nonmigratory or "resident" Canada geese, snow geese and double-crested cormorants. Soaring populations of these species threaten breeding habitat for other migratory birds, increase conflicts with humans and may undermine public support for wildlife conservation.

Congress has been increasingly supportive of the Service's efforts, providing an additional \$1 million for conservation and monitoring efforts, \$5.5 million to partially fund all 12 habitat joint ventures under the North American Waterfowl Management Plan, and \$40 million for projects implementing the



Migratory bird conservation. A biologist bands a mourning dove. FWS photo: Don Pfitzer.

North American Wetlands Conservation Act to address the needs of all migratory birds in wetlands ecosystems.

"We need to build on that support and provide the necessary funding to match our partners' contributions, because we're still turning away good projects," Melius said.

Even with these new initiatives, Melius stressed that the Service and its partners can't do it alone. Through cooperative efforts like its innovative Urban Conservation Treaty for Migratory Birds program, Melius said the Service must continue to reach out to communities and individuals and help them understand what they can do to protect birds.

"We have to figure out new ways to tap into the public consciousness, to make them aware of the important role they can play in conserving migratory birds," Melius said. "Private landowners serve as an effective complement to federal and state conservation activities, whether they implement conservation measures on thousands of acres or simply landscape their backyards to attract birds, reduce the use of pesticides or keep their cats indoors. Everyone can make a difference, and we need to get that message across."

Chris Tollefson, Public Affairs, Washington, D.C.

Balancing Conservation, Economic Development Challenge for International Affairs

Acting Assistant Director for International Affairs Ken Stansell recently sat down with Fish & Wildlife News to discuss the accomplishments of the Service in international issues and the challenges that lie ahead for his program.

What do you see as the major progress International Affairs has made in the last several years?

International Affairs has made major progress in the last several years on integrating and focusing all of our international activities throughout the Service. Although the Service is primarily a domestic agency, we have focused our own organization so that each of our divisions, while retaining their individual priorities, became part of a unified program. Under our Wildlife without Borders banner, we have become a very active player in the Convention on International Trade in Endangered Species of Flora and Fauna (CITES) and the United States was asked to serve as the chairman of its standing committee; we are also a member of the standing committee of the Convention on Wetlands of International Importance; and finally, with the very successful implementation of our grant programs for foreign species conservation, we have been able to take a very active lead in on-the-ground endangered species conservation throughout the world.

What are some of the challenges facing IA in the new millennium?

The challenge is to be able to address the myriad of difficult issues involved in international species conservation, and further refine the agency's capacity to support global wildlife conservation efforts. Short term, one of the key things we're going to focus on is to further define the relationship of international activities to domestic species conservation. A good example of this is what's going on with sturgeon conservation at home and abroad.

Globally, sturgeon is a very valuable commodity to be traded and this trade is depleting the wild sturgeon, particularly in Europe. We must come to terms in dealing with that as an international issue that directly relates to, and impacts, our domestic sturgeon and paddlefish conservation programs.

Medicinal plants are another example. Look at plant conservation here in the United States. The vast majority of all species listed under our domestic statutes are actually plants, but yet they receive a relatively small amount of our attention and resources. We are beginning to work collaboratively with the world community to address this conservation issue.

How has International Affairs implemented the ecosystem approach?

The reality of species conservation is habitat management and protection. Because we have limited funds and the rest of the world to try to address, we've taken an ecosystem approach in trying to focus the resources we have in international species conservation on our own migratory species. For example, with neotropical birds, we are trying to identify wintering grounds and to provide technical assistance to countries where many of these migrants spend a significant part of their life cycle. And, although the funds we receive are often targeted to specific species, we have tried to use those funds for projects that address broader conservation issues. We've taken the ecosystem approach and tried to apply it worldwide.

What are some of your accomplishments?

We looked at the nexus between CITES and the import and export of wildlife and refocused our permitting program to one in which we now use permits as a conservation tool. Permits reform cuts across all programs of the Service and I think it will be a lasting legacy. We have also developed much stronger partnerships with organizations that are interested in wildlife conservation both at home and abroad. We've forged partnerships, particularly with Mexico and Canada and with other governments interested in species of mutual concern.

We've had tremendous expansion with our Russia and China programs, which culminated in a landmark polar bear agreement as well as a process whereby we could allow the import of giant pandas under a conservation program for pandas in China.

What is the major challenge for the next decade?

The major challenge for the next decade is the inherent conflict arising in developing countries as they try to come to grips with balancing resource conservation and economic development. You see that throughout the world. You see it in the Great Amazon basin, central Africa, in the former Soviet Republics. They are struggling to come to terms with how you manage wildlife and protect the environment as economies evolve. I think we are going to have to share our own experiences, what we have learned from our successes and failures.

The other thing that is going to be important early on is to integrate international species conservation throughout the Service. We went from a scattering of activities associated with international conservation and brought that into a unified focal point. Our next goal is to integrate those ideas within the Service. We are going to seek a larger regional presence. Slowly most of our programs are realizing their connection to international affairs.

Our focus in international affairs is sustainable use. Our permits program and our enhancement findings are ways to encourage global conservation. But we must recognize that there is typically an economic component. While it's important to protect critically endangered species, it is also important to try to identify those activities which are protecting resources to help ensure that species don't reach a position where they become endangered. Fortunately the world is still very diverse relative to wildlife and wild lands and species. Our challenge is finding innovative ways to maintain that diversity.

Fisheries Prepares for the Future



Saving an imperilled species. *Service biologists at West Virginia's Ohio River Islands NWR work to conserve populations of freshwater mussels—some of the most endangered species in the world. FWS photo.*

“There are three areas that best describe a new direction for the Fish and Wildlife Service fisheries program—assessment, realignment and strategic planning,” said Cathleen Short, assistant director for fisheries and habitat conservation. “A major effort has gone into all three areas throughout all of 2000. And all three speak to the future.”

Realignment of the Service's programs in 2000 was significant enough that the “fisheries” designation became “fisheries and habitat conservation.” The change reflects the broader idea that resource restoration must include far more than just a concern with fish population management.

“The designation makes it clear,” said Short, “that healthy fisheries are dependant on healthy watershed and wetlands areas and necessarily include all aquatic species.”

The new program name dovetails with reality: dozens of national fish hatcheries are now deeply involved in the restoration and recovery of a long list of other aquatic species that share habitat with fish throughout the United States. In addition, fish culture and habitat restoration are becoming more directly linked with Fish and Wildlife Service activities under the new program alignment. Habitat quality issues such as water quality and invasive species are also part of the new program.

The program has simultaneously moved to undertake a number of assessment activities, including what has become known as the “3As” report on the National Fish Hatchery System—alignment, appropriateness and adequacy.

“The 3As is, simply, a self-evaluation exercise,” said Short. “The main thrust of this evaluation was to determine how well National Fish Hatchery System production programs aligned with the Service's fisheries priorities, and if the necessary scientific and other support for these programs is sufficient.”

The conclusions of the 3As report will be one of the cornerstones that anchor a forthcoming strategic plan for the hatchery system—along with a consensus set of recommendations compiled by a diverse committee of stakeholders brought together by the Sport Fishing and Boating Partnership Council, an audit conducted by the General Accounting Office and the products of eight internal Fish and Wildlife Service workgroups.

“The forthcoming strategic plan and its implementation will help prepare the system to better fulfill our responsibilities for conserving aquatic resources in the future,” said Short. “I am very excited and optimistic about all of this work, including the involvement and support of our stakeholders.”

“We are having increasing successes not just with fish, but with the restoration of a variety of endangered and threatened aquatic species,” she continued. “The fisheries program is, in a real sense, redesigning itself. That doesn't mean abandoning our traditional lines of work; it does mean rounding out the program in ways that are much broader and more inclusive. In the end, we'll see a program that's more efficient and more effective.”

“That's good news for the American people,” Short concluded.

*Ken Burton, Public Affairs,
Washington, D.C.*

“Working with Others”: External Affairs Helps Fulfill Key Part of Service Mission

by Robyn Thorson, Assistant Director for External Affairs

A few years ago, the Service Directorate agreed to change the Service’s mission statement to include the phrase “working with others.” The goal of External Affairs is to make that mission a reality.

Over the past few decades, the Service has been transformed from a sleepy backwater of the federal government into an agency whose mission often takes us into the center of local, regional and national environmental controversies. As our nation’s population has increased, the pressure on fish and wildlife habitat and populations has increased, too. We have learned that we must work with partners to accomplish our conservation mission.

At the same time, everyone in America is suffering from “info-glut”—too much information, too many ads and messages—to the point where many citizens are “tuning out.” These changes in society have made it all the more important for us to communicate well.

An increased focus on communication is one of the greatest cultural changes we have made in the Service during the past few years.

Under the National Outreach Strategy, we now try to anticipate public concerns about our actions and plan for our communication needs, just as we plan for biological activities. We have learned to talk to the people: Congress, the media, the local landowner, the timber company, the states, the conservation groups, even the school children who are all interested in what the Service is doing because our issues are now affecting everyone. We have also learned the importance of listening.

The tools we use to communicate with the public have expanded, too. We have developed a mature and useful Web site that helps us communicate with the world, and we have fortified our external affairs offices both in the regions and in Washington. We have become more sophisticated in how we deal with the media and a better resource for Congress and we work harder to address the concerns of Native Americans. The National Conservation Training Center has helped us by providing training in the skills we need to work well with others.

These skills are going to be very important in the future. Just as we have become more sophisticated in our communication efforts to the public, the public has become more

sophisticated in communicating with us. The Internet now aids people in engaging in the public debate like never before. In the past, an issue might have generated a few dozens letters into our offices over a few weeks. Now, hundreds of e-mails can be generated in a matter of minutes.

These campaigns are great; people get to vote on issues instantly. The price of these high speed campaigns though is that the sound bite can dominate the agenda. Resource issues are complicated. How we take these complex resource issues—which are becoming harder and harder to resolve—and explain them to the public and listen to their comments will be our challenge in the future.



Our scenic refuges.
Walruses where no walruses are found—ice formations at Wichita Mountains Wildlife Refuge in Oklahoma resemble a family of walruses. FWS photo: Elise Smith.

Law Enforcement Steps Up to the Plate

by Kevin Adams, Assistant Director for Law Enforcement

The Division of Law Enforcement has worked effectively to safeguard wildlife in this country and around the world. Over the past several years we have provided key support for the Service's priorities as well as for other core agency missions, from endangered species recovery to global conservation.

Global demand and high profits continue to turn animals and plants into commodities, with potentially devastating effects on species and ecosystems worldwide.

We improved protections for migratory birds through both traditional investigative work and proactive partnerships in which we teamed with private industry to remove hazards and promote compliance with laws that protect birds. We brought our unique expertise to ecosystem teams in every region. In the Midwest, for example, our participation helped address threats to freshwater mussels and secured restitution payments to support continued conservation.

We also helped close the nation's borders to invasive species. In New York, for example, intervention and outreach efforts shut down the seasonal importation of live mitten crabs, a threat to aquatic ecosystems.

Our work, including outreach, also paid off for endangered species. Increased patrols, improved rapport with landowners and hunters, and innovative programs such as grizzly avoidance training for guides and outfitters stemmed the take of wolves and grizzly bears. Enforcement efforts began to turn the tide for manatees in Florida, where boat strike deaths dropped by 12 percent last year.

On the global front, we completed major investigations of reptile smuggling, coral trafficking, and illegal caviar trade and expanded our training programs to support anti-poaching efforts in Africa and Asia.

Most importantly, however, we worked to address long-neglected resource needs that threatened the future viability of the law enforcement program. These efforts secured the most significant budget increase for the division in more than a decade, allowing us to begin rebuilding our core enforcement capabilities. We are hiring new agents for the first time since 1998, filling positions that, in many cases, have been vacant for years.

But major challenges lie ahead. Competing interests at every level of society are putting new pressures on wildlife resources. Local communities, states, even nations must weigh the benefits of development and resource utilization against the impact of habitat loss and commercial use. Global demand and high profits continue to turn animals and plants into commodities, with potentially devastating effects on species and ecosystems worldwide. We face the challenge of working in this increasingly complex enforcement environment while rebuilding our agent force and basic capabilities.

The success of this long-term rebuilding process will determine how well we respond to new threats, support the Service's conservation mission, and serve the American people as diligent and effective stewards of Earth's "living" legacy.

Clark Reflects

The following is excerpted from an interview with former director Jamie Rappaport Clark conducted by Service historian Mark Madison on January 17, 2001.

How does it feel to be a career Service director?

Terrific. For me, becoming director was certainly the highlight of a long federal career but I think it was made easier by the fact that I understood a lot of the internal workings of the agency.

Do you have any things you see as the highlights of your time as director?

Three and a half years seem to have gone by so quickly, but [I've enjoyed] working with the people and getting out in the field and seeing the diversity of what this agency does.

The one issue that sticks out personally for me among many others has been the rebuilding of our law enforcement arm. Getting to know law enforcement better and understanding their needs, bringing them out into the forefront and reinvigorating the program, integrating them better in the Service and then realizing budget increases has been extremely rewarding. I hope that the rebuilding of law enforcement continues not only among our special agents and wildlife inspectors but within the refuge system. Clearly we need a boost in the refuge system for the folks that put their lives on the line everyday to enforce wildlife laws and protect the critters out there.

Historically speaking, why was organic legislation for the Refuge System so important?

It clearly anchors a wildlife first mission. Our refuge system is so diverse. We have refuges in all 50 states plus a number of the territories and they are brought into the system under a number of authorities. While we had a fair amount of policy and regulation, we didn't have consistency.

continued on page 30

Clark Reflects

(continued)



One for the ages. *Mississippi River anglers have landed a prehistoric relic: a rare adult paddlefish. FWS photo.*

The organic legislation, I believe, really has fostered that one mission of America's National Wildlife Refuge System. More and more the impacts on the refuge system are coming externally and so we need to kind of shore up the lands which have become just terrific anchors of biological diversity for the future. We're not growing land and with urban sprawl and fragmentation, wildlife lands are becoming much more important to the future of our biological heritage.

Where do you see fisheries going?

Aquatic conservation is an area that I really wish we could have done more with. We have amazing capability in science and in technology through our National Fish Hatchery System and our tech centers and our health centers, and the expertise in our management assistance offices. We have the right recipe. We have all the right ingredients, but what we haven't really settled on is where we can best focus and channel our efforts. The hatchery system as a tool for fisheries conservation is being kind of revamped and I think that's a good

thing. There have been some outside reports done and our folks inside the Service are really working hard to re-vision the future of the hatchery system. So I have high hopes for that.

What is your take on the changing Federal Aid program?

Federal Aid was probably the biggest shock of my tenure as Director. When I took over the helm, Federal Aid was one of those programs that you just thought was humming along. Wonderful work was being done and it seemed to be a program on autopilot.

Well, I'll tell you I was wrong. Autopilot is not a good thing and Federal Aid exposed that for us all in the agency. It is hugely important not only to the history of our agency but to the future of our relationship with states and other partners. We deserved a lot of the criticism that we got about lack of leadership and poor management.

In the end I think it was all for good. It was a long haul from the bottom to revamp Federal Aid, to get some management accountability invested in the program and to rebuild our relationship with the states.

Federal Aid I'm pleased to say has terrific leadership now. There's legislation that focuses the future of Federal Aid and I believe we're rebuilding our traditional partnerships with the states. I see only good things in the future for Federal Aid.

What would make the Endangered Species Act work better?

I believe that a reformed law should build in more incentives for private landowners to do the right thing. As I've traveled around and I've spent time working with the law, I've yet to find anybody who condones the extinction of a species. What you do find is a lot of people who fear federal regulation of their private right, their property, their livelihood. And so we need to find ways to provide incentives for landowners to do the right thing without fear of the "heavy hand" of the federal government coming in to tell



Endangered species, recovering species.

Volunteers check the nest of an endangered Kemp's Ridley sea turtle as mom heads back to the sea. FWS photo: David Bowman.

them what to do with their future.

Administratively we've found some neat incentives that allow for that like candidate conservation and safe harbors. Those need to be incorporated into new law.

I think that a lot of the law should remain intact. All decisions should be grounded in good science. Whether or not a species deserves protection of federal law is a science decision and science alone. But once you get over that, how you implement the law, how you recover species, how you work in partnership with others, can really be a lot more flexible than it is in the current law. So I hope that what we've learned over the last decade can be incorporated into new law in the future.

Do you think as Director, you've had pretty good success communicating our agency's mission?

I'll tell you the communication aspect has been the greatest challenge of my time in the Service. The Service is a biological agency and most of us went into a biological field to work with wildlife and in the outdoors. So it was a rude awakening for a lot of us, me included, to realize that conservation is not just about fish, wildlife and plants and habitat. It's about communication. It's about society. It's about talking with the public and exciting the public. It's about how we communicate to a non-biological public the importance of a biological heritage.

So often we had biologists and we told them go communicate and we had this really scatter shot communication capability. And so as we ramped up our external affairs capability and we had people that understood communications working more closely with our biologists as a team we really began to make a difference. That to me is one of the most significant cultural changes of this organization in my time with the Service beyond my time as Director.

The National Conservation Training Center is another good example of our desire and our need to communicate and to educate. So many of us... really vested in staying current in our technical training. What we didn't realize is that we also needed to learn negotiation and teambuilding and communication and how to interact with a public with this training center and its curriculum, I've just seen our folks grow so tremendously in that area. That's where the future of conservation will be.

You were a bit of a pioneer as director in that you were the second female director we had in the Service, and the first to have a child in the Service. Did you find the agency supportive?

Certainly having Carson has been my greatest accomplishment as a human being and the agency was terrific about it. I was really concerned about how I would maintain the pace as Director and my commitment to the agency and then be a good mom,



Research matters.

A biologist extracts a tooth from a tranquilized Kodiak bear in Alaska. Data from the tooth will help determine the bear's age, feeding habits and general health. FWS photo: Jill Parker.

but I realized that I'm not the only visible person in this country that's a parent. There's lots of moms and dads out there with important jobs and every job in the Service is important as far as I'm concerned. A lot of us are balancing and juggling parenthood. Thankfully I had a terrifically supportive husband.

I was really grateful for the reaction of women in the Service. So many women from all levels of the agency sent me notes or thanked me in person and said, "I'm so glad that you had a baby and I'm so glad that you came back to the Service because you demonstrated that you can....[be a] career professional [and] a mom."

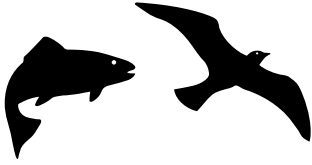
With Carson I learned to work smarter. [You're] more focused and you don't sweat the small stuff and you work on what's really important and you let things go that can be let go....[Having Carson also] reinvigorated my commitment to conservation.

Are there any words of advice you would give to the future director of the agency?

Listen to your people. This agency is extremely focused and it is populated by some of the most dedicated, committed public servants I've ever had the privilege and honor to work alongside of. They know what's best, they're rational, common sense oriented.

The director becomes the highest ranking advocate for the wildlife movement in the federal government. We have an obligation not only to advocate for our people...but also we're the high-ranking voice for the critters. So stay focused and have a lot of fun... When it gets tough inside the beltway it was always really healthy to get out there among our folks and to see what they're doing and get revitalized. It always was really rewarding to go get a second wind by getting out in the field. Just spending some time with folks and hearing their perspective was always really rewarding for me.

Ecosystem Approach Initiatives



One Year Later

As I write this article, it has been nearly a year since I took the job as national ecosystem coordinator. Although we all are still struggling to figure out the Service's Ecosystem Approach to Conservation—what it is, how to get it done, and many other questions—I have a few thoughts after one year on the job.

I was lucky enough in the past year to visit many ecosystem team meetings, although I deny the rumor that my participation was based on the quality of the cook-out planned by the team. (For the record: a tie between a low-country boil and a Gulf Coast fish fry.)

I found a number of teams rightly confused by their role in the Service. Where is our money? Where is our support? Where do the regions and the Washington Office fit in? How do we interact with programs? These and a number of other issues face teams across the country.

Some teams are more energized than ever. I found highly motivated team leaders focused on implementing resource-based projects rather than just budgets for their teams. I saw these teams work to ensure ecosystem conservation priorities are recognized and used by programs. It was the purest form of the Ecosystem Approach: it is the philosophy that guides conservation, not separate budgets.

There are dramatic examples of teams being acutely aware of their limitations and the danger in getting spread too thin. Recently one team decided to reduce their priorities from several to just two. Does this mean that conservation across the ecoregion will suffer? No, it means that they are able to maximize their efforts to deal with the ecosystem conservation through these two priorities and be more efficient and effective.

I found one team feeling chagrined that they scored poorly on an ecosystem team effectiveness evaluation. In fact, they refer to themselves as the "Untidy Team" given their relatively lax view on the structure of teams, meeting notes and other administrative details. However, they are an excellent example of cross-program efforts since the team members have strong relationships and are in almost constant communication about implementing the priorities for that ecoregion.

Last summer, the Directorate took a bold move and created the special assistants for Ecosystems in each region. These critically

important links between the teams, regional offices, and the Washington Office are also providing the advocacy and support so badly needed by teams. The special assistants and I are committed to the support and advocacy of Ecosystem teams as our number one priority by working on the "flex fund" effort, providing guidance on team planning, and finding alternative funding.

Regional offices have welcomed the special assistants with open arms and enthusiasm. Program managers have made the special assistants key to regional operations. Responding to the potential retraction to a solely program based management style, many regions are committing regional office program personnel to attend ecosystem team meetings and serve as advocates for those teams. Regional directors and their deputies have played key roles in facilitating this transition.

I'm excited about the many directions we are taking with the Ecosystem Approach, including:

Communicating the idea that the Ecosystem Approach is a philosophy, particularly to non-project leader field personnel.

Ecosystem Team Leader Workshops that allow team leaders to develop their skills and to interact with each other cross-regionally, with partners and others.

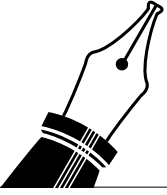
Through the work of the Washington Office Ecosystem Team, programs have become more in tune with one another and are now working informally and formally, and increasing the use of ecoregional priorities to implement their programs.

Using the "flex fund" effort will help direct resources to implement ecosystem team priorities and improve program efficiency and function.

This has been a great year. I've had a chance to learn so much about all the programs and meet some amazingly talented and dedicated people. Don't forget, let me know about those cook-outs!

Scott Johnston, National Ecosystem Coordinator, Washington, D.C.

Exploring Our Past



The First Name on the Wall

The Fallen Comrades Memorial Wall at the National Conservation Training Center in Shepherdstown, West Virginia, displays the names of Service employees who died while protecting our nation's wildlife. It serves as an ongoing reminder of the ultimate sacrifice employees made while carrying out their jobs.

Behind the 61 engraved stone plaques are the stories of real people with rich lives and sad deaths. The first—and oldest—name on the wall is Edgar A. Lindgren, who died in 1922 after he was shot by game bird poachers.

Lindgren died protecting wildlife nearly eight decades ago when the Fish and Wildlife Service was still known as the Bureau of Biological Survey. Even in its early years, our agency had been assigned the pivotal federal role in wildlife protection. The Lacey Act of 1900 became the first federal law to protect game animals, prohibiting the interstate transfer of illegally taken wildlife.

In more than a century of wildlife law enforcement, hundreds of Service special agents and wildlife inspectors have enforced these cornerstone conservation laws. Several have given their lives for creatures who cannot defend themselves. It was while protecting the nation's birds that Edgar Lindgren sacrificed his own life.

Until recently, because of the many agency changes and the passage of time, the Service did not have any records of Lindgren's life or death. However, when his great-granddaughter, Vickie Rudolph, learned of the Fallen Comrades Memorial she provided some newspaper articles and reminiscences from the family attic in the hopes that others would remember her grandfather, who died at the young age of 22.

This is what historians at the training center were able to reconstruct: in 1922, Edgar Lindgren had just become a U.S. game warden, having previously served as a deputy U.S. game warden since June 1921. He went to work for the Bureau of Biological Survey in Council Bluffs, Iowa.

Lindgren had already made a local name for himself arresting poachers for hunting doves out of season. Three weeks after his arrival, on August 17, 1922, he approached three men near Big Lake for shooting game birds out of season. As he asked to see their hunting licenses, Lindgren was hit by a shotgun blast. Two of the poachers then shot him at point blank range as he lay disarmed and bleeding on the ground.

Lindgren died four days later. His assailants were convicted of second-degree murder and sentenced to life in prison.

Although Edgar Lindgren's is the first name on the wall, it is likely that many other Service employees died while on duty before 1922. Unfortunately their stories may have been irretrievably lost in the intervening years. What unites them—and the 61 fallen employees whose careers span the 20th century and whose names appear on the memorial wall—is that they all died doing what they loved best—protecting our nation's fish and wildlife.

You can view the list of names with more biographies at: <<http://www.nctc.fws.gov/history/fallencomrades.html>>.

Mark Madison, National Conservation Training Center, Shepherdstown, West Virginia

Fish & Wildlife Honors

Dr. Gary Carmichael, director of the Mora National Fish Hatchery and Technology Center, in Mora, New Mexico, received the Department of Energy and the Federal Interagency Policy Committee 2000 Federal Energy and Water Management Award for the Department of Interior. The award, presented at an October 2000 DOE ceremony in Washington, D.C., recognized the contribution the technology center made toward efficient use of energy in the federal sector during Fiscal Year 1999. The technology center's mission is to investigate and demonstrate improved water conservation and reuse methodology for cold, cool, and warmwater fishes and propagate threatened and endangered species. The center, incorporating leading-edge water reuse technology in fish production, rears coldwater rainbow trout, Rio Grande cutthroat trout, and the endangered Gila trout.

"Sense of Wonder" Award Goes to Alaska Employee

Candace Ward, a park ranger at Kenai National Wildlife Refuge in Alaska, received the Service's first Sense of Wonder Award, which celebrates the spirit of environmentalist Rachel Carson by recognizing an employee who designs, implements or shows visionary leadership in an interpretive program or project that fosters a sense of wonder and enhances public stewardship of our wildlife heritage.

Ward built a comprehensive environmental education program and public use program over more than 20 years at the Kenai. She received a plaque in recognition of her award at a ceremony during the 2000 conference of the National Association of Interpretation.

Dennis Prichard, environmental education coordinator for the National Wildlife Refuge System, presented Ward with her award and explained the significance of this newest Service honor.

"Rachel Carson was a scientist who changed our world with her accurate portrayal of the facts surrounding the use of pesticides," Prichard said. "She also knew that creating a sense of wonder about nature was essential to build commitment and compassion toward conservation of our nation's wildlife. For those who work hard in our agency to create this sense of wonder, this recognition program was established."

Public use coordinators from each region nominated deserving individuals. Nominations highlighted eight outstanding individuals and their efforts.

Other nominees were Dave Aplin, now of Kilauea Point NWR in Hawaii, for his work establishing Iowa's Neal Smith NWR Prairie Learning Center; Molly Stoddard of Wisconsin's Horicon NWR; Mary Stefanski of Upper Mississippi NWR; Marriane Kronk of Seney NWR in Michigan; Julie Rowand of John Heinz NWR at Tinicum in Philadelphia; and Vickie Hirschoeck, from Utah's Bear River Migratory Bird Refuge.

A panel of three judges chose the winner. They were Doug Staller, branch chief for

recreation and education for the National Wildlife Refuge System; Janet Ady, chief of the division of education outreach at the National Conservation Training Center; and Tom Kelsch, the director of conservation education of the National Fish and Wildlife Foundation.

Their selection was based on the nominee's ability to use the principles of interpretation and environmental education to create original and innovative methods of connecting the public audiences with the resources and programs of the Service.

Janet Ady, National Conservation Training Center, Shepherdstown, West Virginia

Public Lands Day Participation Nets Hammer Award

On December 11, 2000, the Fish and Wildlife Service, along with nine partners involved in National Public Lands Day, received the Vice President's Hammer Award, given to teams who strive to build a government that works more efficiently.

Service Public Lands Day coordinators Tina Dobrinsky of the Division of Refuges and David Lucas of the Division of Finance accepted the award along with representatives of the other federal partners.

The award capped off seven years of Service participation in Public Lands Day, an annual event aimed at coordinating a large volunteer community service effort on America's public lands.

National Public Lands Day is a partnership among the National Environmental Education and Training Foundation and a number of federal agencies, state and local governments, and private partners.

Service participation in National Public Lands Day increased tenfold last year, from three sites to thirty refuges in 23 states. Some 1,200 volunteers contributed 6,000 hours last September, restoring habitat, removing trash and planting native species on refuges across the nation. Among those donating time or resources to Service Public Lands Day projects were refuge support groups,



If I had a hammer... Doug Staller, Tina Dobrinsky and David Lucas (left to right) accepted a Hammer Award on behalf of the Service for its role in making Public Lands Day a success. FWS photo: LaVonda Walton.

volunteer fire departments, universities, schools, state fish and wildlife agencies, nonprofit organizations, and businesses.

In addition, the Service offered funding to National Public Lands Day activities at half of its participating sites.

Rachel F. Levin, Public Affairs, Washington, D.C.

Transitions... Who's Coming and Going

John Christian is the new Region 3 assistant regional director for Migratory Birds and State Programs. Christian was formerly assistant regional director for Fisheries in Region 3. **Gerry Jackson**, supervisor of the Region 1 Olympia Washington Fisheries/ES Office, is now Region 3 assistant regional director for Fisheries.

Jana Grote is the special assistant for ecosystems in Region 1. She comes to the Service from an interagency position funded jointly by the University of Wisconsin Cooperative Extension program and the Wisconsin Department of Natural Resources. Her responsibilities included facilitating coalitions between recreational angling groups and the state to address complex natural resource issues relating to habitat, angler participation, access, and simplifying laws and regulations. Prior to that she was employed in the Austin Ecological Services field office and before that, as the private lands coordinator for Region 1.

Lee Roy Fulton retired last November after 34 years with the Service, most recently as manager of D'Arbonne NWR. He plans to spend the first few months of his retirement completing construction of a cabin in the hills of Arkansas and doing a lot of hunting. D'Arbonne NWR is located in Farmerville, Louisiana.

Greg Siekaniec is the new manager of the Alaska Maritime NWR. Siekaniec most recently served as the deputy chief for Refuges in the Service's Washington, D.C., office. He will replace John Martin, who retired in June after 20 years as Alaska Maritime Refuge's first and only manager. Siekaniec began his Service career at Charles M. Russell NWR in Montana and then worked at several other refuges in the Lower 48 before moving to Izembek NWR in 1995. In 1998, Siekaniec became chief of Wildlife Resources in the Refuges Division in Washington, where he worked on refuge policy issues, establishment of new refuges, and national legislation and budgeting.

Scott Pruitt, a 12-year veteran of the Service, has been named supervisor of the Bloomington, Indiana, Ecological Services field office. His responsibilities as field supervisor include directing a staff of 13 biologists and support staff on projects ranging from investigating effects of contaminants on fish and wildlife to endangered species conservation to habitat and wetland restoration projects. The field office works closely with other federal and state conservation agencies on fish and wildlife projects statewide.

Fishery manager **Dr. Jonathan Jed Brown** has been selected as the Delaware River Fisheries Coordinator in the Northeast region. Brown will coordinate efforts to restore and manage fish populations in the Delaware River Basin and the surrounding area. He will be based at the Service's Delaware Bay Estuary Project Office at Bombay Hook NWR in Smyrna, Delaware. The Delaware River Basin Fish and Wildlife Management Cooperative, which he will coordinate, guides interstate fisheries management and restoration efforts for the Service, NMFS, and the state fishery agencies of Delaware, Pennsylvania, New York and New Jersey.

In December 2000, **Brian Norris** was appointed assistant regional director for External Affairs for the Great Lakes-Big Rivers Region. Norris comes to the Service from the U.S. Army Environmental Center at the Aberdeen Proving Grounds in Aberdeen, Maryland, where he was chief of public affairs. In his 27-year career in public affairs, Norris has held communications management positions with the Department of Agriculture's Agricultural Resource Center in Beltsville, Maryland, and Foreign Agricultural Service in Washington, D.C. and with the Maryland State Bar Association and Martin Marietta Aerospace, both in Baltimore.

Fish & Wildlife... In Brief

Six More Wolves Placed in Forest Acclimation Pens

On January 4, Mexican Wolf Interagency Field Team members placed a pack of six wolves into an acclimation pen in the Apache-Sitgreaves National Forest in eastern Arizona. This is the first of several releases currently planned for this year. The alpha male was born at the Albuquerque Biological Park in 1998. After being transferred to Sevilleta NWR, the alpha male was paired with a female, one of the captive-bred offspring of the free-ranging Mule Pack adults. Four pups, two females and two males born last spring accompany the adults. The newly placed pack has yet to be named. The Apache-Sitgreaves National Forest has issued a public closure order to protect the endangered wolves from disturbance while they occupy the pen. A posted one-mile closure surrounds the acclimation pen.

Donation Benefits Sea Turtles

The Richard King Mellon Foundation has donated one of the world's most important sea turtle nesting beaches and other adjacent wildlife habitat to Archie Carr NWR in Florida. The donation includes a half mile of ocean front that is intensely used by nesting sea turtles in the refuge area. A total of 19,000 threatened loggerhead, 2,800 endangered green and 13 endangered leatherback sea turtles nested at Archie Carr this past summer. The donation also includes scrub habitat important for the threatened Florida scrub jay and eastern indigo snake and three structures, including one used as a University of Central Florida research station. The donation, which totals about 35 acres, nearly doubles the amount of land owned by the Service at the Archie Carr NWR.

Coral Reefs Receive New Protection

The Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve was created last December to protect 84 million acres around the northwestern Hawaiian Islands containing nearly 70 percent of the United States' coral reefs as well as pristine remote islands, atolls and submerged lagoons. The Service will help manage the area, along with the National Marine Fisheries Service, as part of the National Wildlife Refuge System. Ninety percent of the coral reefs in the central Indian Ocean have died and that reefs elsewhere in the world are threatened by pollution, fishing and other human activities.

Fifty Friends

I'd like to begin this Director's Corner with a thank you. The employees of the Fish and Wildlife Service have given me invaluable support during this transition period and for that I owe you all a debt of gratitude. It is only proper, therefore, that I dedicate this column to imparting what I know of the new administration.

Our new Interior Secretary, Gale Norton, has not only voiced but demonstrated a deep respect for the professionalism of Interior's many bureaus. As she and her staff acquaint themselves with our upcoming departmental issues and review our policies, they are turning to us for unbiased, expert advice and information. We were told up front to expect some changes but we have also been assured that many of our day-to-day decisions will not be affected and, more importantly, that we can expect to have a strong voice at the decision-making table when changes are being considered.

This spirit of collaboration was reaffirmed by the Secretary herself when she paid a personal visit to the Service's offices. Her visit came within 24 hours of her confirmation and marked her first stop in her initial tour of the Department's bureaus. For more than an hour, we discussed a wide range of issues, from the Endangered Species Act to the National Wildlife Refuge System Centennial to the needs of our Fisheries program.

Secretary Norton expressed strong support for the Service's efforts in these areas and emphasized her desire to do great things for conservation. We then discussed the importance of partnerships and I took the opportunity to highlight one set of partners I believe is vitally important to the Service's future success.

All of our partnerships are essential to our mission but the Service's relationship with the fish and wildlife management agencies of the 50 states is of a special nature. We share with our state colleagues not only a similar mission but also a sense of public duty, a connection with many common constituencies and a first-hand understanding of government's capabilities and limitations. It is perhaps because of all of these elements that our longstanding relationship with the states has enjoyed great success. Even so, I believe we have yet to realize its full potential.

Working together we can tap that potential by fostering a closer relationship. Whenever we tackle an issue, we ought to think first about how it affects our state colleagues and what role they might play in developing and implementing a solution. We need to be more active in requesting advice and assistance from the states. We may not always agree on the best course of action, but, like a family, we ought to be able to air our differences and yet still maintain a strong, cohesive alliance, based on honesty and respect.

Secretary Norton was enthusiastic about the idea of strengthening our relationship with states. I encouraged her to emphasize greater federal-state collaboration at the annual meeting of the North American Wildlife and Natural Resource Conference in mid March. But we don't have to wait until then to build new bridges. I challenge each of us to think about how we can work together with our state partners to do more for fish and wildlife conservation.



*Marshall Jones
Acting Service Director*

Fish & Wildlife News

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Deadline for July/August/September 2001 issue:
May 15, 2001

Deadline for October/November/December 2001 issue:
August 15, 2001