



COOPERATIVE
CONSERVATION

U.S. Department of the Interior
Annual Report
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**Department of the Interior
Cooperative Conservation (Executive Order 13352)
2007 Annual Report**

Table of Contents

	Page
Introduction	2
Knowledge Building	4
Strengthening Skills	9
Improving Management Accountability	11
Embracing Cooperative Conservation	
Enhancing Science in Cooperative Conservation	16
Strengthening Partnerships in Conservation	25
Achieving Cooperative Conservation Results	44

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Introduction

The Interior Department manages 507 million acres—or 20 percent—of the land mass of the United States. Its responsibilities lie at the confluence of people, land and water. Interior programs touch the lives of millions of people across the Nation, as we conserve unique natural, historic and cultural landscapes, provide access to energy, deliver water in the West for drinking and for irrigation, protect threatened and endangered species, reduce risks to communities from wildland fire, and fulfill responsibilities to Native Americans, Alaska natives, and affiliated island communities.

In 2001, the Department of the Interior set forth cooperative conservation principles (a term synonymous with collaborative conservation) as a central organizing theme for enhancing resource management and reducing conflict relating to public lands decisions. This conservation vision was affirmed through the 2004 Executive Order on Cooperative Conservation.

In its embrace of this vision, the Interior Department has aligned budgets, administrative tools, and policies to strengthen its capacity to encourage cooperative conservation and fulfill its potential to achieve on-the-ground conservation results. Specifically, the Department has:

- increased programs and grants designed to facilitate cooperative conservation from \$217.1 million in 2001 to \$311.3 million in 2008; a 43 percent increase.
- incorporated cooperative conservation goals into employee performance plans;
- coordinated with the Office of Personnel Management to identify competencies essential to building human resource capacity in cooperative conservation;
- inventoried training programs and augmented training in facilitation, mediation, partnering, and other skills relevant to collaboration;
- developed NEPA guidance to enhance use of consensus-building and collaboration;
- proposed Cooperative Conservation legislation to promote landscape-scale conservation partnerships and interagency cooperation;
- revised our policies pertaining to cooperative agreements to improve their utility as a foundation for building strong conservation partnerships;
- provided grants coordination guidance to facilitate greater cooperation and collaboration in the implementation of different grant programs;
- held 26 Listening Sessions around the Nation to highlight best practices and identify barriers to cooperative conservation;

- established a permanent Office of Conservation, Partnerships and Management Policy within the Office of the Secretary that works with an intradepartmental team to strengthen capacity for collaboration, mediation, and partnering.
- developed and disseminated video highlighting Interior partnerships and collaborative efforts to be used to promote a culture of teamwork and cooperation among Interior employees and externally, with the public.

In addition, many of the Department's bureaus have programs and initiatives predicated on advancing cooperative conservation. Our National Fish Habitat Initiative, for example, comprises multiple federal, state, local, tribal, public and private partners who have collaborated to develop common goals and jointly select priority projects to improve fish habitat. Our migratory bird and joint ventures programs similarly are premised on achieving results through systematic collaboration. A number of our grant programs and technical assistance programs, such as our Partners for Fish and Wildlife Program and our Coastal Program, could not succeed without collaboration to define goals and pursue on-the-ground results.

The accomplishments described in this 2007 annual report on the Department's cooperative conservation efforts range from scientific studies to community groups involved in wildlife resource management. These wide-ranging cooperative activities demonstrate that Interior's bureaus and offices fully embrace the principles embodied in the Executive Order. We have grouped our recent activities under these main headings: Knowledge Building, Strengthening Employee Skills, Improving Management Accountability, and Embracing Cooperative Conservation.

Knowledge Building

Knowledge and accurate information are essential to conducting effective cooperative conservation. Conservation efforts benefit from scientific research as well as from local knowledge gleaned from those who live and work on the landscape. Projects and activities that build locally-applicable conservation knowledge and capabilities are needed to advance cooperative conservation. Building conservation consciousness in school-aged children also is important for the future of the Department's mission and cooperative conservation efforts. The following are examples of how Interior agencies worked with local groups and communities to support cooperative conservation through knowledge building.

Indiana Bat Workshop Promotes Recovery Plan

The Office of Surface Mining Reclamation and Enforcement (OSM) continues its leadership role in bat conservation education and technology transfer related to mining activities, a role they undertook during the late 1990's based on information that many of North America's 45 species of bats, including some of the largest remaining bat populations, roost in mines. During fiscal year 2007, the OSM Bats and Mines Steering Committee conducted an Indiana Bat Recovery Plan Workshop that brought federal and state agency personnel, industry, and academia together to discuss the recently released Indiana Bat Recovery Plan and the relationship between the Indiana bats and coal mining. The workshop provided opportunities for participants to more thoroughly understand the draft recovery plan and develop comments for consideration by the Fish and Wildlife Service.

Texas Freshwater Fisheries Center Honored For Education Efforts

The American Fisheries Society annually recognizes projects that have been funded through the Fish and Wildlife Service's Sport Fish Restoration program for their conservation successes. At its fall meeting the Society announced this year's winners include the Texas Freshwater Fisheries Center. Sport Fish Restoration funds, along with a variety of both private and public partners, have allowed the Center to increase its public education offerings since the facility was constructed in 1996. Over the last six years, a fish hatchery tram was constructed and placed into service; a wetlands and a wetlands trail with interpretive wayside exhibits, pavilions, restrooms, and interactive interpretive stations were completed; and an outdoor amphitheater, a casting pond and pier; a conservation center, a classroom, a teaching lab, and a game warden museum were built.

100th Anniversary of Rachel Carson Celebrated

On May 27, 2007, Interior celebrated the 100th anniversary of the birth of Rachel Carson, one of the world's foremost leaders in conservation. Her work as an educator, scientist and writer revolutionized America's interest in environmental issues. Whether it was her passion for the oceans and coasts, or her inspiration as one of the first female scientists and government leaders, her legacy is certainly one to be honored and celebrated.

The Fish and Wildlife Service's (FWS) nationwide efforts to celebrate the centennial anniversary of the FWS's most notable employee included a website, fact sheet and toolkit for FWS employees to celebrate the centennial in their local communities. The toolkit incorporated template news releases, hands-on kid's activities and biographical information on Rachel Carson, which many other organizations used to celebrate Rachel Carson. In addition, the FWS National Conservation Training Center, in cooperation with the Ward Museum of Wild Fowl Art in Salisbury, Maryland, staged the nation's premier public exhibition celebrating the life and legacy of Rachel Carson, at the Cape Cod Museum of Natural History in Brewster, Massachusetts.

California Friendly Landscape Pilot Engages Builders

The California Friendly Pilot Rebate Program offers financial incentives to builders to encourage the installation of water efficient landscaping in new model homes. Landscapes that incorporate the California Friendly Standards can use up to half the water of their more traditional "turf" counterparts. California Friendly Landscapes feature smart, sustainable designs, plants that are right for the climate, and state-of-the-art irrigation systems. Metropolitan Water District of Southern California (Metropolitan) is a consortium of 26 cities and member agencies that provides drinking water to nearly 18 million people in parts of Los Angeles, Orange, San Diego, Riverside San Bernardino and Ventura Counties. Metropolitan is funding a portion of the landscape incentive rebates offered to builders who install California Friendly Landscape designs with a grant from the Bureau of Reclamation. During fiscal year 2007, the first phase created over 200 new homes incorporating California Friendly Landscapes.

Great Lakes Beach Health Initiative Supports Public Health

The Great Lakes beach health community is a strong coalition of dedicated scientists, beach managers, public health officials and other stakeholders who are working to protect public health at Great Lakes beaches. Some of the activities in 2007 include: initiating a BEACH 101 class to be held annually; developing a standardized sanitary survey for use by all Great Lakes beach managers for identification of contamination sources impacting beaches; producing a DVD entitled, "Beach Models: Predicting Water Quality"; and developing the international Beach Network website (beachnet.info) to share information on the latest research and technology.

New Guide Focuses on Breeding Bird Habitat in Young Conifer Forests

The U.S. Geological Survey published a new guide to breeding bird habitat in young conifer forests in cooperation with a nongovernmental organization, the American Bird Conservancy. Questions the guide helps answer include which bird species to prioritize for management and conservation, what habitat conditions and features are needed by breeding bird species associated with young conifer forests, and how these species respond to management activities.

Tests on Freshwater Mussels Contribute to Water Quality Standards

About 70% of North American freshwater mussel species are considered to be endangered, threatened, or of special concern. Contamination is considered one of the causal or contributing factors to the declines of freshwater mussel populations. However,

the U.S. Environmental Protection Agency (EPA) has generally not used toxicity data generated from freshwater mussels in the derivation of water quality criteria, mainly due to a lack of standardized guidance for conducting toxicity tests with freshwater mussels. The U.S. Geological Survey cooperatively worked with U.S. Fish and Wildlife Service and EPA to develop standardized methods for conducting freshwater mussel toxicity tests, now accepted and published by the American Society for Testing and Materials. The results of the studies have been reported in a series of ten papers in the recent issue of the scientific journal *Environmental Toxicology and Chemistry*, and the data from the studies are being used to re-evaluate several current water quality criteria or standards.

Manatee Research Advances Knowledge of Endangered Species

Collaborative research among U.S. Geological Survey (USGS) scientists and the Florida Fish and Wildlife Conservation Commission's Florida Wildlife Research Institute, produced a notable report, "A Quantitative Threats Analysis for the Florida Manatee," that enables assessment of the relative roles that different threats, such as watercraft-related mortality and loss of warm-water winter habitat, play on the future status of Florida manatees. This is the first time a quantitative assessment has been designed to analyze the five listing factors under the Endangered Species Act in an integrated manner and was used by the Fish and Wildlife Service in the Five-Year Review of the Florida Manatee that is mandated by the Endangered Species Act.

Be PlantWise Helps Public Target Invasives

Be PlantWise is a partnership between the National Park Service, Lady Bird Johnson Wildflower Center, National Invasive Species Council and Center for Plant Conservation to educate the public and communities about best management practices to control invasive plants at the wildland urban interface. Partners and experts have worked to develop best management practices. These practices can now be accessed via the web. The next step will be a community education program on invasive plant management to assist communities, agencies, and nongovernmental organizations by providing them with a standard set of educational materials. This partnership continues to adapt to meet the ever-changing conditions on the ground with new invasive species and new control technologies. This year the partnership is developing a tool to assist landowners determine the invasibility of their yards.

Improving Local Understanding of Maned Wolves

The Fish and Wildlife Service provided a federal assistance grant to the Brazilian organization Instituto Pro-Carnivoros to improve the status of the maned wolf, which is regarded as a predatory pest by Brazilians. Recently, intense human occupation of the Cerrado ecosystem has led to a decrease in the maned wolf population from the killing of wolves to stop livestock losses. This project supported education initiatives targeting misperceptions of local communities (including stakeholders, such as farmers and schools) about the maned wolf while promoting the value of native habitats. The project developed qualitative and quantitative information on livestock depredation, and tested and proposed preventive methods to significantly reduce livestock losses and increase farmer acceptance of the species. Ecology, behavior, health, and reproduction of wolves living in the low versus dense human activity areas were monitored, as well as the impact

of domestic dogs on the health of the wild carnivore community. The project also facilitated an international experts' workshop to develop a regional conservation strategy for the maned wolf.

Cienega High School Develops Environmental Area

Cienega High School in Vail, Arizona, is developing an environmental area on school grounds to allow the students and the community to learn about and experience the Sonoran Desert in an interactive way. An important element of this project is a water feature that will demonstrate how native desert fishes thrive in this environment. The Fish and Wildlife Service's Partners for Fish and Wildlife Program will fund the construction of this element. Students will participate in the construction and management of the ponds. Two ponds will be constructed and provide habitat for two federally listed fish species, the Gila topminnow and the desert pupfish. In addition to these two species the project will also provide habitat for the longfin dace and lowland leopard frogs.

Wildlife Forever MOU Engages Public in Minnesota

On January 22, 2007, Fish and Wildlife Service (FWS) and Wildlife Forever signed a Memorandum of Understanding (MOU) to work together on conservation issues of mutual interest, such as invasive species outreach and conservation arts programs. The MOU covers three main areas: FWS participation in Wildlife Forever's annual State-Fish Art contest, held in the Twin Cities, Minnesota; cross-promotion opportunities between the State-Fish Art contest and the Service's Junior Duck Stamp program to help connect children with nature; and coordination with Wildlife Forever on reaching out to diverse and underserved audiences in area city schools with conservation education. Among 2007 cooperative conservation activities undertaken under the MOU was the State-Fish Art Expo, which honored children who entered Wildlife Forever's State-Fish Art contest and drew thousands of visitors.

Alaska Youth Practice Stewardship Through North Slope Bird and Cultural Camp

The Fish and Wildlife Service partnered with an Alaska school district, large companies, and nonprofit organizations to sponsor a science program dedicated to educating and promoting stewardship among Alaska youth. This program used a foundation of scientific and cultural activities to introduce students to science with a specific concentration on conservation issues surrounding the threatened Steller's eider. Students became interns and learned about ground-based sampling procedures to estimate the number of nests. The student interns worked with experts on bird identification and learned about the endangered species program, and the harmful effects of lead shot. Upon completion of the experience, students were required to share their knowledge with other members of the community through classroom and community presentations as well as through the local media.

Connecting Children with Nature in Arkansas

The Fish and Wildlife Service is working closely with partners in Arkansas to build a movement to reconnect children with nature. As a result, government and non-profit

decision-makers from the health care, education, and conservation sectors are now collaborating on:

- Incorporating communications on the importance of nature and the outdoors into Arkansas' Coordinated School Health Program, which reaches thousands of public school children in more than 30 school districts;
 - Participating in an "Obesity in Arkansas: From Contemplation to Action" forum, which is developing a plan to combat obesity through public schools; and
 - Including regular interaction with nature and the outdoors into Arkansas's children's health care strategic plan and in guidelines for pediatricians to address childhood obesity.
- To involve educators in the movement, the partners also sponsored a continuing education workshop for more than 300 teachers and administrators. Participants heard from author Richard Louv about how nature helps children learn better and improves their health. They also learned how to incorporate several outdoor education programs topics, such as archery, fishing, hunting, wildlife observation, and conservation, into the classroom. Because these programs have been certified by the Arkansas Department of Education, teachers are able to easily incorporate these programs into the school curriculum.

Mapping the Rio Watershed Education Project Serves Students

The Mapping the Rio Watershed Education Project was initiated in 2005 as a cooperative effort between the Friends of the Bosque del Apache National Wildlife Refuge and the Refuge to serve kindergarten through fifth grade students in Socorro County, New Mexico. Its mission is to enrich academic experience with an intensive nine week field investigative curriculum focused on the Rio Grande Watershed; to generate a principled understanding of the Rio Grande ecologically, geographically, culturally; and to learn how our local wildlife refuges, as well as international wildlife refuges, promote conservation ethics. Activities include: river maps and murals, watershed models, poetry, a Rio Grande photo exhibit, Rio Grande children's books, and a Rio Grande presentation. The latest activity is a Rio Grande film documentary.

Archery in the Schools Competition Promotes Conservation and Sportsmanship

Deep Fork National Wildlife Refuge staff held the Second Annual Archery in the Schools Competition this year at Cussetah Bottoms Boardwalk Trail, March 27, 2007. Ninety children from three area schools met for a day long archery competition. Students from the local schools in fourth and fifth grades had to qualify during their archery classes to participate in the event. Throughout the day, the students rotated between a competition archery shoot, a 3-D archery shoot, and a bow fishing event. The event provides opportunities for school children to learn about natural resources conservation and sportsmanship.

Strengthening Skills

Skills in partnering and collaboration are critical for conducting cooperative conservation effectively. Examples of 2007 activities that will enhance partnering and collaboration competencies among Interior employees and their partners and among the wider conservation community are provided below.

Collaboration Helps Alaska Natives Gain Degrees

Leading a consortium of federal and state agencies, the Fish and Wildlife Service (FWS) initiated a historic collaboration with the University of Alaska's "Alaska Native Science and Engineering Program" (ANSEP) to help Alaska Natives acquire advanced degrees. The Alaska Natives hold a variety of local-hire but low-graded jobs within the FWS, e.g., seasonal Refuge Information Technicians. The lack of a college degree precludes many Natives from advancing into professional positions with state and federal resource agencies. For a decade the University of Alaska's ANSEP model has recruited, trained and graduated Native students for engineering careers. Through FWS leadership in 2007, this proven program will now recruit, train and graduate Native fish and wildlife biologists for careers with federal and state agencies including FWS, U.S. Geological Survey, Bureau of Land Management, Bureau of Indian Affairs, National Oceanic and Atmospheric Administration, Forest Service and Alaska Department of Fish & Game.

Inupiaq Speaker to Work with Subsistence Harvesters

Cooperative conservation efforts are vital to the Village of Kaktovik, where most residents are dependent upon food resources obtained through a subsistence lifestyle. Building on a Memorandum of Understanding signed in 2006 between the Village and the Minerals Management Service (MMS), the parties worked to facilitate a position within the Village Wildlife Management Department. MMS funding will enable the Village to identify a tribal employee that speaks Inupiaq and has gained the trust of the tribal and local residents. This employee will serve as a point of contact for subsistence harvesters to communicate issues and concerns to the Village and MMS.

Interior Agencies Building Capacity in Collaboration/Cooperation

As part of the Bureau of Reclamation's effort to identify actions to improve the level of service to its customers and other stakeholders, a review identified critical positions where collaborative competencies are needed, and position descriptions were refined to include these competencies. Supervisors were asked to identify one of three collaboration levels for each position and to document that level in individual position descriptions. Supervisors then discussed the assigned level with each employee, determined the employee's current skill level in each of the required competencies, and prepared an Individual Development Plan when necessary. Supervisory and managerial performance plans were modified to include accountability measures for the activities described.

The Bureau of Land Management (BLM) has initiated a process to get collaboration process skills into all the appropriate training courses it offers. In addition the BLM offers the only place-based training on collaboration that includes stakeholders in a joint

learning environment. The BLM also completed Advanced Alternative Dispute Resolution/Conflict Prevention for Managers for their State Leadership Teams in Nevada, Wyoming, and Eastern States in FY 2007. One session of ADR/Conflict Prevention Principles, Strategies, and On-the-ground Applications was presented for field managers, Bureau of Indian Affairs, and others. Fundamentals of Negotiation, a satellite broadcast, had over 250 Bureau employees registered.

Building Community Collaboration

The Bureau of Land Management (BLM) has signed cooperative agreements with the Sonoran Institute and the National Policy Consensus Center to jointly build capacity partnering and collaboration in communities throughout the West. These two non-profits are assisting BLM by organizing and facilitating meetings among stakeholders. Having a neutral third party is particularly helpful in handling contentious issues.

Also the BLM continues to work closely with the Collaborative Action Team sponsored by the Forest Service and several non-government organizations to better coordinate activities. These include the Collaborative Adaptive Management Network (CAMNet) to build agency and community capacity to implement adaptive management; the Communities Committee and the Rural Voices for Conservation Consortium to develop a greater understanding of community issues and relationships; and the Western Collaborative Action Network (WestCAN) to develop a mentoring network for public and private sector people who want to build their collaboration skills.

Introduction to Grants and Cooperative Agreements

In July 2007, Fish and Wildlife Service International Conservation administrative and program staff participated in basic grants management training designed to familiarize and refresh all staff with the nuances of grants processing and project management related to projects funded. This training promoted team building by outlining the steps taken at various stages of grant processing, providing all staff with a better understanding of the interdependent nature of their roles throughout the life of a conservation project funded. With the responsibilities of various staff thoroughly reviewed, a new respect for the tasks assigned at various levels was developed. This training put the Division in a better position to cooperatively work with prospective grantees and ensure compliance with existing regulatory and statutory mandates.

Training Delivered on New Adaptive Management Guide

<http://www.doi.gov/initiatives/AdaptiveManagement/training.html>

The Department of the Interior presented an orientation session (May 24) and two training sessions (Sept. 27 and Nov. 29) to familiarize staff at all levels with adaptive management concepts and applications. An introduction to the Department's recently released Adaptive Management Technical Guide, this training provided a brief overview of adaptive management as a resource management tool and describes circumstances under which it is appropriate to use adaptive management. These broadcasts are part of a Department-wide effort to firmly establish adaptive management as a tool for resource decision-making. The broadcasts were recorded for future use.

Mentoring Promotes Conservation of East African Wildlife

This project focused on reducing the illegal and unsustainable commercial trade in bushmeat in East Africa by raising the capacity of emerging wildlife managers and leaders in the region. The Fish and Wildlife Service through the newly established MENTOR Fellowship Program (*Mentoring for ENvironmental Training in Outreach and Resource conservation*) supports fellows from four Eastern African countries to complete a bushmeat focused curriculum and nine months of field work. Based at the College of African Wildlife Management in Mweka, Tanzania, the fellows undertake a specialized curriculum providing them with personalized instruction and mentoring from a select group of highly experienced wildlife professionals. The unique combination of active fieldwork, mentoring, and tailored instruction is intended to prepare the fellows for participation in the establishment of a network of Eastern African wildlife professionals dedicated to reversing the rising trend of illegal hunting. The MENTOR program is coordinated by the Africa Biodiversity Collaborative Group, a consortium of major conservation NGOs, incorporating the expertise of a wide range of organizations dedicated to improving the capacity of African wildlife conservationists in Eastern Africa.

Improving Management & Accountability

Good government practices and accountability in conducting cooperative conservation activities help ensure that scarce resources are used appropriately and leveraged to achieve optimal conservation outcomes. In spring 2007, Secretary of the Interior Dirk Kempthorne established a Partnership Facilitation Review Team, chaired by the Deputy Secretary. The specific charge of this team was to evaluate current policies and their effects on fostering collaboration, partnerships, and cooperative conservation. Through the work of the Team, the Department has revised its policies pertaining to donations, as well as its policies pertaining to use of cooperative agreements. Both policies have been finalized. Each policy maintains transparency and accountability while, at the same time, better assuring that collaborative efforts that advance the Department's mission can be effectively and efficiently pursued. These policies facilitate cross-boundary management and clarify circumstances when grants, procurement contracts, and cooperative agreements should be used. They also clarify the circumstances in which competition and single-sourced cooperative agreements are appropriate, respectively. More specifics on these policies and other notable management activities are described below:

Interior Revises Donations Policy

http://elips.doi.gov/app_dm/act_getfiles.cfm?relnum=3772

Donations from the public are important and appropriate tools authorized by Congress for the Department and its bureaus to use in accomplishing our mission. The Departmental Manual chapter on donations (374DM6) has been revised effective December 2007. The new chapter provides a streamlined process for evaluating and accepting donations and upholds the principle that integrity, impartiality and public confidence in the Department are key considerations in the acceptance of all donations.

Cooperative Agreements Policy Revised to Facilitate Partnering

http://elips.doi.gov/app_dm/act_getfiles.cfm?relnum=3784

The Departmental Manual chapter on procurement contracts, grant and cooperative agreements (505 DM 2) has been revised, addressing concerns raised by bureaus and partners. The new policy provides more flexibility to bureaus for creating and maintaining partnerships. At the same time, the policy calls for more accountability in Federal financial assistance decisions and transactions.

Departmental Partnership Office Leads Capacity-Building Efforts

http://elips.doi.gov/app_so/act_getfiles.cfm?order_number=3275

The Department strengthened its administrative structure to support partnerships by establishing the Office of Conservation, Partnerships, and Management Policy under Secretarial Order 3275 on November 30, 2007. The Office is headed by a Director and a senior analyst, who lead Departmental efforts to promote cooperative conservation capacity building. The Office is under the Assistant Secretary – Policy, Management and Budget.

Conservation Grants Coordination Guidance Prepared

At the Secretary's direction, Interior has prepared guidance on the coordination of conservation grants and cooperative agreements within and among Bureaus to enhance conservation outcomes by enabling more coordination among grants and cooperative agreements. The Department annually spends \$1 billion on conservation grants and cooperative agreements; the guidance provides a flexible, systematized method for identifying synergistic opportunities among programs to optimize that spending. It will assist Bureau program managers and field staff in identifying shared priorities and maximizing their synergies to achieve conservation aims.

State Wildlife Planning Efforts Integrated Among Key Agencies

The Fish and Wildlife Service (FWS) is working with the Department of Defense and the State fish and wildlife agencies to develop cooperative conservation projects and partnerships. The starting point for integrating conservation projects among these agencies are State Wildlife Action Plans, which outline conservation actions for wildlife and natural places designed to benefit the health of wildlife and people. These plans are developed by scientists, sportsmen, conservationists and members of local communities. At workshops conducted across the country, these agencies are developing projects that combine State Wildlife Action Plan goals with Defense's integrated natural resource management plan and that support the mission of the FWS. The FWS is providing expertise and project coordination. A Southeast workshop resulted in the Carolina Species at Risk project that promotes Defense, State, and FWS cooperative conservation for targeted imperiled species and their habitats. This same workshop identified an airfield management study in South Carolina that seeks to remove invasive vegetation and replace them with native species to increase native habitat without increasing risks for aircraft strike hazards.

Northeast Wildlife Strategy is Team Effort

This past year, the Fish and Wildlife Service's Division of Sport Fish and Wildlife Restoration in the northeastern region played an integral role in the development of the Northeast Wildlife Teamwork Strategy (NEWTS). The FWS staff worked closely with the Wildlife Management Institute and the Northeast Wildlife Administrators to develop an innovative regional process to address common needs of Northeastern states that were identified in State Wildlife Action Plans. The NEWTS process solicits and prioritizes proposals for work to address these common needs, and pools State Wildlife Grant funds to undertake work to address them. The FWS staff attended organizational meetings and conference calls, assisted in reviewing the request for proposals and pre-proposals, and created the grant documents needed for states to commit funds. Also FWS staff worked closely with both the state Federal Assistance Coordinators and State Wildlife Grant Coordinators to keep them involved in the NEWTS process.

Pilot of Electronic Purchase of Duck Stamps Initiated

The Electronic Duck Stamp Act of 2005 directed the Secretary of the Interior, in consultation with state management agencies to conduct a three-year pilot program under which up to 15 states could issue electronic Federal Duck Stamps. Congress mandated a September 1, 2007, start date which the Fish and Wildlife Service (FWS) and participating states successfully met. The goal for this three-year pilot program is to make it easier for hunters, birdwatchers, stamp collectors and conservationists to buy Federal Duck Stamps. Through this pilot program the FWS is exploring a new way to improve service to duck stamp purchasers, in particular those from rural or remote areas as well as to meet the demands of today's web-savvy customers. To date approximately 17,000 "E Stamps" have been purchased through state websites. At the conclusion of each of the pilot program's three years, the FWS and its state partners will work together to analyze and evaluate that year's data. In addition, following the completion of the program, a final report will be provided to Congress as directed and, at that point, a decision will be made regarding permanent implementation.

Combined Agency Efforts Address Species Issues in West Virginia

In 1996, the Fish and Wildlife Service (FWS) completed a Biological Opinion for the Office of Surface Mining Reclamation & Enforcement (OSM) outlining the roles of each agency regarding threatened or endangered species. Since then many states, including West Virginia, have struggled to reach a consensus on the actions and responsibilities of each agency. To overcome this problem, the OSM, the FWS, and the West Virginia Department of Environmental Protection decided to work together to develop guidelines for implementing the Opinion. In conjunction with developing the guidelines, this multi-agency group also decided to craft a species-specific protocol for a federally-listed endangered species in order to test whether or not the guidelines they were developing were useful.

As a result of this effort, on January 1, 2007, the group released guidelines associated with the Opinion and a species-specific protocol for a federally-listed endangered species, the example being the Indiana Bat in West Virginia. The guidelines are helping to ensure the protection of threatened or endangered species in the State of West Virginia and to

streamline the permitting process, allowing agencies involved to work together in a more organized and efficient manner.

OSM Partners with Corps of Engineers in West Virginia

The Office of Surface Mining Reclamation and Enforcement (OSM) met with the U.S. Army Corps of Engineers to discuss the Corps' permitting process when reclamation of abandoned mined lands or the abatement of acid mine drainage occur in or near streams and wetlands. Watershed groups throughout West Virginia, along with various agencies within the West Virginia Department of Environmental Protection are often required to obtain authorization from the Corps when conducting the reclamation and water quality improvement work. On September 11, 2007, the Corps issued the Regional Permit for Abandoned Mine Land Reclamation for the State of West Virginia. The permit allows the State and any non-profit organization to address acid mine drainage and abandoned mine land reclamation problems that occur in or near streams and wetlands with a simplified permit process.

After the Storms: Emergency Recovery a Team Effort

In February 2007 the Fish and Wildlife Service formed an Emergency Recovery Team (ERT) to ensure that the recovery money was spent appropriately and within the specified timeframe. The team committed to a goal of obligating 90% of the funding for recovery construction contracts by June 30, 2007. In meeting its goal, the ERT established 47 grants and contracts with government agencies, universities, and non-government organizations to carry out recovery activities; the clean-up of 36,000 acres of Sabine National Wildlife Refuge marsh damaged by Hurricane Wilma; and the repair of 43,000 feet of levees, 22 water control structures, and 200,000 feet of canals in Louisiana with the Tennessee Valley Authority.

Water 2025 Challenge Grants Promote Conservation

The Bureau of Reclamation evaluated additional proposals for the Fiscal Year 2006 Challenge Grants, and in July 2007, selected 44 projects for funding, a total of \$9.2 million in *Water 2025* Challenge Grants for projects across the Western United States. Including the matching contributions of non-Federal partners, the selected projects represent a combined investment of more than \$32 million in water management improvements. The projects are anticipated to result in 5.2 miles of canals lined, 48 miles of canal piped, 22 projects including water marketing, and 26 projects to install water measurement, Supervisory Control and Data Acquisition systems, or automatic water delivery systems.

Citizen-Centered E-Government Priority with Fish and Wildlife Service

Communication is a critical pillar of cooperative conservation. The Fish and Wildlife Service (FWS) is working to communicate the agency's activities to the public via the Web site: www.fws.gov. The Web site also makes information about cooperative grant opportunities readily accessible at the public site <http://www.fws.gov/grants/>.

In FY 2007, the FWS oversaw the re-chartering of the Web Council and completion of a new Web Standards Handbook. They provided important leadership to the Web Council,

providing guidance on formalizing Council operations and procedures and helping the Council to work through a prioritization process for implementing the requirements outlined in the Web Standards Handbook. The Web Council serves as an important resource and recommendation drafting body that works to constantly improve the management and deliver of Web site content to the public. The Council was able to complete in 2007 a new Web Standards Handbook that will help the Service better serve online customers and meet the diverse array of Web site requirements that federal agencies must meet. Viewing of the FWS Web site has doubled in the past year. Now, FWS Web pages are being viewed more than ten million times each month.

Farm Conservation Program Working Group Promotes Cooperation

The Fish and Wildlife Service (FWS) engaged in an opportunity for a new cooperative program arising out of legislative action on the 2007 Farm Bill by creating a Farm Conservation Program Working Group to review and identify opportunities for working cooperatively with the U.S. Department of Agriculture (USDA) to implement conservation programs, while also making recommendations to enhance conservation programs under the Farm Bill to benefit fish and wildlife habitat and resources.

The Farm Conservation Program Working Group also developed various recommendations for reauthorization of the Farm Bill. As a result of the Working Group's preparation, comprehensive analysis, and justification, several of the report's recommendations were incorporated into the Administration's Farm Bill legislative proposal. In addition, subsequent comments to the House and Senate Statements of Administration Policy were also accepted.

In addition, the FWS worked with the Farm Service Agency to incorporate biological data regarding nesting waterfowl concentrations derived from work performed by the Habitat Assessment and Population Evaluation Team within a new enrollment opportunity for the Conservation Reserve Program. As a result of this cooperative activity, the agencies were able to strategically target conservation of important nesting habitat by working with landowners at a local level.

Restructuring for Collaborative Capacity in BLM

Through the Bureau of Land Management's (BLM) Managing for Excellence Initiative, a Division of Partnership, Environmental Education, Volunteers, Tourism/Geotourism and Community Programs has been created under the National Landscape Conservation Systems organization. This new organization will extend the benefits of cooperative conservation more broadly across the agency and allow for better coordination of the activities.

Embracing Cooperative Conservation

Enhancing Science in Cooperative Conservation

Balancing Coal Production with Environmental Protection

The Office of Surface Mining Reclamation and Enforcement (OSM) is charged with balancing the nation's need for continued domestic coal production with protection of the environment. OSM began the Applied Science Initiative in 2005 to increase the application of science and technology in the regulation of active coal mines and the reclamation of abandoned mines. The program is run by OSM through its National Technology Transfer Team, with States and Indian Tribes involved with coal mining issues. The program provides over \$900,000 per year to universities and other research institutions to develop applications of current science and technology to mining related issues. Through cooperative agreements in FY 2007, OSM funded and supported 11 Applied Science projects. The results and findings of applied science projects are presented at various mining and reclamation technical conferences and can also be accessed on the OSM Technology Transfer website <http://www.techtransfer.osmre.gov/NTTMainSite/appliedscience.htm>. The Applied Science Initiative results in better "on the ground" environmental protection and restoration, resulting in less need for enforcement. Ultimately, this initiative will result in more efficient and effective mining and reclamation practices.

OSM Mine Map Initiative Helps Decision-makers

Underground mine maps provide vital information for engineers, scientists, community and transportation planners, developers, and regulators for making decisions on land use development, property purchase, and environmental protection. The Underground Mine Map Steering Committee, a partnership of the Office of Surface Mining Reclamation and Enforcement (OSM), Interstate Mining Compact Commission, and coal mining state agencies, works to further the preservation, archiving, and distribution of underground mine maps. The goal of the Initiative is to develop a set of best practices for the preserving, archiving, and distributing mine maps, as well as, seeing this process to fruition. In FY 2007, OSM received 18 proposals from various State agencies and was able to totally or partially fund 7 of the 18 proposals, spending \$329,575 toward the Underground Mine Mapping Initiative. A good example of the type of projects submitted is Pennsylvania's efforts to geo-reference a library of mine maps that were being discarded by Consol. This library was acquired by Consol in the Rochester & Pittsburg Coal Company merger. These maps were going to be discarded by Consol, and Indiana University of Pennsylvania volunteered to restore, preserve, and digitally archive the thousands of maps. This project includes a very high percentage of cost sharing from the State of Pennsylvania, the University, and equipment support by Consol.

Aquatic Animal Drug Approval Partnership Key for Aquaculture

The growth of the U.S. aquaculture "industry," which includes federal, state and tribal natural resource agency facilities, in addition to private-sector facilities, has been severely hampered by the paucity of U.S. Food and Drug Administration-approved drugs needed to combat diseases in aquatic species and facilitate efficient production. A major portion of partnership field activities occur on the premises of our 275 co-investigator

partners located in 42 states. In the early 1990's, a consortium of Federal agencies, aquaculture producers, regulators, and scientists formed the Aquatic Animal Drug Approval Partnership (AADAP) with the goal of addressing the need for aquaculture drugs. The AADAP's mission is to coordinate activities to obtain approval for drugs needed in aquaculture and fisheries management programs. FY 2007 was a very good year since Schering-Plough Animal Health received approval for their antimicrobial for coldwater disease in all freshwater-reared salmonids. This is the first in-feed antibiotic approved for aquatic species in 20 years, and is the first drug to be approved under a new FDA category (Veterinary Feed Directive drugs). The AADAP's work over the past five years provided the entire effectiveness technical section for this animal drug application.

Fisheries Lake Survey Recognized

The American Fisheries Society annually recognizes projects that have been funded through the Fish and Wildlife Service Sport Fish Restoration program for their conservation successes. At its fall meeting the Society announced the winners for 2007. This year's winners include a robust mobile Fisheries Lake Survey system was developed and implemented to capture, store, analyze, and share current and historical physical, chemical, and biological information regarding habitat, water quality and fish population characteristics. This new system provides data entry while in the field and allows immediate reporting, saving thousands of hours of staff time (valued at more than \$200,000 annually), ensuring quality data, and easier sharing with the public.

Alaska Forum Focuses on Climate Change http://alaska.fws.gov/climate_change.htm

The Alaska Region of the Fish and Wildlife Service (FWS), in collaboration with U.S. Geological Survey (USGS), hosted the Alaska Forum on Climate Change in February 2007. The forum featured global climate researchers explaining climate change and the impacts on Alaska and the world. Numerous agencies and non-government organizations were invited to these science presentations, which were followed by agency specific workshops. Since the climate forum, the FWS has also hosted a follow-up roundtable discussion with state and federal agency leaders. This initial collaboration on climate change should reap benefits by aligning the agencies together to confront the impacts of global warming. The forum also identified the FWS and USGS in Alaska as agencies focusing on climate change.

Special Symposium Explores Offshore Renewable Energy

<http://www.omaef.org/omaedatabase/omaef07db.htm>

The significance of offshore renewable energy in supplementing the energy demands of society is undisputed. There are ongoing discussions worldwide on how various regulatory and technological challenges can be mitigated to promote the use of offshore renewable energy resources. Recognizing the need for collaboration on this important topic, Minerals Management Service (MMS) organized a special symposium to address offshore renewable energy as part of the 26th International Conference on Offshore Mechanics and Arctic Engineering held June 2007 in San Diego, California. The Symposium objective was to provide a forum for the presentation of information and views on regulatory and technology matters to enhance the exploitation of offshore renewable energy resources. So successful was the Symposium with over 200 attendees

at the nine technical sessions representing regulators, engineers and scientists from around the world, the Organizing Committee for the 2008 Conference has asked that the MMS organize a second special symposium addressing offshore renewable energy.

Efforts Focus On Endangered North Pacific Right Whales in the North Aleutian Basin

The highest priority recommendation resulting from the four-day Minerals Management Service (MMS) North Aleutian Basin planning workshop held November 28-December 1, 2006 in Anchorage, AK, was to undertake research on use of the Basin by the endangered north Pacific right whale. The MMS made within-year adjustments to free nearly \$4 million to fund an interagency agreement with the National Marine Fisheries Service (NMFS) to support a 4-year multi-disciplinary study. In a sincere spirit of cooperation, the NMFS committed an additional \$1.3 million in the form of sea time on the NOAA R/V Oscar Dyson and staff salaries to support the study. The study addresses topics in physical and biological oceanography as well as right whale behavior and demography.

Distribution of Shorebirds Studied at Monomoy

The Fish and Wildlife Service Monomoy National Wildlife Refuge, Chatham, Massachusetts, provides stopover habitat for tens of thousands of shorebirds representing 24 species during migration. However, no quantitative studies have assessed the abundance, spatial distribution, or habitat use of migratory shorebirds at the Refuge. The Refuge also hosts large numbers of visitors during peak shorebird use periods. Public use has not been quantitatively investigated, and Refuge staff is increasingly concerned about potential conflicts between migratory shorebirds and visitors. Research is being conducted under an agreement with University of Rhode Island, and during the 2007 field season data were collected nearly every day. The spatial distribution and abundance of shorebirds were documented through repeated surveys at 25 permanent survey sites. Over 700 surveys counted over 35,000 shorebirds. On most days surveys public use recorded nearly 1,000 visitors in the study area, and shorebird responses to public presence were measured in three different ways in 2007. Data analysis for this project will be completed in 2008.

Team Effort for Alligator Gar Restoration

www.nicholls.edu/bayosphere/workinggroup

Alligator gars are a long lived, river species that once inhabited the majority of waters comprising the Mississippi River Basin. From the early 1950s and lasting into the 1960s, this predator supported a thriving recreational fishery and was a highly sought after trophy fish throughout the Southeast. The Fish and Wildlife Service, through its Private John Allen National Fish Hatchery in Tupelo, Mississippi, began working with the State of Tennessee in 1997 to restore a self sustaining population of alligator gar throughout the Mississippi River drainage of western Tennessee. Through the support and leadership of the FWS, the much larger and diverse Alligator Gar Working Group was eventually formed. The Working Group is primarily composed of state and federal agency biologists, academics, fish farmers, members of the media, fishing guides, and members of the general public that are interested in the conservation and management of alligator

gar populations. In addition to the FWS, the Working Group includes Nichols University, the University of Southern Mississippi, Mississippi State University, the Bowfishing Association of America, all state fisheries agencies in the Lower Mississippi River Basin, and several non-government organizations. There are currently nine research projects underway by members of the Working Group to determine the current range and distribution of alligator gar, its preferred food and habitat, possible genetic variations between populations, seasonal movement patterns, propagation techniques, and sperm cryopreservation.

Sharing a Concern for Shorebirds

The Fish and Wildlife Service and the Apalachicola Riverkeeper, Inc. share a concern for the plight of Florida's shorebirds. This year, the two groups teamed up to organize a shorebird monitoring program to track the birds on all their major habitat or potential habitat in Franklin County, Florida. With the help of a volunteer shorebird network of 21 community members, the partners surveyed all species of shorebirds and many waterbirds, with a particular emphasis on the piping plover, a federally-listed species; the red knot, a candidate for Federal listing; and the southeastern snowy plover, an at-risk species. Several other partners jumped in to support the survey teams. The Florida State Parks provided a camp site and access to an ATV; Florida Division of Forestry provided storage for equipment; and St Vincent National Wildlife Refuge provided use of a boat and canoes. From October 2006 to May 2007, 21 volunteers spent 549 hours over 103 days assisting with the shorebird surveys and with boating transportation of other surveyors. Lands owned by The Nature Conservancy, Florida State Parks, St. Vincent Wildlife Refuge, and private citizens were included in the surveys. This collaborative effort provided valuable information on shorebirds to be used by Federal and State agencies to minimize impacts on these species from human activities. By involving the community, the shorebird monitoring program also built awareness of the importance of local lands to the future of these birds.

Avian Ecology Workshop Enhances Partnership in South Florida

The Fish and Wildlife Service's field stations in South Florida know that partnerships are the key to restoring and protecting the Florida Everglades and the many species of wildlife that make their homes in the magnificent "River of Grass." That awareness provided the impetus to team up with the South Florida Ecosystem Restoration Task Force to host the 2007 Avian Ecology Workshop at Florida International University in Miami. With facilitation by the Sustainable Resources Institute, members of the scientific community, resource managers, stakeholders, and policy-makers had the opportunity for independent review and assessment of key issues and new scientific information to assist with the restoration of the Cape Sable seaside sparrow, the snail kite, the wood stork, and roseate spoonbill, all species of concern. The objectives of the workshop were to share new information and findings; make an independent, objective evaluation of existing information and identify new information needs; obtain independent, science-based management recommendations and evaluations of management options, particularly those relating to Everglades restoration; and provide ideas for improving conservation strategies. This science-based effort will help develop approaches to foster recovery of

many different imperiled species and advance Everglades restoration in Everglades National Park, Big Cypress National Preserve, and Florida and Biscayne Bays.

The Surprising Cave Beetle Object of Cooperative Effort

The surprising cave beetle (*Pseudanophthalmus inexpectatus*) is a fairly small, eyeless, reddish-brown insect originally described from two caves in Mammoth Cave National Park in Kentucky. In September 2001, the Park and the Fish and Wildlife Service (FWS) entered into a 15-year Candidate Conservation Agreement for the surprising cave beetle to jointly implement conservation measures for beetle in the Park. In the process of evaluating other restoration efforts needed in this part of Mammoth Cave, the National Park Service (NPS) has completed a number of qualitative surveys for the species since 2002. Through this effort, the species was discovered in three new locations, significantly increasing the known range to five caves and conservative estimates are that the current range of the species is the entire cave habitat that lies beneath 20.3 square miles or 12,992 acres of the park. A more intense qualitative search effort has been funded by FWS and will assist the NPS in developing a comprehensive, long-term monitoring program for the species. As a result the FWS has determined that the species no longer meets their definition of a candidate and is proposing to remove this beetle from candidate status.

Partners Experiment with Soft Release of Colorado Pikeminnow

In an effort to ameliorate immediate downstream dispersal of stocked fish, the Fish and Wildlife Service (FWS) has begun experimenting with a variety of stocking techniques including acclimation of fishes in low velocity habitat prior to release. In April 2007, the FWS and partners experimented with a “soft” release of 1,666 age I (average length of seven inches) Colorado pikeminnow in New Mexico. These fish were acclimated in a low velocity side channel of the San Juan River for a period of 16 hours prior to release. This acclimation period was conducted to allow stocked fish to become accustomed to river water quality conditions, flow and to allow their blood chemistry to adjust to normal levels post transport. Preliminary recapture results suggest that short-term retentions in and around the stocking site were relatively high. Further studies using a variety of acclimation timing and localities will be performed in 2008 using different size classes of fish. These data will be used by managers to determine the most effective strategies to utilize during augmentation efforts for this federally protected fish. These efforts are supported by the San Juan River Recovery Implementation Program. The purpose of this program is to protect and recover endangered fishes in the San Juan River Basin while water development proceeds in compliance with all applicable Federal and State laws.

Communications Key in Rio Grande Silvery Minnow Rescue and Release

In FY 2007, the Fish and Wildlife Service’s New Mexico Fish and Wildlife Conservation Office assumed responsibility for continuation of the Rio Grande silvery minnow rescue and salvage project. This project serves to reduce the effects of the intermittent Middle Rio Grande flow on the Rio Grande silvery minnow. The operations consist of constant communication with two federal agencies, U. S. Bureau of Reclamation and the Army Corps of Engineers, and two non-federal entities, Middle Rio Grande Conservancy District and the City of Albuquerque. Water operations and demands within the Middle

Rio Grande are discussed on a daily basis often with benefits to the river and associated fish and wildlife resources including federally endangered Rio Grande silvery minnow and southwestern willow flycatcher.

Glen Canyon Dam Scoping Report Published

<http://www.usbr.gov/uc/rm/amp/index.html>

The Bureau of Reclamation announced on March 30, 2007, the publication of the Scoping Report for the Glen Canyon Dam Long-term Experimental Plan Environmental Impact Statement (EIS). The Scoping Report provides important public input which Reclamation and cooperating agencies will use in defining a broad range of alternatives for the long-term experimental plan. The proposed federal action is to develop and adopt a long-term experimental plan that will implement a structured, long-term program of experimentation (including dam operations, modifications to Glen Canyon Dam intake structures, and other non-flow management actions, such as removal of non-native fish species) in the Colorado River below Glen Canyon Dam to improve and protect important downstream resources.

The development of this EIS continues efforts of the Glen Canyon Dam Adaptive Management Program created to protect resources downstream of Glen Canyon Dam, including the Grand Canyon, through adaptive management and scientific experimentation. The Bureau of Reclamation's Glen Canyon Dam Adaptive Management Program was implemented as a result of the 1996 Record of Decision for the Operation of Glen Canyon Dam Final Environmental Impact Statement (FEIS) and to comply with consultation requirements of the Grand Canyon Protection Act of 1992 (PL 102-575). The Program consists of 25 agencies, Native American tribes and organizations representing a diverse range of values and ideas on how to best operate Glen Canyon Dam, a major water delivery and hydroelectric generation facility on the Colorado River. This diverse group has recommended major experiments to better understand the relationship between dam operations and downstream aquatic and riparian resources.

Lower Colorado Salinity Assessment Network Joins Agencies

The Bureau of Reclamation works in partnership with several lower Colorado action agencies that comprise the Lower Colorado Salinity Assessment Network. Their goal is to improve the knowledge of soil salinity management. In addition to Reclamation, the network is composed of: USDA Agricultural Research Service Salinity Lab – Riverside, California, Coachella Valley Resource Conservation District, Imperial Irrigation District, University of Arizona – Yuma Ag Center, and Soil & Water West, Incorporated. Recent studies and field assessments have helped water users to more efficiently use water for salinity control. This past year, 50 field assessments and two studies were completed. One study was on the impact of salinity on lettuce yield in the Yuma and South Gila Valleys. The result showed the average yield loss was 905 pounds per acre. That information will be shared with growers, and identifies the economic loss that is estimated to be \$59 million annually. The level of soil salinity where yield losses begin was found to be lower than expected from previous studies. About 72% of the losses were due to excessive leaching and 38% were due to inadequate leaching. A portion of

the losses are unavoidable due to the salinity in the Colorado River and a portion is avoidable through improved irrigation efficiency.

Sea-run Brook Trout Subject of Joint Effort at Acadia National Park

Small streams on the northeast Atlantic coast historically have represented important habitat for sea-run brook trout. Specifically in Maine, historic records indicate that streams on Mount Desert Island (part of Acadia National Park) have contained significant sea-run brook trout populations. In spite of being sought after by anglers, the current status of anadromous populations is largely unknown for most Maine waters. Spurred on by the partners of the Eastern Brook Trout Joint Venture, the State of Maine's natural resource management agencies and federal resource management agencies have become increasingly concerned over the presumed general trend of population declines for coastal brook trout.

Since 2006, the U.S. Geological Survey, University of Maine, National Park Service, and Maine Department of Inland Fish and Wildlife have worked jointly to develop and implement an exploratory research program that aims to fill knowledge gaps of sea-run brook trout life history. A key component to this project is the ability to identify which brook trout are moving between fresh- and seawater and understand the time frame for these movements. This study continues with exploratory research and the purchase equipment to continuously monitor brook trout movements between fresh- and seawater.

Huron-Erie Corridor Initiative Celebrates Progress

In 2007 the Huron-Erie Corridor Initiative celebrated progress toward the ecological recovery of the Detroit River and the 35th Anniversary of the Clean Water Act and Great Lakes Water Quality Agreement, including a symbolic release of young lake whitefish into the Detroit River. The event took place in the Fish and Wildlife Service Detroit River International Wildlife Refuge as a part of National Wildlife Refuge Week. Participants included members of Congress, Canadian dignitaries, local high school students, public supporters, and Huron-Erie Corridor partners.

Resource managers, scientists, including the U.S. Geological Survey, industry, universities, and other stakeholders are working together to restore fish spawning and nursery habitat and re-establish a heritage fishery in the Lake Huron-Lake Erie corridor. Conflicting uses of corridor waters for waste disposal, water withdrawals, shoreline development, shipping, recreation, and fishing have resulted in a number of environmental changes to this system. Natural resource managers need quantitative scientific information to make informed decisions for managing and restoring native aquatic species and habitats in the corridor. Implemented in 2005, the purpose of the Huron-Erie Corridor Initiative is to provide scientific information to assist resource managers in making decisions concerning restoration of native aquatic species and their habitats in the corridor.

Science Supports Recovery of Pallid Sturgeon

Native to the Missouri and the middle and lower Mississippi Rivers, the pallid sturgeon (*Scaphirhynchus albus*) was listed as a federally endangered species in 1990 due in part to

habitat and hydrologic alterations. While the ecological changes are understood in general, more scientific understanding is needed to guide river rehabilitation and management for pallid sturgeon recovery. In 2004, the U.S. Geological Survey (USGS) began research funded by the U.S. Army Corps of Engineers to determine the ecological factors affecting the reproduction and survival of Missouri River pallid sturgeon and shovelnose sturgeon (*Scaphirhynchus platorhynchus*), used as a surrogate species for the rare pallid. The USGS collaborated with the Fish and Wildlife Service, Nebraska Game and Parks Commission, South Dakota Game, Fish and Parks to conduct multi-disciplinary research into fish behavior, physiology, habitat use and availability, and population modeling of all life stages.

This research was published in 2007 as *A Conceptual Life-History Model for Pallid and Shovelnose Sturgeon*. The report introduces a conceptual life-history model of the factors that affect reproduction, growth, and survival of shovelnose and pallid sturgeons. The conceptual model was developed to organize the understanding about the complex life history of *Scaphirhynchus* sturgeons. It was designed to be used for communication, planning, and to provide the structure for a population-forecasting model.

Partnership Focuses on California Channel Islands Plants

The California Channel Islands span an ecological gradient off the coast of southern California where cold waters from the north mix with warmer waters from the south. Each of the eight Channel Islands developed unique floras as colonizing plants adapted to each new island home. The northern five islands comprise Channel Islands National Park, authorized for the preservation of their unique ecosystems. The park islands support 75 endemic plant taxa, 14 of which are listed as threatened or endangered. The challenge before the National Park Service and its partners is to recover the native ecosystems and the endemic plants they support. Now that feral animals are nearly eliminated from the islands the U.S. Geological Survey (USGS) research has focused on the listed plant groups for the last decade, searching for populations, sampling their habitats, monitoring demography and conducting recovery experiments.

USGS and Reclamation Team to Target Invasive Species in Water Diversion

U.S. Geological Survey scientists provided analytical support to the Dakotas Office of the Bureau of Reclamation in conducting risk assessments of potentially invasive species that may occur as a result of the proposed diversion of water from the Missouri River to Fargo, North Dakota, which is located on the Red River of the North, within in the Hudson Bay watershed. A number of species of concern were identified with the help of stakeholders from both watersheds.

Agencies Join in Ecotoxicological Studies on Coal-Bed Waters

Water collected during drilling for coal-bed natural gas is often released as a waste product. Sodium bicarbonate, one constituent of the wastewater can reach concentrations of 1,000 mg/L. Neither the U.S.EPA nor the State of Montana has established a sodium bicarbonate water quality criterion or standard for aquatic life. The USGS, Reclamation, U.S. EPA and the states of Wyoming, Montana, and Idaho are collaborating on an investigation of potential toxic effects of sodium bicarbonate in the Tongue and Powder River watersheds of Montana and Wyoming.

Assessing Coho Salmon off Northern California

The USGS Redwood Field Station is working with the National Park Service, California Department of Fish and Game and the Redwood Creek Watershed Group to document trends in stream temperature in the Redwood Creek basin, north coastal California. Coho salmon, (*Oncorhynchus kisutch*) are federally listed as threatened in north coastal California, and they are susceptible to warm stream temperatures.

Basin and Range Carbonate Aquifer System Study Addresses Water Demands

Water demands from the lower Colorado River system are increasing with the rapidly growing population of the southwestern United States. To decrease dependence on this over allocated surface-water resource, water purveyors in southern Nevada have proposed to utilize the ground-water resources of rural basins in eastern and central Nevada. Municipal, land management, and regulatory agencies have expressed concerns about potential impacts from increased ground-water pumping on local and regional water quantity and quality, with particular concern on water-rights issues and on the future availability of water to support springflow and native vegetation. In response to these concerns, the Basin and Range carbonate-rock aquifer system (BARCAS) study was initiated through Federal legislation. Results of the study were released for public comment in the spring of 2007 and will be summarized in a USGS Scientific Investigations Report (SIR), to be submitted to Congress by December 2007.

Lingering Effects of Exxon Valdez Oil Spill

A once valuable fishery for Pacific herring in Prince William Sound has all but disappeared following the Exxon Valdez oil spill. Through the Exxon Valdez Trust Council, the USGS is working with the Alaska Department of Fish and Game to ascertain the causes, thought to be infectious and parasitic diseases in the herring population. This approach will provide the basic epidemiological information necessary to develop and validate adaptive management techniques intended to mitigate the effects of future herring disease outbreaks in Prince William Sound.

Fish Pathogens Identified in Shenandoah National Park

The USGS assisted the National Park Service in its management of wild trout populations in Shenandoah National Park by integrating knowledge of the presence and occurrence of fish pathogens with present and past stocking practices. The initial results seem to validate the National Park Service's fish stocking policies with regards to concerns over the introductions of exotic pathogens with stocked fish in parks. These investigations will continue in 2008.

Quagga Mussel Infestation Prevention

In January 2007, quagga mussels, a type of invasive mussel related to zebra mussels were detected in Lakes Mead, Mohave, and Havasu. They have almost certainly spread downstream of National Park Service (NPS) sites on the Colorado River. Quagga mussels may significantly alter aquatic ecosystems and are often spread by water-based recreation. Quagga mussel infestation may have significant economic impact to park sites as well as to non-NPS sites. The NPS is committed to preventing the spread, slowing the

rate of infestation, and determining treatment options to minimize the impacts of this species introduction.

The Quagga Response Team met in April. The team members included representatives from U.S. Geological Survey, U.S. Coast Guard, Fish and Wildlife Service, Western Association Fish and Wildlife Agencies, and NPS. They obtained technical input from experts in quagga management, boat design and inspection, applicable law and regulations, concessions, and outreach and education. The team completed a guidance document which has also undergone extensive review by other agencies. The guidance is now being implemented by parks and state partners.

Park Flight Migratory Bird Program Has International Focus

The Park Flight Migratory Bird Program works to protect shared bird species and their habitats in U.S., Canadian, Latin American and Caribbean national parks and protected areas by implementing bird monitoring and education projects and creating opportunities for technical exchange and cooperation. Park Flight provides service-wide leadership in migratory bird conservation and is the only national level migratory bird program in the National Park Service (NPS), as well as being an internationally recognized program.

Working with local partners, NPS International Volunteers in Parks are an important component of the Park Flight Migratory Bird Program's technical exchange efforts. During FY 2007, 15 biologists from six Latin American countries and one biologist from Canada assisted with Park Flight bird monitoring and education projects in ten National Park Service units, contributing a total of 6,761 hours valued at \$126,904. These interns play a special role in reaching underserved audiences and achieving cultural exchange, through connecting Latin American biologists with Spanish-speaking children in National Park Service units and adjacent communities. Shared migratory birds are a particularly effective tool for engaging these audiences.

Strengthening Partnerships in Conservation

Southeastern U.S. Water Discussions

The Secretary of the Interior has initiated meetings with the Governors of Florida, Alabama, and Georgia to help resolve water issues associated with the drought affecting the southeastern U.S. The states have made several previous efforts to resolve the allocation issue, but the most recent effort led by the Administration is grounded in an effort to balance and address the necessary operations of the Army Corps of Engineers projects - as well as compliance with the Endangered Species Act - in the context of a drought in the Southeast United States of historical proportions.

Initiative Restores Coal-mined Lands in Appalachia <http://arri.osmre.gov/>

The goal of the Appalachian Regional Reforestation Initiative is to restore coal-mined lands to the forests that existed before mining. To accomplish that goal, the Initiative promotes a scientifically proven, five step process, called the Forestry Reclamation Approach, to select tree species and prepare coal-mined land for planting trees. The approach challenges the conventional method of mine reclamation that results in a

smooth, heavily compacted, rock free land surface with a thick cover of grasses – conditions that prevent trees from growing properly and can kill them. Lands prepared using the Forestry Reclamation Approach will have reduced compaction of the land surface allowing tree roots to grow and a reduced vegetative ground cover that lessens competition with trees for sunlight, water and nutrients.

In 2007, the Office of Surface Mining Reclamation and Enforcement (OSM) and the Appalachian Regional Reforestation Initiative sponsored the first annual mined land reforestation conference in Abingdon, Virginia, that was attended by over 200 people interested in restoring forests on mined land. The Initiative also sponsored Arbor Day events in States throughout the Appalachian Region during which school children and representatives from conservation groups, industry, and government agencies planted trees on reclaimed mine sites and learned about the Forestry Reclamation Approach. The OSM has funded cooperative agreements to promote reforestation research to further the science behind the forest reclamation. In addition, Initiative team members have promoted reforestation through various workshops, meetings, presentations, field trips, a 30-minute promotional video, and a television commercial which ran in the southeastern states highlighting the Initiative's partnerships.

West Virginia Watershed Network Targets Acid Mine Drainage

<http://www.wvca.us/wvwn/>

The West Virginia Watershed Network, in existence for ten years, is a partnership composed of State and federal agencies, and nonprofit organizations that is committed to providing resources for watershed management in West Virginia. The Office of Surface Mining Reclamation and Enforcement (OSM) has been a participant on some of the Network's project teams. The mission of the Network is to support efforts to empower local residents to make decisions for sustainable management of their water resources.

During the past year a primary focus of the West Virginia Watershed Network project teams has been the clean up of acid mine drainage from old and abandoned coal mines. One of the Network's undertakings was a tool to assist in the clean up of streams polluted by mines. The Network determined that a stream disturbance permit booklet was necessary because of a requirement imposed by OSM in its Watershed Cooperative Agreement Program. This program, whose purpose is to provide financial assistance to watershed groups for cleaning up streams polluted by old and abandoned coal mines, requires the groups to obtain all necessary permits before working in or around streams and wetlands. The Network recognized that the watershed groups, non-profit organizations, governmental agencies, and others were confused about the types of permits needed and how to apply for them. Consequently, in March 2007, the West Virginia Watershed Network sponsored a statewide forum to address this problem, with representatives from appropriate federal, state, and local governmental agencies giving presentations on the different permitting processes. Forum participants agreed a booklet that briefly described all the various stream disturbance permits would be helpful. The booklet was completed in September 2007 and can be viewed at www.wvca.us/wvwn/wvwn_publications.cfm.

Coal Combustion By-Products Steering Committee Enhances Recycling

<http://www.mcrcc.osmre.gov/ccb/>

The Office of Surface Mining Reclamation and Enforcement (OSM) has been very successful in bringing together many divergent interest groups associated with coal combustion by-products in a way that enhances the recycling of these by-products in an environmentally acceptable manner and also enhances environmental protection where these by-products are used at mines. During fiscal year 2007, the OSM led the Coal Combustion By-Products Steering Committee, organized, and conducted a forum which focused on: (1) the increasing amount of Flue Gas Desulphurization By-Product that is being generated due to increasing use of scrubbers; (2) efforts to improve the predictability of leachate protocols for assessment of potential hydrologic impacts; (3) a peer review of the National Academy of Science report on coal combustion by-products and mining; and (4) the impact of the Academy's report and its implications for rulemaking by EPA. The Steering Committee is currently working on a new national technical forum that will focus on the impacts of OSM rulemaking, current research efforts, and impacts of changing U.S. energy policies.

National Fish Passage Program Works with Local Communities

In 1999, the Fish and Wildlife Service (FWS) initiated the National Fish Passage Program to address the problem of fish barriers on a national level, working with local communities and partner agencies to restore natural flows and fish migration. The program uses a voluntary, non-regulatory approach to re-open historic habitat in the Nation's streams and rivers through inventory, prioritization, implementation, and monitoring of fish passage barriers and projects. In FY 2007, the FWS, along with its partners in 31 states, spent a combined \$15 million to remove or bypass 90 barriers to fish passage. Through these efforts, the FWS is helping to reopen almost 1,000 miles of stream and river and 1,232 acres of wetlands in previously inaccessible habitat that will restore native fish and other aquatic species to self-sustaining levels. With an appropriated \$5.0 million dedicated toward fish passage, the FWS Fisheries Program played a key role in addressing the issue of barriers at the local, regional, and national level through its leadership in strategic habitat conservation.

In 2007, the National Fish Habitat Board, a group of the nation's leading authorities on aquatic conservation, officially recognized the first four "National Fish Habitat Partnerships" as part of a bold new initiative to reverse persistent declines in our nation's rivers, streams and coastal areas. Following the successful "Joint Venture" model of the North American Waterfowl Management Plan, which changed the face of wetland conservation in the 1980s, these partnerships are self-forming, self-determining coalitions focused on consensus building in the conservation community to direct the host of tools, such as the National Fish Passage Program, toward more strategic conservation efforts. As well, twelve other partnerships began to organize.

Midwest Partnership Recognized

In 2007, the Driftless Area Restoration Effort (DARE) was one of four partnerships recognized in full by the *National Fish Habitat Action Plan* Board. This is a partnership to protect, enhance, and restore riparian and aquatic habitats throughout a 24,000 square-

mile area encompassing portions of Minnesota, Wisconsin, Iowa, and Illinois that was bypassed by the last continental glacier. The absence of glacial drift makes this a truly unique geographical region located at the western-most extent of the historic range of brook trout. Since 2005, DARE alone has leveraged \$22 in partner contributions with every \$1 in *National Fish Habitat Action Plan* funds to restore 15.88 miles of stream. These projects help reduce sediment loads, decrease water temperatures, and in-stream habitat for fish.

Building the Atlantic Coast Fish Habitat Partnership

The FWS proposed that the Atlantic States Marine Fisheries Commission form a fish habitat partnership under the National Fish Habitat Action Plan. With its existing infrastructure, administrative processes, and history of addressing meaningful coastal habitat actions and issues, the Commission concurred and charged its Habitat Committee to develop a pilot partnership. Correspondence focused on reversing habitat degradation and persistent declines in Atlantic slope coastal drainage systems to provide critical habitats for diadromous and estuarine-dependent fish species was submitted to the National Fish Habitat Board to develop an Atlantic Coastal Fish Habitat Partnership: the partnership was granted “candidate” status. Over 80 partners and stakeholders attended a coast-wide workshop to establish focal species and habitats, regional units, and administration for the partnership. The FWS continues to serve as a catalyst for partnership, and staff members are proactive participants on the partnership’s Steering Committee, Science and Data Work Group, and Communications Work Group that have been developing governance documents, constructing a species-habitat matrix, and identifying key communication tools for development.

Advancing the National Fish Habitat Action Plan

With oversight by the National Fish Habitat Board, the National Fish Habitat Action Plan (www.fishhabitat.org) works through regional-scale Fish Habitat Partnerships to set strategic priorities; implement projects to protect, restore, and enhance habitats; and measure and communicate results. In FY 2007, the FWS funded 24 Action Plan projects in 18 States, based on strategic priorities of the Fish Habitat Partnerships, with a partner cost-share exceeding 3:1. With \$2.985 million dedicated toward the Action Plan, the FWS Fisheries Program played a leadership role at national, regional, and local scales. Other partners also contributed funding for projects, such as the National Fish and Wildlife Foundation and the mine reclamation program of the Office of Surface Mining Reclamation and Enforcement. By 2010, partners in the Action Plan will produce the first five-year report on the status of fish habitats across the United States. This work was initiated in FY 2007 by a team at Michigan State University, with financial support from FWS and U.S. Geological Survey.

Restoring the California Condor

After new science further confirmed lead from spent ammunition was poisoning condors and posing a significant threat to condor recovery, the Tejon Ranch Company, California’s largest private landowner, announced in February 2007 its voluntary decision to discontinue the use of lead ammunition on its 270,000 acre ranch in the heart

of condor country in Kern County. More than 1,800 hunters come to the ranch each year to hunt deer, elk, antelope, wild pigs, wild turkey and other game.

Three other ammunition-related actions will contribute to condor survival. Two military installations—Fort Hunter Liggett in southern Monterey County, and Camp Roberts in San Luis Obispo County--also worked with the Condor Recovery Program to voluntarily enact lead-free ammunition requirements for their respective hunting programs. The Fish and Wildlife Service (FWS) produced a 16-minute video to inform and educate hunters and the public about the effects of lead ammunition on condor health. The video was distributed to partners for use in outreach and hunter education programs. In October 2007, California enacted legislation requiring the use of non-lead ammunition within the current range of the condor.

A delegation from the U.S. Condor Recovery Team transferred a pair of condors to the Chapultepec Zoo, Mexico City, in May. Although Mexico has been a partner in the recovery program since 2002, the transfer of California condors to the zoo marks the first documented presence of California condor in any of Mexico's zoos. Future plans call for the zoo to breed and raise condors for release in Baja California. Only three facilities in the world -- Chapultepec Zoo, San Diego Zoo and Peregrine Fund facility -- have California condors for viewing by the public.

The California condor was listed as an endangered species in 1967. Managed by FWS, the California Condor Recovery Program is built upon a foundation of private and public partnerships. From a low of 23 birds worldwide in 1982, the population has grown to 301 individuals, primarily the result of captive breeding programs. Today 154 birds fly free in North America scattered across California, Arizona and Baja Mexico.

Caddo Lake Ramsar Promotion

This federal assistance project continues and expands work of the Caddo Lake Institute directly related to the promotion and advancement of the Ramsar Convention on Wetlands. This work has been ongoing since 2001, using funding from the Fish and Wildlife Service complemented by additional private funding. Goals and activities include promotion of the designation of Caddo Lake as a wetland of international importance, and exploring cooperative activities with wetlands in Texas and Louisiana, and other U.S. States that border Mexico. The grant also supports linkages and exchanges among U.S. Ramsar sites (currently a total of 22) and potential new Ramsar sites in the U.S. and in Latin America. In addition, the grant supports development of common signage, coordination of meetings and communications with Ramsar site managers, and assistance for communication, education and public awareness programs on wetlands and their values. This collaborative effort supports the Ramsar Convention on Wetlands, of which the United States is a signing party, and will assist the U.S. National Ramsar Committee meet its 2007 strategic goals based on priorities set by the Committee. For example in November 2007, Caddo Lake Institute hosted a meeting of U.S. Ramsar site representatives to discuss areas of collaboration, resulting in a task force that will explore how the Committee can address threats to the ecological character of U.S. Ramsar sites.

Signing of Calumet EcoTox Protocol

Signed on June 9, 2007, the Ecotox Protocol is a guidance document that will be used to help identify areas that may require remediation of pollutants and determine cleanup levels that are protective of wildlife. The protocol provides a decision-making framework for contaminant remediation based upon land restoration principles. It will be an important tool for remediation and restoration of important migratory bird habitat at the southern end of Lake Michigan. The protocol is the latest development in a multi-agency effort to remediate and restore natural areas in the Lake Calumet Region, an area of approximately 12,000 acres on Chicago's far southeast side. The area has been subject to 120 years of intensive industrial use and waste disposal that has altered the landscape and polluted soil, sediment, surface water and groundwater.

Despite the industrial legacy, the area still has a large concentration of marshes that serve as important breeding and migratory stopover habitat for wetland birds. The City of Chicago's land use plan for this region, developed in partnership with the Illinois Department of Natural Resources, calls for approximately 4,000 acres to become part of the Calumet Open Space Reserve and managed for conservation of natural resources. The Fish and Wildlife Service recently provided significant support for this plan in the form of federal assistance grants for the acquisition and restoration of Hegewisch Marsh. In order to implement the plan, it will be important to determine levels of pollutants that may require remediation to prevent injury to wildlife that utilize the reserve.

Land Exchange for Alaska Refuges

In 2007, the Fish and Wildlife Service (FWS) made significant progress towards completing the largest, most complex land exchange ever proposed within an Alaska wildlife refuge as the Draft Environmental Impact Statement (DEIS) for the exchange of several hundred thousand acres of lands between the Yukon Flats National Wildlife Refuge and Doyon, Inc., a Native corporation, moved towards completion. If approved, the Doyon--Yukon Flats National Wildlife Refuge land exchange will involve a total of more than 200,000 acres of land and potential production payments of millions of dollars to the FWS while enabling an Alaska Native Corporation to achieve increased economic success for shareholders.

Salmon Habitat Protection with The Conservation Fund

Fish and Wildlife Service continued to work in collaboration with The Conservation Fund in land acquisition and habitat protection in southwestern Alaska. The Fund has received donated funds primarily for protection of salmon spawning and rearing habitat. They have agreed to contribute to FWS land acquisition funding with a 20% match for each land acquisition dollar spent to acquire any property in the Yukon Delta, Togiak, Alaska Peninsula, or Becharof National Wildlife Refuges that protects salmon habitat. This contribution may be 20% of the purchase price of a single tract, or may accumulate to purchase entire parcels. The Fund has also contacted numerous small property owners to locate owners of salmon habitat who might be interested in selling their property to the Service.

Louisiana Sand Management Working Group Improves Communications

The Louisiana Sand Management Working Group, formed in 2003, facilitates the efficient management, in the most cost-effective and environmentally sound manner, of the use of sand offshore Louisiana for barrier island rebuilding, an effort which is estimated to require upwards of 61 million cubic yards of Federal Outer Continental Shelf sand. The group is composed of individuals representing Federal (including the Minerals Management Service) and State agencies, academic institutions, environmental organizations, environmental/oceanographic consulting firms, coastal engineering and dredging companies. In addition to improving communication among the various entities, the Louisiana Department of Natural Resources has taken the lead in an effort to create a database on sand sources and inventory of projected sand needs which will improve their ability to develop guidelines for sand resource allocation.

Protecting and Managing 28,000 Acres of Delmarva

The Eastern Shore of Virginia National Wildlife Refuge Comprehensive Conservation Plan identified 6,030 additional acres of critical migratory bird habitat in need of protection. Within this boundary, two priority farms, totaling 578 acres, immediately became available. These were among the most threatened properties with a combined value totaling nearly \$12.25 million. At the encouragement of the Fish and Wildlife Service (FWS), The Nature Conservancy stepped in to secure their interim protection. The FWS then convened a meeting with key conservation stakeholders on the Delmarva Peninsula to develop a strategy for the permanent protection and stewardship of these tracts. Along with the Conservancy, area public agencies including those from Virginia participated.

The partnership concluded that the FWS should undertake the protection of the 82-acre Chesapeake Bayfront farm, and the southern 210 acres of the oceanfront farm, closest to the refuge. In FY 2007, the FWS acquired 60 acres of the bayfront 82-acre farm. The FWS hopes to close on the final 22-acres in FY 2008. The entire 210-acre oceanfront tract was also acquired in FY 2007. Virginia recently completed the purchase of the remaining 286 acres of that property, by leveraging state conservation bonds grant funds. These key properties are protected and managed via an overarching Memorandum of Understanding among the partners. As a result, the partners manage more than 28,000 acres (fee and easement) at the southern tip of the Delmarva Peninsula cooperatively, sharing personnel, equipment, and research capabilities.

Rural Area Conservation and Economic Restoration (RACER) Races On

In late 2005, Franklin County, Virginia, approached the Fish and Wildlife Service (FWS) for assistance in removing a defunct power dam to establish a blueway along the Pigg River near the Town of Rocky Mount and improve fishing opportunities. The FWS staff worked with the Ward Burton Wildlife Foundation to develop a conceptual proposal that framed the potential for a watershed-wide conservation partnership that would accomplish all of the locality's goals as well as assist in recovery of the federally endangered Roanoke logperch. In 2006, the FWS signed an agreement to establish the nine-member RACER partnership, focused on achieving conservation projects that also deliver economic benefits to the Upper Roanoke River Watershed of western Virginia.

By Fiscal Year 2007, RACER had established a Steering Committee, adopted a financial management agreement, and project approval guidelines. The FWS has developed the sediment sampling protocol necessary to determine contaminant risks from removing the dam and consulted with the Virginia Department of Historic Resources to mitigate cultural resource concerns. RACER has secured over one million dollars toward conservation projects, most of which will support removal of the Town of Rocky Mount's Power Dam, slated for deconstruction in 2008.

Maine Atlantic Salmon Conservation Fund Marks Successes

The Maine Atlantic Salmon Conservation Fund was established by Maine's Congressional delegation to support Atlantic salmon recovery in Maine rivers with remnant or historic populations of Atlantic salmon. The National Fish and Wildlife Foundation and the Fish and Wildlife Service have jointly coordinated the program since 2000. In 2007, funding helped to build organizational capacity of local groups by supporting watershed coordinators, technical staff to identify restoration priorities, funding information exchanges, and conducting outreach. Two salmon habitat protection grants are helping permanently protect habitat in the Sheepscot and Narraguagus River watersheds. Funding was provided to 15 fish passage improvement projects that will aid salmon and other diadromous fish species. Support was also provided to a project to restore complexity to Atlantic salmon habitat. Also funding is supporting the Greenland Conservation Agreement which helps local fishermen develop alternatives to fishing for Atlantic salmon.

Planning for Bird Conservation on the Atlantic Coast

http://www.acjv.org/bird_conservation_regions.htm

The Fish and Wildlife Service (FWS) staff for the Atlantic Coast Joint Venture has worked with numerous state, federal, and non-government organization partners for several years to assess priority conservation actions for Bird Conservation Regions in the Joint Venture area. Plans are being written for each region to determine the highest priority bird species and their habitat needs in this region and delineate focus areas to help guide high priority conservation activities. Each of the plans also identifies population and habitat goals, if applicable, to sustain populations of priority species. Other actions in the plans include prioritization of research and monitoring needs and the identification of implementation strategies to deliver conservation actions that restore and sustain native bird populations in the region. Central to each plan is the coordination necessary to implement actions, build partnerships, and communicate among local, state, provincial, and international stakeholders.

During Fiscal Year 2007, two Bird Conservation Region Plans were completed by FWS biologists and approved by the Board for the Atlantic Coast Joint Venture. The Lower Great Lakes – St. Lawrence Plain plan covers the lake plains of Lakes Erie and Ontario, and the St. Lawrence, Mohawk and Hudson Valleys in four states and two Canadian provinces. The New England – Mid-Atlantic plan covers coastal regions from southern Maine to southeast Virginia. Partners in these areas are now using the results to prioritize and organize conservation efforts.

Northwest Atlantic Marine Birds Conservation Cooperative Sets Priorities

<http://www.acjv.org/marinebirds.htm>

Comprehensive conservation planning by the Fish and Wildlife Service, States, and multiple partners indicate that not nearly enough is known about the Atlantic seabirds plying near- and offshore waters, and their vulnerability to a number of ongoing and emerging threats. Data on the pelagic distribution and abundance of seabirds are critical for understanding their basic ecology and role in marine ecosystems, monitoring population trends, assessing actual or potential impacts from oil spills, fishery by-catch, offshore development, identifying critical marine habitats, and educating the public about marine conservation issues. These species are also key indicators of global climate change where changing ocean currents and prey distribution can dramatically change breeding success, distribution, and abundance.

In January 2007, an organizing entity – the Atlantic Marine Bird Conservation Cooperative – emerged and committed to using best information to prioritize research and management needs and to engage resource agencies and partners in and outside its membership to develop initiatives and outreach products to address these needs. Partners include other federal agencies including National Oceanic and Atmospheric Administration, U.S. Geological Survey, Canadian Wildlife Service, and multiple university and other partners such as the American Bird Conservancy, Manomet Center for Conservation Sciences, and The Nature Conservancy. Funding was secured for monitoring marine birds on NOAA ships, hosting an oil spill response workshop, and aerial surveys for high priority nearshore species along the mid-Atlantic.

Fighting Fire at Okefenokee

Severe drought and all-time low water levels in the “land of the trembling earth” created the ideal conditions for a wildfire at Okefenokee Swamp that was so large it was named the Georgia Bay Wildfire Complex. The fire started in April 16, 2007, as a result of a downed power line in one location and a lightning strike in another. Before it was contained and brought under control in early November, the fire had burned more than 600,000 acres in Florida and Georgia, including more than 80 percent of the Fish and Wildlife Service (FWS) Okefenokee National Wildlife Refuge. This makes it one of the largest fires in modern history in the lower 48 states and the largest on record for the southeastern United States.

Once a fire had begun, the key was to mount a coordinated effort to contain the fire in the swamp and to protect adjacent private lands. When that strategy failed with the Georgia Bay Wildfire Complex, an exceptional partnership effort was required. The Greater Okefenokee Association of Landowners (GOAL), a unique public/private partnership developed in 1995 to manage, protect and promote forest resources in and around the Okefenokee Swamp, the refuge and the Georgia and Florida wildfire suppression agencies were well prepared to carry out the job of fighting this huge fire. GOAL is an example of cooperation among federal, State and local resources in fire management. The Georgia Forestry Commission, the Florida Division of Forestry, the U.S. Forest Service, and the FWS’s own Incident Management Team are among the GOAL members who worked together on the Georgia Bay Wildfire Complex to ensure that there were no

fatalities or significant accidents or injuries to members of the public or to firefighters. Their cooperative efforts were credited for stopping the fires before they could reach urban areas to the north and south thereby preventing tens of millions of private property damage. Property losses included more than 70,000 acres of private timberlands around the Refuge and eighteen residences, as well as Refuge losses valued at \$550,000.

Ensuring the Future of the Puerto Rican Parrot

The state-of-the-art Iguaca Aviary, located in El Yunque National Forest, was dedicated in April 2007, with representatives of the 27 donor organizations on hand to celebrate the event with Department of the Interior and Fish and Wildlife Service (FWS) leaders. The new facility offers many advantages, including more space for outdoor cages and a quarantine room that will increase the FWS's capacity to exchange birds with the Puerto Rico Department of Natural and Environmental Resources.

The Puerto Rican parrot is one of the world's most endangered birds, with only about 20 to 25 birds left in the wild. The FWS staff has worked with the U.S. Forest Service and the Puerto Rico Department of Natural and Environmental Resources for more than 30 years on the parrot's recovery. Their goal is to have self-sustaining populations of the iconic Puerto Rican parrot occupying forestlands throughout the island to ensure the bird's survival. To accomplish this goal, a new aviary was needed to captively raise healthy parrots for release into the wild.

In 2004, Congress appropriated \$1.7 million of the \$2.4 million needed to build the aviary. The rest was to be raised from private donations. Working through the National Fish and Wildlife Foundation, developers, builders, bankers, business owners, and private citizens came together as a nonprofit organization and raised the funds needed to complete construction. This was a "first" in Puerto Rico's conservation history!

Platte River Agreement Signed

The Platte River Basin has seen more than two decades of conflict over water use and endangered species. After 12 years of negotiations and required environmental reviews, the three Governors and the Secretary of the Interior signed the Platte River Recovery Implementation Program Agreement in late 2006. The Program was initiated on January 1, 2007. The initiative is based on significant scientific research and analysis, including a review and endorsement of species' habitat and water needs by the National Research Council of the National Academy of Science.

The Platte River Recovery Implementation Program is a basin-wide effort in the States of Nebraska, Colorado, and Wyoming to improve habitat for four threatened and endangered species that utilize the Platte River in Nebraska. The Program is a collaborative effort among Fish and Wildlife Service (FWS), Bureau of Reclamation, the States, water user groups and environmental groups, to cooperatively address the needs of endangered species (whooping crane, interior least tern, and pallid sturgeon) and ensure that current and future uses of basin water can continue. Three primary goals are to improve habitat for the target species using an adaptive management approach by the following methods:

- Reducing shortages to the FWS's recommended target flows in the central Platte River by 130,000 to 150,000 acre-feet on an average annual basis, primarily by retiming river flows to improve habitat conditions in the spring, summer, and early fall;
- Leasing or acquiring land interests from willing sellers and restoring habitat, focusing primarily on restoration of wet meadow areas and areas of wide unvegetated river channel; and
- Research and monitoring of pallid sturgeon habitat needs, and testing whether managing flow in the central Platte River also improves habitat for the pallid sturgeon in the lower Platte River.

Tulare Planning Moves Forward <http://tularebasinwildlifepartners.org/tbwp/>

As a result of information in its three completed plans, the Tulare Lake Basin Working Group approved 12 high priority landscape scale conservation project sites in October 2007. These sites were proposed by the Tulare Basin Wildlife Partners (TBWP), the "action arm" of the Working Group; the Fish and Wildlife Service and the Bureaus of Land Management and Reclamation are all partners. The TBWP expects to complete the Tulare Basin Wildlife-Corridor Conservation Plan, the fourth and final plan during 2008, covering 24 wildlife and riparian corridors connecting to the three completed plan areas.

Under a grant, the TBWP also prepared site recommendations for a conservation bank in Tulare County and are proceeding to obtain funding for surveys and reports that will include similar recommendations in Fresno, Kings, and Kern counties -- in 2008. And as well the TBWP has completed an Integrated Outreach and Fund-raising Plan that will guide its efforts to implement the 12 highest priority conservation projects over the next five-to-ten years. The TBWP expects to focus on Basin-wide Integrated Watershed Management Planning, working closely with appropriate water districts and agencies in Tulare Basin, over the next several years.

The TBWP is a locally-driven non-government organization leading and assisting public and private partners in a large-scale conservation and restoration initiative in the Tulare Lake Basin of the Southern San Joaquin Valley, California. Project planners have placed a high priority on the Goose Lake, Sand Ridge-Tulare Lake, and Buena Vista Lake areas of the project. This planning effort seeks to facilitate collaboration among many landowners to provide flood control, improve water supplies, protect water quality, enrich quality of life, increase recreation opportunities, enhance and restore wildlife habitat and secure the agricultural legacy of the area.

Backwaters Created at Imperial National Wildlife Refuge

One of the first joint cooperative projects of the Lower Colorado River Multi-Species Conservation Program is for backwaters creation at the Fish and Wildlife Service (FWS) Imperial National Wildlife Refuge. In 2006 FWS entered into a fifty year Land Use Agreement with the Bureau of Reclamation for restoration activities on the Refuge. This was the first such agreement to be developed between FWS and Reclamation pursuant to the Lower Colorado River Multi-Species Conservation Program.

Under the agreement excavation and construction of the ponds was completed in FY 2007. Preliminary designs for the 104 acres of filled fields have been completed for the leveling and new concrete-irrigation canal, which will be finalized and executed early in FY 2008. Ground clearing, contouring, and leveling of the 12 acres of marsh habitat will occur during the winter of FY 2008 and will be planted with wetland species during the spring of FY 2008. Ground preparation and planting of a cover crop on 34 acres eventually targeted for cottonwood-willow will occur in the fall FY 2008. In addition, approximately 70 acres of adjacent land will receive fill dirt from the excavation site to raise the field elevation three feet and will receive installation of a water delivery system. The tree restoration will provide habitat for southwestern willow flycatcher and yellow-billed cuckoo; the marsh habitat will support Yuma clapper rail and California black rail; and the fields will support grain crops for wintering waterfowl.

June Sucker Gaining in Utah Lake <http://www.junesuckerrecovery.org/>

The June Sucker Recovery Implementation Program had several noteworthy accomplishments in 2007. Approximately 9,500 June sucker were removed from the Rosebud Refuge Pond in Box Elder County, Utah, and placed in Utah Lake during the last week in September 2007. Then the Program hosted its “Third Annual Utah Lake Symposium” on October 5, 2007, for all those involved in June sucker recovery activities. The Program is also working to acquire a parcel of land known as the “Simpson Property,” located adjacent to lower Hobbie Creek. Bio-West, Inc., Logan, Utah, an environmental consultant, has been awarded a contract to design and ensure NEPA compliance for the Hobbie Creek Restoration Project. This property would provide an opportunity to develop improved habitat conditions for June sucker.

In 1986, the June sucker, a native species found only in Utah Lake and its tributaries was listed as endangered by the Fish and Wildlife Service. Bureau of Reclamation took the lead in organizing the June Sucker Flow Work Group which coordinated local water user groups, the state of Utah, and federal agencies to devise a flow plan for the June sucker. In addition, the Work Group drafted a Memorandum of Understanding among potential program participants to develop the June Sucker Recovery Implementation Program, which was initiated in April 2002.

U.S. Army Garrison-Pohakuloa Receives Conservation Partner Award

In March 2007, U. S. Army Garrison-Pohakuloa (Pohakuloa) was recognized by the Fish and Wildlife Service (FWS) with the FWS’s annual Military Conservation Partner award for 2006. The award demonstrates the FWS’s appreciation for the cooperative work of Pohakuloa, a highlight of which is the creation of a Habitat Conservation Plan Implementation Team. The Pohakuloa team consists of scientists and land-use managers who are familiar with Pohakuloa species and environmental issues and are dedicated to facilitating communication and exchanging ideas regarding habitat management and restoration. This partnership team has developed an impressive array of community partnerships such as the Hawaii Community College and the Junior Sierra Club to educate the public about resource protection and land stewardship through Earth Day Activities and other community events. Pohakuloa also works with organizations to

allow feral sheep, goat, and pig hunting and provide “guzzlers” (artificial drinking water structures used to augment bird habitat) for game birds.

Deep Gulf Habitats Project Recognized

<http://www.gomr.mms.gov/homepg/regulate/environ/chemo/chemo.html>

In May 2007 the Minerals Management Service (MMS) Deep Gulf Habitats Project received the Department’s Cooperative Conservation Award. This partnership study was initiated through the National Oceanographic Partnership Program and co-funded by MMS and the National Oceanic and Atmospheric Administration’s Office of Ocean Exploration. This project extends previous MMS studies of Gulf of Mexico chemosynthetic communities and hard bottom coral communities to include the entire continental slope to depths of 3,000 meters. Objectives of the study include both explorations of newly discovered sites, as well as, focused process-based studies at known sites. Knowledge of the distribution, relative abundance, and population structures of deepwater organisms, particularly the high-density chemosynthetic communities and coral habitats, will provide critical information for management of these unique biological assemblages. This project is expanding knowledge of sensitive biological communities throughout all depths of the Gulf of Mexico.

Kamins Leads Hegewisch Marsh Restoration

Nicole Kamins, who led efforts to protect a coastal wetland in one of the nation’s most industrialized areas, was honored in May 2007, with a Department of the Interior Cooperative Conservation Award. Kamins, an employee of the City of Chicago’s Department of Environment, serves as the lead for a team that is working to restore and protect Hegewisch Marsh, a remnant coastal wetland in south Chicago. The U.S. Fish and Wildlife Service, through its Midwest Region, is a member of this team. The State of Illinois and City of Chicago received grants to purchase 100 acres of Hegewisch Marsh. The City of Chicago provided a matching contribution. Additional grants enabled partners to begin restoring the area from a neglected and abused landscape to its more natural coastal wetland character. Kamins will now be working with the Ford Motor Company to develop a state-of-the-art nature center at Hegewisch Marsh. The Ford Environmental Center and the city-owned coastal wetland will provide access to the natural world for an estimated 300,000 annual visitors. The large majority of these visitors will be children from the surrounding urban area of south Chicago.

Whooping Crane Recovery Partners Honored

Terry and Mary Kohler, who have made significant contributions to the recovery of endangered whooping cranes in eastern North America, were honored in May 2007 by the Department of the Interior. The award recognizes conservation achievements by groups of diverse partners, including federal, state, local and tribal governments, non-government organizations, and individuals. The Kohlers, through their company, Windway Capital Corp. of Sheboygan, Wisconsin, have donated time, equipment and funds that have been among the keys to the success of the Whooping Crane Eastern Partnership, an international coalition of public and private groups that is reintroducing this highly imperiled species in eastern North America.

Restore New Mexico Flourishes

A vision to restore degraded landscapes has grown into a flourishing partnership of government agencies, landowners, conservation groups and energy industry leaders. Under the Bureau of Land Management's (BLM) flagship program, Restore New Mexico, the BLM and its partners are restoring woodlands, grasslands, and riparian areas across New Mexico to a healthy and productive condition. This partnership-powered initiative restored just over 250,000 acres of federal public lands plus 15,000 acres of state and private land within targeted watersheds in Fiscal Year 2007.

As part of the Healthy Lands Initiative, Restore New Mexico is doing landscape scale restoration projects. Key to their success has been the BLM's commitment to work with partners of all land-ownership types (state, private, and federal) and involving communities, agencies, industry, organizations, and private citizens in the effort. Restore New Mexico is working to:

- restore habitat for fish, wildlife and species of concern,
- restore native grasslands and reverse the expansion of invasive plant species,
- reverse habitat fragmentation from historic oil and gas development,
- improve water quality, and
- reduce the impacts from catastrophic wildfires

Restore New Mexico also aims to transform features of the landscape that are fragmenting ecosystems. To reverse fragmentation from historic oil and gas development, the BLM identifying abandoned oil field well pads and roads and removing the caliche (a material rich in clay that is used to stabilize dirt roads) in those areas. Over 172 miles of roads and 375 well pads have been reclaimed, 'defragmenting' more than 80,000 acres of wildlife habitat.

Owl Mountain Partnership Awarded

The work of the highly effective Owl Mountain Partnership was recognized in September 2007 when long-time partnership member Jack Haworth received the Bureau of Land Management (BLM) Rangeland Stewardship Award for implementing the management plan collaboratively developed by the Partnership. The plan greatly improved waterfowl productivity in the Hebron Waterfowl Area which Haworth manages as part of a BLM grazing allotment. It called for changing his cattle operation to incorporate new grazing practices as well as making water and range improvements. The Owl Mountain Partnership has facilitated development of several additional coordinated resource management plans and is currently working on a planning effort for an 18,000-acre area spanning the Colorado-Wyoming border.

BLM is involved in a number of successful long-term partnerships. One, the Owl Mountain Partnership, has been managing cooperative ecosystem management projects on public and private lands in north central Colorado since 1993. Named for Owl Mountain, a prominent landscape feature near Walden, Colorado, the partnership focuses primarily on livestock and wildlife issues in a multi-county region near the State of Wyoming. Since 1993, the Owl Mountain Partnership has directed more than \$2.3 million in public and private partner contributions, along with significant in-kind

services, to enhance wildlife habitat on rangelands in Colorado and Wyoming. Projects include water developments, wildlife-friendly fences, grazing systems, monitoring, and vegetative treatments. The greater sage-grouse is one of a number of wildlife species that has benefited and as a result, North Park sage-grouse habitat is among the best in Colorado.

Sage-Grouse Habitat to Increase

The Southern Idaho Snake River Plain provides 65 percent of the sage-grouse habitat in Idaho. This habitat is vital to ensure viable populations of sage-grouse and other sagebrush obligate species. Increasing occurrences of large wildfires threaten remaining areas of prime sage-grouse habitat. The area is also experiencing expansion of cheatgrass; and in some areas, juniper encroachment is reducing sage-grouse habitat quality, and increasing fuel loads favoring catastrophic wildfire.

The focus of this Bureau of Land Management Healthy Lands Initiative Emphasis Area is to accelerate implementation of Idaho's *Conservation Plan for the Greater Sage-grouse*, and associated plans. A collateral focus is to expand ongoing partnerships with landowners, local, state, and federal agencies, to foster a landscape-level approach to addressing habitat concerns. The primary objective is to promote the maintenance of intact, healthy shrub-steppe and riparian communities, and to restore other strategic areas that are in need of restoration or at risk.

John Day River Agreement Signed

http://sonoran.org/index.php?option=com_content&task=view&id=215&Itemid=253

In October 2007, a group of diverse governmental agencies and local tribes signed an agreement to coordinate the management of the John Day River, a federally-designated Wild and Scenic River and State Scenic Waterway. Facilitated by the Sonoran Institute, the agreement establishes a unique partnership to focus on developing a shared vision for the future of the John Day River. The agreement sets the stage for the coordinated implementation of multiple plans and requirements for the river corridor, including the John Day River Management Plan, the Wild and Scenic Rivers Act, the Oregon Admissions Act, and the Tribal Wild and Scenic Rivers Act.

The partners included in the agreement are the Bureau of Land Management, the Oregon Departments of Fish and Wildlife, Parks and Recreation, and State Lands; the Confederated Tribes of Warm Springs, and the Coalition of John Day Counties. The agreement includes a specific provision which allows for a single county representative to act on behalf of the five counties through which the John Day flows. The counties are: Sherman, Gilliam, Wasco, Wheeler and Grant.

Great Basin Pilot Studies Initiated

In 2005, USGS initiated the Great Basin Integrated Landscape Monitoring Pilot Project to develop and test monitoring approaches for detecting and forecasting landscape change in the Great Basin. Primary partners include Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, Bureau of Reclamation, and Bureau of Indian Affairs. Four pilot studies were started in 2007. These studies focus on the priority

drivers of climate change, water extraction, fire-invasive species interactions, and land treatments. They are intended to test approaches for evaluating, predicting and monitoring how these drivers affect change across the Great Basin landscape.

Body Condition of Waterfowl Being Studied

During 2007, U.S. Geological Survey (USGS) scientists working with state, federal and non-government organizational partners successfully completed the first of a 2-year study to measure the impact of Central Valley Joint Venture (CVJV) habitat conservation on body condition of wintering waterfowl. During this first year of the study, the most recent in a series of cooperative studies to guide waterfowl habitat conservation in California, body condition data were collected from more than 10,000 individual waterfowl of 5 species throughout the state. These data will be compared with similar data from before the CVJV to provide an understanding of factors impacting waterfowl body condition and a measure of the population response to CVJV habitat conservation programs. Winter body condition is important for healthy waterfowl populations because it can effect both survival and productivity.

In 1996, biologists and land managers from throughout the Pacific Flyway met and determined that the assumptions upon which CVJV habitat goals were based needed to be evaluated and updated in order to improve the effectiveness of CVJV. USGS scientists organized a cooperative research team to garner necessary funding and expertise to gather this critical information. Information resulting from these efforts has been reported in more than 40 scientific reports and presentations and was key to development of the 2006 CVJV Implementation Plan update. USGS scientists are continuing to work with a variety of partners to meet the information needs of the landscape conservation community in California in order to improve effectiveness of the CVJV programs.

Chesapeake Bay Studies—Identifying Areas for Enhanced Restoration

Accomplishments in FY 2007 include a U.S. Geological Survey (USGS) developed decision-support tool that provides modeling and monitoring results to help resource managers better target and assess water-quality management actions. The U.S. Environmental Protection Agency and other Chesapeake Bay Program (CBP) partners have suggested that USGS expand the application into the Chesapeake Online Assessment Tool (COAST) to include other partner information.

The USGS is leading the CBP partners to develop a collaborative approach to identify geographic areas to enhance implementation of ecosystem management actions. The USGS undertook the effort as part of the CBP partner resolution to “Enhance Cooperative Conservation in the Chesapeake Bay Watershed”, which was signed in 2005. The effort is also a component of the CBP strategic implementation plan, which is being prepared to better integrate activities to achieve the goals of the Chesapeake 2000 restoration agreement. The goal is to identify the geographic areas in the Bay and its watershed where enhanced implementation of restoration and conservation actions will provide the greatest benefit for improving conditions in the Bay and its watershed.

Coordinating Dam Removal Information <http://www.pc.ctc.edu/coe/elwha.htm>

The U.S. Geological Survey (USGS) is an active member and advisor to the Elwha Research Consortium, a strategic partnership between governmental agencies, educational institutions, and community groups focused on understanding societal and ecological effects of dam removal and ecological restoration activities in the Elwha River in northwestern Puget Sound. The USGS participation assists in the coordination and integration of science activities before and after removal of two dams in 2012. The Consortium facilitates annual conferences for researchers and educators to share their work, network, and communicate with other like-minded individuals. A monthly e-newsletter, UPSTREAM, provides updates on recent activities of Consortium members, funding and workshop opportunities, and dam removal and restoration articles in the news.

Planning for Air Quality at Rocky Mountain National Park

On August 16, 2007, the Colorado Air Quality Control Commission, through a policy resolution, unanimously endorsed a plan to ensure protection of Rocky Mountain National Park natural resources sensitive to atmospheric deposition of nitrogen compounds. Since 2004, the National Park Service has cooperated with the U.S. Environmental Protection Agency and the Colorado Department of Public Health and the Environment in a public process facilitated by the Commission to characterize the nitrogen deposition problem and to develop workable approaches to reduce excessive nitrogen deposition affecting the park. Stakeholders from the agricultural and livestock community, industry, local government and environmental organizations participated in the collaborative process that led to development of the plan. The plan commits the three cooperating agencies to act on the basis of a large body of peer-reviewed, park-based scientific information indicating unnatural effects on park ecosystems.

Considering the Human Dimensions of Wildlife Issues

Through a cooperative agreement with Cornell University, the technical report *Deer, People and Parks: Human Dimensions of Deer Issues in National Parks* was completed in 2007. That and related reports are available at:

<http://www.dnr.cornell.edu/hdru/pubs/Elecpubs.asp>. Information from the overall research project is intended to help the National Park Service (NPS) better understand community interests related to deer impacts and management of NPS lands and to provide insights to guide ongoing communication with communities near parks.

The NPS created a new Human Dimensions program which is collaborating with several governmental and non-governmental organizations, including, representing the NPS in the Human-Wildlife Conflict Collaboration, The Wildlife Society's newly formed Human Dimensions Working Group, and on the planning committee for the 2008 conference "Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife Management." Also, a workshop entitled "Thinking Like a Manager" was conducted for Florida Fish and Wildlife Commission to develop skills in dealing with human dimension issues. This partnership increases the capacity for NPS to address human dimensions issues, showcases the desire of NPS to incorporate civic engagement in management decisions, and addresses the critical interface between the human and

ecological components of biological resource management, which need integration as an essential characteristic of best management practice.

Southeastern Partnerships Honored

In spring 2007, 15 conservation partners or partner groups and 62 employees and volunteers were honored by the southeast region of the Fish and Wildlife Service. Among the partners recognized at the 2007 Regional Director's Honor Awards ceremony were:

- The American Bald Eagle Foundation of Sevierville, Tennessee, which operates the largest bald eagle captive breeding and exhibit facility in the world;
- David H. Estes, an Assistant U.S. Attorney in Huntsville, Alabama, who worked closely with Wheeler National Wildlife Refuge Law Enforcement in Decatur to ensure that the refuge remains a safe place to visit;
- Dr. Nicholas Aumen of the National Park Service, who plays a crucial role in the protection and restoration of water quality in South Florida and the Everglades; and
- The Southeast Louisiana Hurricane Cleanup Team, consisting of five people from agencies and businesses in Louisiana, Tennessee and Texas who managed the removal of more than 12,700 items of hazardous debris from 36,000 acres of marsh habitat at Sabine, Cameron Prairie, and Lacassine National Wildlife Refuges after the 2005 hurricane season.

The feedback from honorees and their families has been extraordinary. Their commitment to partnering with the Fish and Wildlife Service on conservation projects of mutual concern has been strengthened and deepened by this awards program.

Recovery Champions Recognized

In FY 2007, the Fish and Wildlife Service (FWS) established *Recovery Champion*, an annual award to recognize the outstanding contributions of Service employees and public and private partners to the conservation and recovery of endangered and threatened species. This award is not only an excellent vehicle for acknowledging exemplary employee and partner efforts, but it also gives FWS the opportunity to highlight the importance of working cooperatively with others to achieve recovery milestones.

In this first year of the *Recovery Champion* award, FWS recognized 16 individual and team efforts including those of FWS Ecological Service Field Offices, National Wildlife Refuges, National Fish Hatcheries, State and Federal agencies, and non-government organizations. In every instance, each recipient worked with the support and cooperation of multiple and diverse partners to effectively leverage resources for species conservation and recovery.

The *Recovery Champion* award recognizes and promotes cooperative conservation efforts and invites other FWS resource programs, other Federal and State agencies, local and Tribal governments, business and industry, academia, conservation organizations, and the American people to join us in this important work. It is an award that today, and in the years to come, reinforces the importance of cooperative conservation in endangered and threatened species recovery.

Ohio and FWS Collaboration in Transportation Recognized

The Ohio Department of Transportation and the Fish and Wildlife Service (FWS) received the FWS 2007 Transportation Environmental Stewardship Excellence Award. The award honored their partnership effort in developing a state-wide initiative to promote the conservation of the Indiana bat and protect valuable ecosystems such as riparian hardwood forest. The state-wide initiative evaluates a full range of transportation projects and applies conservation measures based on biological impacts and species conservation needs. By developing conservation measures that are specific to a project impact and the biological needs of the species within each biological management units, the Department is able to anticipate, design, and deliver projects efficiently while addressing the site-specific needs of the species. The agreement has greatly shortened the review time for transportation projects occurring in Indiana bat habitat by nearly 50 percent. In addition, projects can now move forward on an accelerated time schedule that already has saved the Department approximately \$7 to \$10 million while ensuring conservation of important Indiana bat habitat.

Natural Resource Damage Recommendations Accepted

In May 2007, the Natural Resource Damage Assessment and Restoration Advisory Committee unanimously reached a set of recommendations to the Department on issues related to the Department's authorities, responsibilities and implementation of the natural resource damage provisions of the Comprehensive Environmental Response, Compensation, and Liability Act and the Oil Pollution Act. In accepting the Advisory Committee's recommendations, Deputy Secretary Scarlett remarked "Reaching unanimous consensus is a great achievement, especially in light of how contentious these matters have often been in the past. This Federal Advisory Committee exemplifies the spirit of Cooperative Conservation." The Advisory Committee's recommendations provide a blueprint for the Restoration Program to build upon to continue restoring damaged natural resources. Based on the recommendations, the Program has already drafted revised regulations for conducting damage assessments and has begun to develop a series of technical workshops that will lay the framework for future guidance and regulations on detailed scientific and economic issues. The Program has also embarked on a partnership with a non-governmental organization to inventory restoration successes and future opportunities.

Saving Colorado River Water

The Drop 2 Storage Reservoir will enable the Bureau of Reclamation to capture non-storable flows of the Lower Colorado River for beneficial use in the United States. When water districts reduce water orders due to changes in conditions (weather events or return flows), there is currently no place to capture this water; and it is sent to Mexico as an over-delivery. With the Drop 2 Reservoir in Imperial County, California, Reclamation anticipates being able to capture an average of 70,000 acre-feet annually. In 2007, Reclamation completed the feasibility design, related cost estimate and environmental assessment for the project. Reclamation expects to begin construction in late 2008 on the \$160 million reservoir. Southern Nevada Water Authority has agreed finance construction.

Piping Groundwater to the Pecos

Opened in July 2007, the Vaughan Conservation Pipeline is the first partnership project between the Bureau of Reclamation and the New Mexico Interstate Stream Commission (NMISC) under New Mexico's new Strategic Water Reserve Program. The project links 10 wells, located on the privately-held Vaughan Ranch, to pump and deliver groundwater leased by Reclamation, to a point on the Pecos River about five miles south of the town of Fort Sumner, New Mexico, thereby augmenting river flows for the Pecos bluntnose shiner. Key partners included federal and state agencies, local irrigation districts, and the Vaughan family of Fort Sumner.

The project stemmed from a Record of Decision issued by Reclamation in July 2006, that established changes in water operations within the Pecos River in order to conserve the Pecos bluntnose shiner (*Notropis simus pecosensis*), a species identified as threatened under the Endangered Species Act, and its designated critical habitat, while conserving the Carlsbad Project water supply. Later the same year the NMISC used the authorization and funding of a new state law, the Strategic Water Reserve, to build a water delivery system for the benefit of a long-term lease agreement with Reclamation to obtain water for the Pecos bluntnose shiner.

Achieving Cooperative Conservation Results

Many of the Department's Bureaus have programs and initiatives predicated on advancing cooperative conservation. A number of the grants and technical assistance programs could not succeed without collaboration to define goals and pursue on-the-ground results. For example, Interior's Partners for Fish and Wildlife Program and Coastal Program both involve direct interaction with local communities and landowners. Projects from programs such as these are included here.

Colorado River Management Strategy Signed

Secretary of the Interior signed an historic decision that will implement innovative strategies for management of the Colorado River, reflecting "a remarkable consensus" among stakeholders about sharing water during the current drought and charting a water management course for the future. Signed at the Colorado River Water Users Association's annual meeting in Las Vegas, Nev., the Record of Decision activates a legal agreement among the basin states that contains a provision in which they firmly commit to address future controversies on the river through consultation and negotiation before initiating any litigation.

The decision implements new, interim operational guidelines to meet the challenges of the current eight-year drought in the basin and, potentially, low-water conditions caused by continued drought or other causes in the future. The rules, which take effect immediately, will be in place through 2026.

Kenai River Rip Rap Removed

The Fish and Wildlife Service (FWS) partnered with the Alaska Department of Fish and Game and a private landowner to restore habitat in the Sterling area of the Kenai River. Technical assistance and funding was provided for project construction. This project is located in a highly traveled portion of the river. By removal of non-fish friendly rip rap

and installing native vegetation at this site FWS was able to demonstrate appropriate bank stabilization techniques that are fish habitat friendly and hydrologically sound. In addition to educating the public, this project has provided an additional 60 feet of critical near- shore habitat for juvenile salmonids. As well as removing harmful structures from the river, this project provided direct habitat benefits to Chinook and coho salmon fry.

Improving the Highland Lake Fish Ladder

The Highland Lake dam is located at the outlet of Highland Lake on the Presumpscot River in Maine. Highland Lake historically supported sea-run fish including American shad, river herring, American eel, sea lamprey, striped bass, rainbow smelt and Atlantic salmon. Since the removal of another dam, there is significant regional interest in restoring spawning and nursery habitat for these fish. The project objective was to improve upstream and downstream passage for sea-run fish into spawning, nursery and adult habitat and to restore the stream channel habitat. In Fiscal Year 2007 the project was completed with funding from the partners and the Fish and Wildlife Service. The stream channel restoration creates a more stable system to attract fish to the fishway and allows for downstream passage. The completed restoration project also allows for effective downstream fish passage into the Casco Bay and the Gulf of Maine.

Restoring Coastal Habitat in Santa Barbara

The Fish and Wildlife Service's Arroyo Burro Estuary and Mesa Creek Restoration Project restored coastal habitats within the city limits of Santa Barbara, California. The project specifically restored and expanded estuarine, riparian, coastal live oak woodland, and coastal sage scrub habitats at the confluence of Arroyo Burro Creek and Mesa Creek, and increased aquatic species access to additional habitats that occur upstream of the site. In 2006, the project removed a 300-foot concrete culvert that formerly conveyed Mesa Creek, reconstructed a new creek channel on Mesa Creek, and doubled the estuarine habitat at the confluence of the two creeks by expanding the existing wetlands into formerly disturbed habitats adjacent to the estuary. Community volunteers helped to install over 5,000 native plants. The project also constructed trails and a footbridge to improve public access along Arroyo Burro Creek and over the newly constructed Mesa Creek channel.

The project highlights a community-based restoration project which benefits an urban watershed and provides important conservation benefits to the federally endangered tidewater goby (*Eucyclogobius newberryi*) and southern California steelhead (*Oncorhynchus mykiss*), and numerous other native species including many migratory birds. The project also supports the Recovery Plan for the Tidewater Goby (FWS) the California Wildlife Action Plan (California Department of Fish and Game, the Southern California Wetland Recovery Project, and the City of Santa Barbara's Arroyo Burro Watershed Action Plan.

Enhancing Savannas Scrub

Fish and Wildlife Service funding was used to assist Florida's Savannas Preserve State Park in implementing the "Savannas Preserve State Park Atlantic-Coastal Scrub Ridge Restoration" project. The overall objective of this project is to enhance and restore

approximately 338 acres of overgrown scrub to an earlier successional stage for management of the Federally-threatened Florida scrub-jay. The Federally-endangered four-petal paw paw, as well as the fragrant prickly apple, a Federally-endangered cactus endemic to the Park, are also found within the project area. By providing a long corridor of suitable scrub habitat, the project will provide connectivity to conservation lands and known scrub-jay territories adjacent to the Park. It will also help restore one of the largest intact portions of the imperiled Atlantic coastal ridge scrub community.

Lewis River Hydropower Re-Licensing

Fish and Wildlife Service staff have been working with multiple stakeholders in Washington State for the past seven years resulting in a comprehensive Settlement Agreement that provides watershed-scale conservation benefits for the entire Lewis River watershed for the life of the Federal Energy Regulatory Commission license, which may be up to 50 years. Early involvement was a key in building a partnership with 24 signatories of the Settlement Agreement, which included PacifiCorp, Cowlitz Public Utility District, NOAA Fisheries, the Forest Service, the Cowlitz and Yakama Tribes, the Washington State Departments of Fish and Wildlife, Skamania and Clark Counties, American Rivers, Rocky Mountain Elk Foundation, Trout Unlimited.

The license will open 170 miles of spawning and rearing habitat for Chinook and coho salmon, and increase connectivity for bull trout from the fishway prescriptions. The fishway designs, which staff participated in developing, will decrease injury and mortality to listed bull trout and all anadromous fish passing through the system. The license will include acquisition and protection of at least 98 acres of wetlands that will provide nesting and foraging habitat for numerous migratory bird species and amphibians; 1,730 acres of uplands to provide winter forage and calving habitat for elk, 1020 acres of riparian and shoreline acres to provide complex aquatic habitat for salmon and bull trout and riparian vegetation to provide nesting and foraging habitat for a variety of migratory birds. Instream flows will be improved on three miles of river in the bypass reach and about 20 miles of river below Merwin Dam and thereby will increase spawning, rearing, and foraging for Pacific salmon species and other forage species for bull trout.

Black Lagoon Becomes Ellias Cove

In June, the Fish and Wildlife Service, the City of Trenton, Michigan, and other partners celebrated the restoration and revitalization of the Black Lagoon in a ceremony renaming it Ellias Cove. The Black Lagoon was a backwater embayment located in the Trenton Channel of the Detroit River that got its name in the mid-1980s when scientists investigating the Detroit River discovered that oil and grease released during the 1940s to 1970s had accumulated in the sediment of Black Lagoon. A matching grant from the Fish and Wildlife Service will help to build a marina and further economic revitalization of downtown Trenton. This area of the Detroit River is part of the Detroit River International Wildlife Refuge, managed by the Fish and Wildlife Service.

Evening Hole and Lost Creek Restoration Receives AFS Award

At its fall meeting the American Fisheries Society recognized the Oklahoma Department of Wildlife Conservation's Evening Hole and Lost Creek Restoration Project as the 2007 winner for Sport Fishery Development and Management. For this project, applied fluvial geomorphology techniques were used to improve fish habitat, channel shape, stream flow, sediment transport and water temperature in Evening Hole, a 1,600-foot trout stream below Broken Bow Reservoir. In addition, a new 1,200-foot trout stream, called Lost Creek, was constructed nearby, along a remnant floodplain. Vegetation, grade control, and bank stabilization structures were installed to ensure stream stability, while riffles, runs, pools, woody cover, native gravel, and cobblestones were added to provide trout habitat.

The project was made possible by donations from trout anglers and Fish and Wildlife Service Federal Aid in Sport Fish Restoration funds. Other partners included the U.S. Army Corps of Engineers and the Oklahoma Department of Tourism. The American Fisheries Society annually recognizes projects that have been funded through this FWS grant program for their conservation successes.

Controlling Nutria in Maryland

The Fish and Wildlife Service (FWS) leads the Nutria Management Team for the Maryland Nutria Project, a partnership of 22 organizations that are working together to eradicate nutria from FWS Chesapeake Marshlands National Wildlife Refuge Complex and other nutria infested wetlands in the Chesapeake Bay region. Since October 2006, 17 trappers have removed nutria, a non-native rodent, from wetland habitat in Dorchester, Somerset, and Wicomico Counties, Maryland resulting in the protection and recovery of 36,383 acres of wetland (154,123 acres since September 2002).

In addition to eradication measures, the project also involves habitat restoration and public education components. The Corps of Engineers recently completed pilot emergent wetland restoration projects to identify alternative means to restore habitat. A thin-layer spray technology to restore sediments to nutria-damaged wetlands successfully tested. Through FWS outreach efforts, the public is informed of the damaging effects of nutria and alerted to the concern for the introduction of all exotic species. The eradication of nutria is resulting in the recovery and protection of several hundred thousand acres of marshland in the Chesapeake Bay from the impacts of this destructive rodent, benefiting the migratory birds and migratory fish that are supported by these marshes.

Supporting Northern Forest Woodcock

The Northern Forest Woodcock Initiative is a collaboration of over 22 public and private agencies and organizations working together to support conservation and management of early successional forest in the northeast for a suite of migratory bird species, with special emphasis on American woodcock. Staffs at Fish and Wildlife Service (FWS) Moosehorn National Wildlife Refuge and Silvio O. Conte National Fish and Wildlife Refuge are key participants in the initiative.

FWS biologists have provided consultation to State of Maine on forest habitat management on two Wildlife Management Areas; a portion of each was subsequently selected for development into a habitat management demonstration area. They also have advised the City of Calais, Maine, in habitat management and outreach at a city park, and assisted in developing habitat management demonstration area at Old Canada Road Scenic Byway in western Maine. They assisted West Virginia Department of Natural Resources in developing a Wildlife Habitat Incentive Program plan to regenerate shrub and forest habitat, primarily for woodcock, on a parcel of private land in Canaan Valley, WV. Moosehorn National Wildlife Refuge received a grant to develop an interpretive trail and materials for early successional forest habitat demonstration areas. Staff is working with faculty and students in University of Maine Parks, Recreation, and Tourism Program to develop content of interpretive panels; and received donations of art work from artist/author Tom Hennessey and from Michigan Department of Natural Resources.

The Vermont Electric Power Company, a partner in the woodcock initiative, donated the use of two brontosaurus machines to help implement the demonstration project at the Silvio O. Conte National Fish and Wildlife Refuge. The refuge has three Woodcock Habitat Management Demonstration areas, totaling 286 acres; interpretative panels have been designed and will soon be installed at all three areas. The partnership was highlighted in a video produced by Vermont Electric.

MARINE Partners for Intertidal Communities

Organized and managed by the Minerals Management Service, MARINE, which stands for Multi-Agency Rocky Intertidal Network, is a partnership of 40 Federal, State and local agencies, universities, and private organizations interested in determining the health of the rocky intertidal communities along the Pacific shoreline. MARINE works with managers from local, State and Federal governments to provide the scientific information needed to make decisions about coastal resources. Currently, MARINE is collecting data for or providing key data to policy groups and state agencies which make decisions on Marine Protected Areas, NOAA Mussel Watch, State Water Board enforcement of discharges in Areas of Special Biological Significance, and public access management issues. MARINE data, shared on a common database, led to the closure of the black abalone fishery on the mainland and is currently being used by the State to evaluate impacts to the shoreline from non-point discharges.

Habitat Restored in Vermont

Nearly two acres of wetland and seven acres of grassland were restored this fall to compensate for impacts from two Superfund Sites in Bennington, Vermont. Fish and Wildlife Service staff report that since early October, nearly 15,000 yd³ of fill were removed to restore two acres of emergent marsh and scrub/shrub wetland. The fill is being used to grade approximately seven acres of an adjacent gravel pit which will be seeded and restored to grassland. In combination with the open field habitat on the adjacent Bennington landfill, the restoration will create nearly 30 acres of grassland habitat. Numerous grassland bird species benefit from the restoration including vesper sparrow, grasshopper sparrow, field sparrow, bobolink, eastern meadowlark, and American kestrel. Migratory birds that favor early successional scrub/shrub habitats, such

as rufous-sided towhee, American woodcock, rusty blackbird, great blue heron and a variety of warblers, benefit from the wetland restoration. The wetlands will also support numerous amphibians, reptiles and mammals. A variety of partners are committed to ensuring this project's success, including the Town of Bennington, and the U.S. Department of Agriculture Natural Resources Conservation Service. The restoration plan is available at: http://www.fws.gov/northeast/newenglandfieldoffice/Contaminants-NRDAR-restoration_projects-BurgessBrothers.htm

Creating Beach-Nesting Shorebird Habitat at Cape May

Early in 2007 the Fish and Wildlife Service Cape May Refuge partnered with the New Jersey Department of Environmental Protection and the U.S. Army Corps of Engineers to improve refuge beach-nesting bird habitat for the federally threatened piping plover and, potentially, the state endangered least tern and black skimmer by creating an overwash area. The Corps of Engineers mechanically scraped an approximately 650-foot-long area of foredune to lower the beach elevation to allow an overwash to occur on approximately one acre of the beach. Habitat islands were also created to provide areas for birds to seek cover and crushed shell was placed in sections of the overwash. Within weeks, piping plovers arrived and one pair nested on the overwash. Additionally, a pair of American oystercatchers also nested. Because the overwash area was successful in attracting birds to nest on the Refuge, the site will be maintained in the future to provide quality nesting habitat for beach-nesting birds.

Mohawk Pool Enhanced

In New York the Fish and Wildlife Service Iroquois National Wildlife Refuge in partnership with Ducks Unlimited (DU) completed a six-year project to rehabilitate the water management system and wetland habitats of Mohawk Pool. Construction began in 2001 and was completed in October 2006.

The 1,370 acre Mohawk Pool is the largest impoundment on the Refuge. Refuge managers identified a need to rehabilitate the Mohawk Pool because it provided poor habitat for most wetland wildlife species. To make Mohawk Pool a more productive wetland system, the Refuge partnered with DU to help design and deliver this project. DU staff surveyed the pool, drew up the construction designs, hired a contractor and oversaw the construction and completion of the project. The project was completed in October 2006. New dikes constructed along elevation contours to isolate similar habitat types will allow refuge staff to manage water levels higher in dense cattail stands and lower in open water areas to facilitate the conversion of these areas to more desirable and productive wetland habitat. The creation of three smaller subimpoundments provides different habitat types in close proximity, allowing use by a greater variety of wetland wildlife species.

Marsh Restored at John Heinz National Wildlife Refuge

The Fish and Wildlife Service John Heinz National Wildlife Refuge at Tinicum has been working in partnership to complete a major restoration project involving 12 acres of freshwater tidal marsh along Darby Creek. In Pennsylvania This former U.S. Army Corp of Engineers dredge spoil site, dating from the 1950s and 60s, was covered by 5-7 feet of

fill material which became covered by a thick monoculture of invasive phragmites. During this restoration project all fill has been kept on the refuge to build up dikes and roads used in water management and helping local towns with flood safety. Using detailed hydrology studies and laser leveling, the dredge material has now been removed and the site carefully sculptured to encourage the growth of wild rice, sedges, rushes and other native wildlife food plants. New ponds have been created and water channels reconnect the restoration site with the natural fresh water tidal flow of Darby Creek. Final connection for restored tidal flow will be completed in spring 2008. A public interpretive trail will be added along the dike and local carpenters have volunteered to construct a wildlife viewing deck in 2008.

Santa Cruz Island Native Plant Communities Conserved

The Santa Cruz Island Native Plant Restoration Project is a multi-phase, multi-agency partnership project that is engaging private individuals (volunteers) and organizations to restore native plant communities on Santa Cruz Island through the removal of priority non-native invasive plants and to restore the native island ecosystems. Santa Cruz Island, off the coast of Santa Barbara, is home to eight Federal and State listed plant species and 20 plant species of concern. All are potentially impacted by the encroachment of invasive non-native vegetation, which comprises about 26 percent of the island's flora. The island also falls within a high priority area of the central California coast, where native coastal habitat restoration and protection are vital for conserving over 85 federally-listed species.

This project specifically focused on the control and removal of non-native woody species within a 400-acre area of the island. Removing invasive trees on Santa Cruz Island complements and extends the benefits of Federal management actions occurring on the National Park Service portion of the island where similar efforts are taking place. The Fish and Wildlife Service and the U.S. Geological Survey participate in the Santa Cruz Island Native Plant Restoration Working Group, which is comprised of numerous stakeholders and researchers. The Working Group integrates the numerous invasive plant removal and research projects occurring on the Federal and private portions of the island to streamline approaches, minimize duplicative efforts, share data, and leverage resources.

Enhancing Smith River Estuary

The Fish and Wildlife Service undertook a project to increase the amount of cover and slough habitat available to salmonids in the Smith River estuary. Two tidally influenced side-channels were constructed by excavating river sediments and installing large rootwads and logs to provide rearing and cover habitat for listed Coho salmon and other salmonid species. The sites are being monitored by the Smith River Advisory Council to determine fish use, abundance, and distribution by cover type, and other parameters.

This project addressed recommendations in the "Smith River Anadromous Fish Action Plan" and the California Department of Fish and Game's "Recovery Strategy for California Coho Salmon. The Action Plan identified limiting factors to salmonid survival to be juvenile summer habitat (cover), predation, and slough conditions. The Coho

Recovery Plan recommends the development and implementation of a plan to restore the effectiveness and use of off-channel areas, sloughs, and wetlands, and to increase the amount of in-channel large woody debris. This project increased the amount of in-channel cover (large woody debris) and off-channel fisheries habitat, as well as tests the effectiveness and resilience of excavated sloughs as beneficial salmonid habitat.

Rio Grande River Collaboration

The Middle Rio Grande Endangered Species Act Collaborative Program is comprised of 20 Federal, State, local, and tribal governments, nonprofit institutions, and other nongovernmental entities working collaboratively to protect and improve the status of endangered listed species along the Middle Rio Grande and to simultaneously protect existing and future regional water uses while complying with state and federal laws, including Rio Grande Compact delivery obligations. The Program implements activities required by the March 2003 Biological Opinion, as amended, and additional activities that contribute to recovery of the Rio Grande silvery minnow (silvery minnow) and the Southwestern willow flycatcher (flycatcher). The Collaborative Program brings diverse groups together, as an alternative to litigation, to address serious environmental issues along the Middle Rio Grande. Without the Middle Rio Grande stakeholders working within the framework of the Collaborative Program, it is likely that mutual trust would fade and litigation would be reactivated. During FY07, Reclamation continued its leadership role for the Collaborative Program and hired a Program Manager.

South Channel Completed

The South Channel Project, completed by the Bureau of Reclamation in August 2007, is an integral part of a planned 1400-acre restoration project known as the Yuma East Wetlands. The channel reconnected an adjacent choked-off backwater to the Colorado River. The area was left high and dry after the 1983 control flood of the Colorado River. Located 2 river miles downstream from the Gila River confluence, the restored channel established a shallow emergent marsh plagued by non-native plants and high salt concentrated soils. The project lands are owned by the Quechan Indian Tribe, City of Yuma, and the Ogram Family, with adjacent lands controlled by the Bureau of Reclamation's Yuma Area Office.

Bard Water District Canal Modernized

A Water 2025 challenge grant from the Bureau of Reclamation enabled the Bard Water District to bury two canals (the Yaqui and Waco) in a pipeline on the Quechan Indian Reservation Division of the Yuma Project, authorized in August 1903. Reclamation provided design assistance and technical oversight for this pipeline project, estimated at 600 acre feet of water savings annually. A significant challenge in this project was getting the Quechan Indian Tribe's cooperation and the priorities for specific canal site improvement on the reservation. With a water distribution infrastructure that is over 50-years old, canal improvement, water efficiency, and safety are the District's primary goal and focus. The Waco canal, located near a school, and the Yaqui canal, located near a rural church, presented them with both an on-going safety hazard that the pipeline resolves.

Bard implemented a systems improvement and instilled better management practices to enhance their water distribution efficiencies within their existing irrigation distribution system. Additionally, Bard implemented a water measurement and accounting program. And recently, they implemented a three-year phased water infrastructure upgrade project that includes additional measures such as concrete ditch lining, improved water control and flow measurement structures, and devices. Total project improvement water savings is expected to yield 10,000 acre feet annually.

Tongue and Yellowstone Diversion Dam Fish Passage Completed

The Tongue and Yellowstone Irrigation District substantially completed their Diversion Dam Fish Passage project and held a dedication on September 6, 2007. Montana Congressional and State representatives, along with federal, state, and local contributors and interested citizens attended the event. The Tongue and Yellowstone Irrigation District will operate and maintain the constructed fish passage project.

The “12-Mile Diversion Dam” constructed in 1885 on the Tongue River diverted river water into a 100 mile canal system for irrigation purposes. The dam also prevented fish from reaching their traditional spawning and rearing habitat; this had led to a major decline in several warm water fish species, including pallid sturgeon. In 1999, the Tongue and Yellowstone Irrigation District constructed a downstream bypass screen to limit the number of fish entering the canal system; this did not provide for upstream passage. In 2004, Bureau of Reclamation, with funding from the Fish and Wildlife Service, completed a design to allow for upstream fish passage around the dam. In 2006, The Nature Conservancy, Montana Fish Wildlife and Parks, Natural Resources Conservation Service, and the Fish and Wildlife Service funded construction of the fish passage. The District did the construction, while Reclamation provided inspections.

Uncompahgre Plateau Planning at Landscape-level

The Uncompahgre Plateau Project assists in coordinating and funding restoration activities across jurisdictional boundaries on the Uncompahgre Plateau. The project pulls federal and state agencies, interest groups and private citizens together with the shared goal of improving ecosystem health on the Uncompahgre Plateau and beyond.

The project has been involved in several landscape-level planning efforts. They began work on the Big Dominguez Analysis Area, encompassing 195,000 acres of both Forest Service and Bureau of Land Management (BLM) lands. In summer 2007, the BLM completed a Land Health Assessment for the area, providing current information to be used in the planning and implementation processes. The Native Plant Program began as an effort to propagate native species for the Uncompahgre Plateau. In 2007, the project began discussions with the Forest Service and Arizona Game and Fish Department to join the partnership – moving towards a Colorado Plateau Native Plant Initiative. The Invasive Species Management Program develops Collaborative Weed Management Area Plans for the Uncompahgre Plateau area. In 2007, the Tabeguache Collaborative Weed Management Area plan was completed which consists of 213,816 acres and the 116,000-acre Paradox Weed Management Area was initiated.

Partners Maintain Shrub-Steppe Health

The Oregon-Idaho-Nevada Cooperative Shrub-Steppe Restoration Partnership is a coordinated, landscape level program involving multiple partners, including the Bureau of Land Management (BLM), working together to maintain shrub-steppe health where it currently exists and to strategically restore areas critical to wildlife. This partnership area encompasses 53.5 million acres in the Great Basin areas of southeastern Oregon, southwestern Idaho, and northern Nevada, roughly 50 percent of the remaining sagebrush-steppe habitat in the Great Basin and maintaining this habitat is critical to ensure viable populations of sage- grouse and other sagebrush obligate species.

In Oregon 2,100 acres of western juniper that had encroached into sagebrush, quaking aspen, mountain mahogany, and riparian plant communities were cut. The BLM completed 2,200 acres of juniper control adjoining key sage-grouse habitat in Idaho; and also completed 527 acres of noxious weed treatments and drill seeded 1,200 acres of native grass, shrub and forbs species in Nevada.

Restoring the Northeastern Nevada Landscape

The Northeastern Nevada Landscape Restoration Project is an initiative that encompasses the strategic planning and implementation of many related vegetation treatment efforts. The treatment efforts are guided by the Great Basin Restoration Initiative, the Nevada Governor's Sage Grouse plan, the Northeast Nevada Stewardship Group Sage Grouse Plan, the Lahontan Cutthroat Trout Recovery Plan, Healthy Forest Restoration Act, Hazardous Fuels Reduction, Fire Rehabilitation and Stabilization, various individual habitat management plans, as well as a variety of Multiple Use Decisions. Both Bureau of Land Management and Fish and Wildlife Service are partners on the project. As of 2007, the Northeast Nevada Landscape Restoration Project is also supported by several Healthy Lands Initiative projects.

The projects that have been planned and implemented include: prescribed fires in the Midas area, mechanical treatments such as mowing and green stripping, weed treatments, drill seeding post disturbance, and some chemical applications. Treatments under this broad alternative amount to over 20,000 in the last five years.

Mercury Research Contributes to Everglades Powerplant Permit Denial

<http://infotrek.er.usgs.gov/mercury/acme.html>

Recently, State of Florida regulators unanimously ruled against a permit for a new coal-fired electric generating plant in South Florida because concerns for possibly increasing methylmercury levels in the Everglades were raised by various public interest groups and resource managers at the National Park Service Everglades National Park and the Fish and Wildlife Service Loxahatchee National Wildlife Refuge. Research by the U.S. Geological Survey (USGS) played a major role in defining this key environmental concern.

High levels of mercury in fish and wildlife from the Everglades have prompted a great deal of concern for the potential effects of this neurotoxin, and triggered health warnings limiting the consumption of all sport fish in this fragile ecosystem. The USGS has

conducted extensive in field experiments with sulfate and mercury, both individually and in combination. These studies reveal that even very small additions of these constituents can lead to measurable increases of methylmercury production. Thus, any additions of sulfate and mercury to the Everglades would be detrimental to the ecosystem. This, along with other concerns, led the Florida regulators to decide unanimously not to permit a new coal-fired electric generating plant in South Florida since these plants are significant emission sources of both mercury and sulfate.

Green-Tree Reservoir Flooding

A continuing study by the U.S. Geological Survey of the green-tree reservoir at the Fish and Wildlife Service Felsenthal National Wildlife Refuge has shown that long-standing practice of reservoir flooding may be detrimental to the trees. As a result of this study, the U.S. Army Corps of Engineers has modified their green-tree reservoir permits requirements within the Lower Mississippi River Valley.

Green-tree reservoirs are bottomland hardwood forests that are artificially flooded in the fall and early winter to provide habitat for waterfowl. The green-tree reservoir at Felsenthal NWR was established in 1985 and has been flooded almost every year since that time. A study of the effects of reservoir management on the health of the forest was initiated in 1985 to follow the survival, growth, and vigor of the trees. Results have shown a steady decline in the density and vigor of trees within the reservoir. The 2006 survey also showed greatly increased presence of a fungus that attacks oak trees. The authorized timing of green-tree reservoir flooding has been changed on Corps of Engineers permits to reduce stress on the trees within the reservoir. This benchmark study establishes a scientific foundation for management of green-tree reservoirs throughout the U.S. and illustrates how scientists and land managers work together for conservation of the nation's trust resources.

Protecting South Texas Sea Turtles

<http://www.fws.gov/arsnew/regmap.cfm?arskey=22086>

In the 2007, 22 sea turtle nests resulted in 884 hatchlings on South Padre Island and the southernmost beaches of Texas. The South Texas Sea Turtle Project is a cooperative conservation project to locate and protect nesting Kemp's ridley and other endangered sea turtles and their nests on South Padre Island and Boca Chica Beaches in southernmost Texas. Daily patrols are conducted by volunteers, interns, and staff from April through mid-July each year. Each nesting female is measured, tagged, and released. All nests are relocated to a protective corral on South Padre Island, where they are monitored until hatched.

The South Texas Sea Turtle Project is a partnership among Sea Turtle, Inc., the Fish and Wildlife Service Laguna Atascosa and Lower Rio Grande Valley National Wildlife Refuges, and volunteers from the public. A total of 22 sea turtle nests, including 20 Kemp's ridley (17 on South Padre Island, 3 on Boca Chica) and 2 loggerhead nests (on South Padre Island), were found through the project in 2007. Ten sea turtle nests hatched in July, resulting in a total of 884 hatchlings successfully released (791 Kemp's ridley hatchlings, 93 loggerhead hatchlings). One sea turtle nest found earlier in the season and

thought to be that of a Kemp's ridley was found at hatching to be a loggerhead nest. The project also enables public education of the need for endangered sea turtle conservation. Eight sea turtle hatchling releases in July were open to the public and approximately 950 visitors attended.

Berman Oil Spill Restoration Plan Published <http://www.darrp.noaa.gov/berman/>

The Trustees released the restoration settlement plan for the oil spill from the Morris J. Berman off Punta Escambrón, Puerto Rico, to the public on April 22, 2007, at San Juan National Historic Site. One of the projects announced was the acquisition of a 270-acre parcel that will become a natural reserve within Puerto Rico's Northeast Ecological Corridor. The parcel is a mosaic of extraordinary coastal ecosystems, including more than 1.5 miles of beach habitat. It is one of the few critical nesting beaches remaining in the world for Leatherback Sea Turtles. The land will be managed by the Puerto Rico Department of Natural and Environmental Resources conserving the natural resources there against future development.

In January 1994, the barge Morris J. Berman grounded on a reef off Punta Escambrón, Puerto Rico, releasing about 925,000 gallons of fuel oil into waters near San Juan. The oil spread along the northern coast of Puerto Rico, injuring resources along the shoreline and impairing their use for an extended time. In 2000, a settlement agreement resolving claims for natural resource damages was reached between the parties responsible for the spill and the Trustees: the National Park Service, National Oceanic and Atmospheric Administration, and Commonwealth of Puerto Rico. The settlement reached under the Oil Pollution Act includes \$9,688,563 for compensatory restoration projects to restore three categories of injured resources: lost use of San Juan National Historic Site and of recreational beaches caused by the spill and reef injuries caused by the grounding.

Since the settlement, the Trustees have worked together in a spirit of cooperative conservation to complete a Restoration Plan and Environmental Assessment that identifies compensatory restoration projects. After receiving input from the public, several restoration projects were selected. A kickoff event celebrating the public release of the restoration plan was held.