

PEOPLE LAND & WATER



The Department of the Interior works with a national array of partners in carrying out its stewardship responsibilities for America's public lands and other natural resources. Much of what we accomplish comes about through cooperative efforts with state and local governments and communities, conservation groups, corporations, and other private-sector organizations. This issue focuses on that dynamic relationship, offering a sampling of collaborative efforts, and highlighting the increasing importance of cooperation in an era of declining federal budgets. **Pages 6-13.**

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Cover Design by: Todd R. Hampton • ISC Graphics

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Letters to the Editor? E-mail to
PLW@ios.doi.gov. Fax to (202) 208-5133.
Phone (202) 208-7291. Write to PLW, Main
Interior, MS 6013, 1849 C Street, NW
Washington, D.C. 20240.

Interior People: A Look at Department Employees

and Their Work



Above, Max Little, a member of the Seminole Nation, leads the Grand Procession through the Interior auditorium, followed by Michael Nephew, as the White Oak Singers drum and sing the procession song. At left, Headman Dancer Joe Martin, a solicitor with the U.S. Department of Justice, wore Plains Indian attire that included more than 100 eagle feathers. At right is Head Woman Dancer Kimberly Toyekoyah. Powwow photos by Thomas Hartman

Powwow Celebrates American Indian Heritage

n Hartman

x Little, wearing traditional regalia of the Seminole Nation, led the Grand Procession, ritually marching from side to side, symbolically seeking signs and tracks that lead through life.

Headman Dancer, Joe Martin, of the Menominee tribe of Wisconsin, and Head Woman Dancer, Kimberly Toyekoyah, of the Kiowa and Pawnee tribes of Oklahoma, followed, as the procession moved down the aisle.

Joe Martin's Plains Indian attire included more than 100 eagle feathers. Toyekoyah wore a Kiowa dress with a white horse symbol honoring her family name. Other dancers were dressed in traditional themes from the Iroquois, Plains, Southern Plains, and Cherokee Tribes.

The White Oak Singers, led by Colin Bearstail, played the drum and sang the processional song, as the dancers made their way to the stage for the opening ceremony.

The Bureau of Indian Affairs celebrated the 1996 National American Indian Heritage Month by using powwow to also highlight the Combined Federal Campaign. With the theme "Seasons of Change", the powwow featured Indian dance, singing, crafts, and an Indian-oriented Combined Federal Campaign booth at a November 20 ceremony in the Main Interior Auditorium.

Assistant Secretary of Indian Affairs, Fred the festivities by reading a proclamation from President William J. Clinton: "Tribal America has brought to this great country certain ideas and values that have become ingrained in the American spirit: the knowledge that humans can thrive and prosper without destroying the natural

environment. Tribal America must figure as prominently in our future as it has in our past. I hereby proclaim November 1996 as National American Indian Heritage Month," the proclamation stated.

Deer pointed out that American Indians have served the nation honorably in every war since 1776. So quite appropriately, a joint services Armed Forces Color Guard presented the U.S. flag for the playing of the national anthem. The Flag Song honoring the nation and its veterans, a Native American tradition at powwows, was drummed and sung by the White Oak Singers. Clayton Old Elk gave the invocation in his native Crow language and in English.

"American Indians have always supported strong families and strong communities," said John Nicholas, BIA's director of Equal Employment Opportunity Programs. "Combining a celebration of National American Indian Heritage Month and the Combined Federal Campaign shows the involvement of Native Americans and the BIA in supporting the community."

Master of Ceremonies Tom Fugate, of the BIA's Eastern Area Office, lead the remainder of the four-hour festival, which included descriptions of the symbolism in the various dancers' clothing, dancing, drumming, singing, and story-telling, as well as information on the Combined Federal Campaign from Kristin Oliver, a campaign director.

Since a powwow is not complete without a raffle, two free-ticket drawings were held for an Indian carving of a woman on a horse, made and donated by Navajo artist Les Herbert, and a one-year membership to the Interior Department Recreation Association's fitness center. Donations to the drawing were given to the undesignated fund of the



From left, Harry Rainbolt, Willie Chism, and Steve Chism discuss a scholarship fund eligible for the Combined Federal Campaign. Photo by Thomas Hartman

Combined Federal Campaign.

BIA employees in the auditorium lobby distributed information on Indian-oriented campaign groups. Rebecca Kalush and Naomi Elsworth demonstrated and displayed several Indian crafts. During the lunch hour, more than thirty children from nearby day-care centers visited the powwow and learned about Indian dress and ceremony.

The powwow was sponsored by the BIA's Equal Employment Opportunity office and a committee formed by the BIA Key Workers in the Combined Federal Campaign. Kimberly Toyekoyah, Steve Chism, Willie Collins, and Valarious Drew provided the leadership needed to organize the event and make it successful. The final results of the Combined Federal Campaign will not be in for a while, but the powwow was a spectacular success.

Tom Hartman is a member of the BIA's Indian Gaming Management Staff. The U.S. Postal Service celebrates Native American Traditional Dances with a commemorative stamp issue. Story, page 18.

for 10 years. Earlier that same day she received a Special Achievement award for the excellence of her work in the USGS mail room at Menlo Park.

Those on her mail route know her as one of the hardest working, most cheerful people they see each day. Smith, who has a physical disability in the form of a twisted left foot, and some learning disabilities, begins her day by sorting mail and loading it onto the electric carts that are used to traverse the 26-acre campus.

There are 60 stops where mail is delivered and outgoing mail is picked up. It usually takes Smith and a co-worker about two hours to make the morning mail run. Then it's back to the main mail room to sort all the mail they've picked up; lunch; and then a repeat of the operation in the afternoon. When asked whether her job at the USGS is worth the long bus trip, Smith beams and says, "You bet; I think it's the best job in the whole world."

Interior Trains African-American Earth Scientists

Cradling space-age receivers and guided by electronic signals from satellites, they made their way around the quiet southern campus, mapping land features to a degree of accuracy that used to require the skills of trained surveyors.

The "surveyors", few of whom had mapping experience, were participants in the 13th annual Historically Black Colleges and Universities faculty workshop, conducted by the National Park Service at North Carolina Central University in Durham.

And the campus walks were part of their training and research using global positioning systems technology. The workshop was taught by U.S. Geological Survey staff with assistance from 17 earth science faculty members from across the Southeast.

"It provided the participants with valuable hands-on experience which most would not ordinarily have access to at their respective institutions," said workshop coordinator Lee De Cola, a research physical scientist at USGS's National Center in Reston, Virginia.

The graduates will use their new skills in a variety of ways, including incorporating the measurements in scientific papers, using their knowledge in Geographic Information System courses they teach, and encouraging their schools to purchase hand-held GPS units to teach their students.

"I began my career as a regional planner in the 1960s when there were lots of minorities starting to make their careers in planning and community organization," DeCola explained. "By now, most of my minority colleagues are beginning to retire and,



In top photo, USGS Instructor Peter Murtaugh, at right with baseball cap, demonstrates a GPS receiver to workshop members. Above, Lee De Cola, at right with hat, the coordinator of the workshop, works with a participant using a Global Positioning Systems unit.

frankly, I'm not sure that the earth sciences and professions are bringing enough new African-American talent into the system. The summer workshops are a small effort to correct this problem."

The core of the training was a 3-day course conducted by Matt Florio and Daryl Huffman of Trimble Navigation, Inc., using six roaming data capture receivers and one stationary base unit. The corrected data gathered by the participants was used to produce a campus map. The USGS team worked with participants to analyze the GPS raw data for accuracy assessment, scale issues, and datum adjustments. Discussion was provided on data processing techniques, and the integration of collected field data with USGS Digital Line Graph data using ArcView software.

Two other USGS staffers, Larry Hothem and Peter Murtaugh, also conducted training at the workshop. Murtaugh stressed that even when systems seem to break down, there can be a useful learning experience, because people learn as much when systems don't work correctly as when they do.

"I realized that one afternoon, when the lesson plan broke down and pandemonium broke out in the room," recalled De Cola. "Questions were being asked from all sides at once by several of the educators, and of course I did not have all the answers. It was exciting that eventually we sorted out all of the questions relying on each other to find the information."

Lord, Love of Work Guide NPS Ranger

Rachael Keating

Keeping the radio on at his bedside, Bill Miller jumps at any chance to help anyone in need. A criminal investigator at Grand Teton National Park for 30 years, Miller doesn't think twice about working extra hours. "Some people call me a workaholic, but I love to work and be productive," Miller said.

In October, the Teton County Peace Officers Association recognized Miller's dedication and achievements in law enforcement by selecting him as peace officer of the year. Bob Maguire, Teton park law enforcement specialist, nominated Miller for his integrity, strong work ethic, and ability to elicit confessions. His strong sense of morality and ethics has garnered the respect of his peers in the law enforcement community and the judicial system, said McGuire.

"Most people think I am a pretty cool customer under pressure, but I was so surprised by the award that I couldn't think of what to say," Miller said.

As a seasonal ranger, Miller could not believe he was chosen when there are so many excellent, hardworking law enforcement officers in Teton County. "I could never achieve this award without a great working relationship with other local law enforcement, the prosecutors, and the judges."



Miller never planned to work in law enforcement. After marrying his high school sweetheart at 17, he and his wife farmed in Kansas for four years before selling the farm and going to college. He studied ministry, but ended up working in public education. "The Lord decided to put me in a different line of work," Miller said.

He spent 28 years in El Cajon, California, working as a teacher, a junior high counselor, a vice principal, and a principal—work that has helped him handle and read people during criminal investigations. "It helped me know when to be direct and forceful and when to be more relaxed," he said.

In 1966, six years after moving to California, Miller applied and was hired as a seasonal law enforcement ranger at Grand Teton National Park. "I had no training, except for two hours in a patrol car," Miller said, laughing at the memory. "Law



Ranger Ben Miller, above, who recently was named officer of the year by the Teton County Peace Officers Association, began working in law enforcement at Grand Teton National Park in 1966. At left, Miller, inspecting the hunting permits of Casper, Wyoming, resident Randy Patricelli, monitors hunters activities during elk season. Photos courtesy of the Jackson Hole Guide

enforcement was different back then. The rangers had a communal weapon shared between them and it was locked in the glove compartment," he said.

Miller had intended to spend only three summers in Teton park, but ended up staying. His five children spent their summers working in the park, too. During his first two summers on road patrol, Miller made it his personal goal to stop drunk drivers after investigating a crash in which the driver had died.

"Road patrol rangers used to shut down at night when most drunk driving crashes happen," Miller said. "I made it my personal goal to stay out there past my shift." At the end of his two months, Miller had arrested more drunk drivers than had been arrested in the previous 10 years in the park. Road patrol rangers then started to monitor the park at night.

After three years, Miller advanced to a supervisor position in Colter Bay. He made such an impression with the success of his criminal investigations that the park developed the position of criminal investigator for him in 1976. One of his supervisors, Walt Dabney, now superintendent of Canyonlands National Park, wrote his impressions of Miller's work in a letter.

"I have seen you deal with some of the worst of representatives of the human species and, even when undeserved by them, you have always treated folks with composure and outstanding sense of humor," Dabney wrote in the letter.

In 1988, the draw of Wyoming became too great and Miller retired from public education in California to move to Jackson Hole for good. He began working seven months out of the year at the park. Miller plans to continue working as a ranger as long as he can. "I have been so fortunate to have so many great careers during my life, especially being a ranger."

Reprinted from the Jackson Hole News.

USGS Whirlwind has "Best Job in the Whole World"

Pat Jorgenson



Cindy Maltby, left, presents a special recognition plaque for personal achievement and work initiative to Audrey Smith of the USGS Western Region Center.

When Audrey Smith leaves her apartment in Milpitas, California, each weekday morning, she embarks on a trek that would wear most people out before they ever got to work. But two hours and three bus transfers later, when Smith arrives at the USGS in Menlo Park, she's full of energy and eager to get on with the job.

Smith has no choice but to take the long bus ride to work, because she is technically disabled and doesn't have a driver's license. But that's about the only way that she has allowed her disabilities to hold her back, as evidenced by her recent selection for two awards that recognized her excellent on-the-job performance at the USGS.

Audrey received a client-of-the-year award from HOPE, the Santa Clara-based rehabilitation and training agency that Smith has been associated with

round the Department

User Fee Test Program Will Fund Public Land Improvements at Parks, Refuges, and Recreational Areas

ig Overdue. Money well spent. Still the best gain in America. A small but significant step in right direction.

se were some of the initial and generally itive public reactions to the Department's reational fee test program, announced November 1996. The flood of comments from government cials, news media editorials, and the business munity heavily favored the pilot project that l increase fees at 106 Interior-managed reational sites around the nation and use the litional revenue for a backlog of specific repairs l improvements. (For a sample of editorial ction, see the Viewpoint Section, Page 32.)

en with the pilot fee increase, a family of four i enjoy a week's visit to Yosemite, Yellowstone, or crier National parks for less than it cost to see a t run movie," said **Secretary Babbitt**. "While ryingh else has gone up in price over the past years, Yellowstone is still \$10 per car. That's less n the price of a good video of the park, and ch less than it cost to visit an imitation lowstone at an amusement park in Florida," bbbitt said.

ew and revised recreational user and entrance s were authorized by Congress with broad artisan support. "I am pleased to see Secretary bbbitt has made good progress with the recreation demonstration program that was provided ough the Interior appropriations efforts," said ator **Slade Gorton**, Chairman of the Senate rropriations Subcommittee on Interior and ated Agencies. "I encourage the Department of Interior to move swiftly with its lementation."

re American people cherish the public lands and all recognized that the needs are enormous and wing," said **Representative Ralph Regula**, irman of the House Appropriations ommittee on Interior and Related Agencies. x dollars alone can no longer fully satisfy the and for increased recreation opportunities and ilities. This will provide much needed financial orces for the areas collecting fees to enhance visitor's experience," Regula said.

rance fees at the four largest parks will increase \$20 per car for seven days. Fees at most other ntified sites will range from \$2 per person to ut \$20 per car. The fees will be used for specific jects at the sites where they are collected and l be targeted for much needed repairs and rovements that have been delayed because of lget shortfalls.

example, the fees will enable Bighorn Canyon



Secretary Babbitt, who has climbed, paddled, and hiked through Interior-managed lands to raise public awareness of the need for proved upkeep and maintenance, receives a \$10,000 donation from the National Park Foundation for the restoration of the C&O Canal. Photo by Tami Heilemann, ISC

National Recreation Area in Wyoming and Montana to rehabilitate campgrounds and open new trails. It will allow for the repair of 60 miles of trails in Georgia's Chattahoochee River National Recreation Area, give visitors to Everglades National Park new grills and picnic tables, put visitors at California's Yosemite National Park on new shuttle buses, and provide for handicapped access to the best fishing at Minnesota Valley National Wildlife Refuge, south of Minnesota's Twin Cities. Hunters at Bosque del Apache National Wildlife Refuge in New Mexico will benefit from 50 acres of rehabilitated wetland habitat, and Texas campers will have campsites available at Amistad National Recreation.

The National Park Service, Bureau of Land Management, and the U.S. Fish and Wildlife Service have identified 106 of 1,880 sites—about 5.6 percent of Interior-managed recreational areas—to participate in the three-year test fee demonstration project. Congress has authorized the program for up to 300 sites (100 per bureau). Additional sites may be added to the project as public input and discussions with local community leaders are completed.

Under the current system, fees collected are deposited into the Treasury and are distributed by the Congress through the appropriations process. Not all recreational units charge fees at present. Only 186 of the national park system's 369 parks, monuments, and historical sites now charge entrance fees. And the estimated \$80 million those units collect each year covers only about five percent of the park service's \$1.4 billion annual budget.

The test fee demonstration project authorized by the Omnibus Consolidated Recessions and Appropriations Act of 1996 (P.L. 104-134) allows the collecting sites to keep up to 80 percent of the new fees and targets the remaining 20 percent to sites with the greatest need. The pilot program is expected to raise about \$50 million in additional revenue over three years.

Over the years, budgetary requirements have not kept pace with inflation, while the number of visitors to Interior recreation areas continued to increase. Last year, the national park system hosted 270 million visitors. The park service

To obtain a list of sites selected to participate in the test fee demonstration project and a brief explanation of how the new revenue will be used, please contact the respective bureau's public affairs office.

Fish and Wildlife Service;
42 sites identified; (202) 219-3861.

Bureau of Land Management;
17 sites; (202) 452-5125.

National Park Service;
47 sites; (202) 208-6843.



President Clinton speaks on the need for parks to retain some of their entrance fees and other ways of generating increased revenue for Interior-managed recreation areas during a 1995 visit to Grand Teton National Park. NPS Photo

estimates its backlog of deferred maintenance is about \$4.5 billion. The additional test fee revenue will be used to make additional funds available for repairs and improvements to roads, buildings, campgrounds, and nature trails. Some of the money will be used to improve educational programs, signs and exhibits, as well as visitor safety.

"Our highest priority as we implement the test fee demonstration program is to articulate to the public the need for their participation and support in order to maintain healthy, thriving, and accessible public lands," said Babbitt.

The bureaus have worked with local areas to develop fair and equitable fee collection programs. While public reactions indicate that most visitors support some fee increases as long as the funds stay with the site where they are collected, the Department will solicit opinions and advice at each identified site through a public outreach and involvement process. When the public involvement process is complete, it will help establish fee levels and potential infrastructure improvements.

"Public input, suggestions, ideas, and feedback are crucial to the success of this three-year demonstration project," Babbitt said. "We stand ready with the American public to rededicate ourselves to the task of enhancing and preserving our public lands."

A broad section of programmatic and geographically diverse sites have been identified to participate in the pilot fee demonstration project. As designated sites are announced, each local site will provide an explanation of the intended use of the revenue, allowance for frequent local use, and evaluation procedures for measuring success of the project.

Flight of the Condors

Six young California condors were released on the Vermilion Cliffs of Arizona December 12 in an historic effort to re-establish a second wild population of the endangered birds.

Secretary Babbitt signaled the start of the release that freed the condors near Paria Plateau, about 115 miles north of Flagstaff. The goal of the project is to re-establish the largest and rarest land bird in North America throughout its ancestral range. Condors once flew over vast stretches of the Southwest, including the cliffs of the Grand Canyon. Joining the Secretary for the release were Arizona **Senator John McCain** and Arizona **Governor Fife Symington**.

"This is a magnificent symbol of how the Endangered Species Act can, does, and is working," Babbitt said. "The recovery of this ancient and magnificent species is the result of a remarkable partnership and cooperation between the Fish and Wildlife Service and private and public groups.

Babbitt noted the support of the San Diego Wild Animal Park and Los Angeles Zoo in the captive breeding program that raised the condors as well as the Peregrine Fund's World Center for Birds of Prey in Boise, Idaho. The Peregrine Fund also paid all the costs of releasing the condors in Arizona.

Peregrine Fund President William Burnham called the release "an

historic event that is the result of cooperation between the government and the private sector to include the people of southern Utah and northern Arizona." The release came after an extensive series of meetings with local governments in southern Utah and northern Arizona, public hearings in both states, and a three-month public comment period.

The population of California condors declined to 21 birds and the species was on the brink of extinction in the 1980s. In 1987, the Fish and Wildlife Service took the bold action of bringing the last 7 wild condors in the hemisphere into captivity at a time when only 27 of the birds remained alive. There are now 120 California condors in the world—94 in captive breeding programs and 20 in the wilds of southern California, in addition to the six released at Vermilion Cliffs.

Arizona's larger wildlands with sparse population offer a more suitable habitat for the condor and the

Department wants to release more of the birds in the region. Babbitt said the condors will not impede hunting or grazing livestock, and will have only a minimal effect on how the land in northern Arizona can be used.



A condor perches on a ledge at Los Padres National Forest in California. Photo by Carl B. Koford

When the Smoke Clears

Jane Anderson

The wildfires were out and the smoke had cleared from the largest wildfire season in 30 years. The Department's firefighters stood down from their long hazardous summer and fall of containing and controlling thousands of blazes across the West.

But on millions of acres of burned public land, the work of other Interior employees had just begun. Specialists from the Bureau of Land Management, the National Park Service, the U.S. Fish and Wildlife Service, and other Interior agencies moved in to assess the damage done to the land, its wildlife and cultural resources, and develop rehabilitation plans. Cultural resources include Native American archeological sites and artifacts as well as dinosaur fossil beds.

A typical program was carried out at **Mesa Verde National Park** in Colorado. From August 17-24, the Chapin Fire No. 5 burned 4,781 acres in the park. The Burned Area Emergency Rehabilitation Team, a multidisciplinary group from Interior, was requested to assist the park with fire damage assessments. Led by **Irv Gasser**, the Team developed a rehabilitation plan to address short and long term needs to restore the health of the land.

Lisa Floyd-Hannah, a professor of Biology at Prescott College, assessed the burn for damage to threatened and endangered species of plants and animals. A survey also was done to evaluate the viability of plants to regenerate as well as an assessment of invasion of exotic plants, like Cheatgrass, St. Johnswort, and Purple Loosestrife. A project leader for the team, **Sarah Craighead** of Mesa Verde, was selected in September to implement the rehabilitation and assessment of burned areas using the Team's plan as a guideline. In October, about 200 acres of severely burned area were reseeded with native grasses. Hydrologists also assessed the burned area for potential damage from erosion caused by the runoff of soils.

The plan identified funding for assessing damage to the 295 previously recorded archeological sites located within the perimeter of the burn as well as the 75 new sites located during the digging of a fireline around the perimeter of the fire.

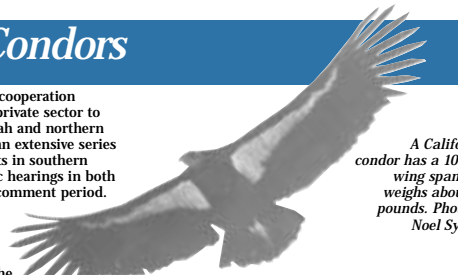
A team of 21 archeologists began the damage assessment of the previously recorded sites in



Protecting known and newly discovered archeological sites, above, and fossil beds, at below, is a major goal of rehabilitation efforts on Interior-managed land that has been burned by wildfires. Photos courtesy of BLM



October. **Gay Ives** was selected as lead archeologist. Her expertise gained during assessment of sites at Bandelier after the Dome Fire gave her an excellent background to implement assessment at Mesa Verde. As of November 25, eighty sites had been surveyed within the burn. Ninety two new sites have been found which also will need to be surveyed. These sites include a tower and kiva complex surrounded by several room blocks. Alcove



A California condor has a 10-foot wing span and weighs about 20 pounds. Photo by Noel Synder

"It is a peaceful and indeed a pacifist bird," Babbitt said, "with no interest in attacking livestock or other living animals. Think of it as a grand effort to tidy up the American landscape," Babbitt said of the condor's scavenging.

Only a 10-acre site where the birds are released will be restricted until the birds have dispersed. The birds were kept at the site in pens for several weeks to allow them to become comfortable with the climate and altitude of their new surroundings. To prepare the condors for living in the wild, the breeding program has been structured so that the birds have had no human contact.

They are the first six captive condors to be raised by their parents. However, Fish and Wildlife Service biologists will be acting like condor parents for a while, supplying the fledglings with supplemental feedings of carrion until the birds can learn to survive by themselves in the wild.

or cliff dwelling sites were also found that had never been recorded. It is estimated that there may be as many as 300 undocumented sites.

It is important that all of the burned area be surveyed as soon as possible so that the maximum amount of new site information may be acquired. This avoids potential loss of site data from erosion or burial, and new vegetation obscuring small sites or artifact scatters.

The archeologists concentrated their efforts in the high burn intensity area of the fire (1,104 acres or 23 percent of the burn). The vegetation in this area was completely burned and thus the soil has the highest potential for erosion. Any newly uncovered sites are at high risk for further damage or burial from eroding materials. Due to winter snows the project has been halted until spring when the archeologists will return to resume assessments.

At present, funding is available only for the assessment and rehabilitation of previously recorded sites at Mesa Verde. A donation account has been set up so that funds can be designated to assess new sites. Donations may be sent to National Park Service, Mesa Verde National Park, Colorado, 81330, and labeled "Chapin No. 5 Fire Rehabilitation Fund."

Similar efforts occurred across the West at numerous Interior-managed sites that were burned. A large scale project took place on BLM-managed land in Idaho, for example, where 438 blazes burned 752,000 acres. For about 90,000 acres that may not recover naturally, BLM developed rehabilitation plans and reseeded the area with native grasses, forbs, and shrubs to prevent non-native and volatile Cheatgrass from spreading. BLM also will rest all of the burned ground from grazing for two years. Nearly 300 miles of fence are being erected to protect the area.

"We have several objectives in rehabilitating programs," said BLM Idaho Director **Martha Hahn**. "Stabilizing the soil and re-establishing vegetation to prevent erosion is a major goal. Preventing loss of life and property in areas threatened by floods and mudslides and securing wildlife and cultural resources are primary concerns. And minimizing the establishment of undesirable vegetation like Cheatgrass is of longer-term significance to restoring the health of the land."

Working With America

We will continue to work through partnerships with local, state, and international groups to conserve and restore wildlife habitat.

— Bruce Babbitt

Endangered Species Protection Requires Greater Cooperation

The U.S. Supreme Court considers a challenge to a key provision of the Endangered Species Act, an international organization warns that a fourth of the world's mammal species are threatened with extinction and half of those may vanish within a decade.

A Supreme Court case was brought by landowners and conservation districts who claim they were harmed when the Interior Department reduced water flows from reservoirs on the Oregon-California border to protect two species of sucker. The suit alleges that the reductions violated the Act and that the loss of water caused \$75 million in damages to farmers and cattlemen.

If the court agrees, the decision could allow people whose economic interests are harmed by actions taken to protect endangered species to sue under the Act to stop what they view as overregulation.

Specifically, the landowners want the Supreme Court to return a lower appeals court ruling that said only people who have an interest in preserving endangered species have a right to sue under the Act's citizen suit provision. U.S. attorneys argue that people who suffer economic harm as a result of efforts to protect endangered species do not have standing to sue under the Act but can sue under other federal laws.

During oral arguments on November 13, several Justices expressed skepticism and concern with what one called a "piecemeal construction" of the Act's citizen suit provision. The court just read resource-user protection out of the Act, Justice **Anthony Kennedy** told Department of Justice attorneys. A ruling is expected by July.

As those deliberations continue, the most complete global analysis of endangered animal species ever compiled included that 1,096 of the 4,600 known species of mammals are at risk of extinction. The main factor threatening these warm-blooded, milk-producing animals is fragmentation and degradation of habitats by humans. Pollution also is a major factor.

The report was produced by the Species Survival Commission, the World Conservation Union and was jointly published with Conservation International. More than 500 scientists contributed to the study.

It is probably the most thorough scientific assessment of the state of the world's wildlife ever undertaken," said **Secretary Babbitt**. "The report's finding that habitat loss and fragmentation are primarily responsible for this threat is both disturbing and a reason for hope," Babbitt added.

The damage done by human activities can perhaps be set right by the ingenuity of people working together. Economies can thrive while protecting irreplaceable wildlife resources. Conserving the land and water habitat so important to wildlife and to our own quality of life," Babbitt emphasized.



Fifteen of the world's most beautiful, intriguing, and at-risk animals are featured on the U.S. Postal Service's Endangered Species Stamps issue. All of the animals depicted are on the U.S. Fish and Wildlife's Endangered Species list. The stamps are based on photographs by James Balog, whose work has appeared in numerous conservation magazines. The U.S. Postal Service is sending education kits to 65,000 schools and libraries to promote the stamps among young people.

The report's Red List of endangered species uses a set of objective criteria of endangerment that suggests that previous estimates of the number of endangered species worldwide may have been too low.

The report has no direct effect on U.S. listings, which recognize 431 domestic animal species, including 64 mammals, as endangered or threatened. U.S. lists

also recognize 525 domestic plant species as endangered or threatened. The complete report can be found on the Internet at www.iucn.org/themes/ssc/index.html

The book can be ordered by calling (202) 797-5454 or writing to the IUCN-U.S. Office, 1400 16th Street NW, Suite 502, Washington, D.C. 20036. The cost is \$40. A summary of the report's findings can be found at www.conservation.org.

Breaking Ground in Louisiana



From left, **Dr. Brad Brown**, Director, Southeast Fisheries Science Center, National Marine Fisheries Service; **U.S. Senator John Breaux**; Louisiana Lieutenant Governor **Kathleen Blanco**; **U.S. Senator J. Bennett Johnston**; and **Dr. James Caillier**, President of the University of Louisiana System. In the middle background is **Dr. Wayne Denton**, Vice-President of Research, University of Southwestern Louisiana. They are standing in front of the USGS National Wetlands Research Center, located in the university's research park in Lafayette.

Interior agencies joined with Louisiana state officials recently to help launch construction on a National Marine Fisheries Service compound at the University of Southwestern Louisiana's Research Park.

When completed, the buildings, which will be located next to the USGS National Wetlands Research Center, could host some USGS and Fish and Wildlife Service activities.

At a groundbreaking ceremony hosted by the USGS National Wetlands Research Center and the University of Southwestern Louisiana, guests spoke about the value that the new complex for the scientific community of the South and the economic benefits to the Lafayette, Louisiana, community.

Prominent speakers included U.S. Senators **John Breaux** and **J. Bennett Johnston**, Louisiana's Lieutenant Governor **Kathleen Blanco**, University of Southern Louisiana officials, and **Dr. Brad Brown**, Director of the National Marine Fisheries Service Southeast Fisheries Science Center.

Also participating in the groundbreaking were University of Louisiana System officials, architects, and contractors. In addition to the National Marine Fisheries Service, other potential occupants of the building are the U.S. Army Corps of Engineers, USGS, FWS, Department of Agriculture, and the Smithsonian Institution. Following the October 24 ceremony, an informal open house was held at the USGS National Wetlands Research Center.

U.S.-Mexican Environmental Cooperation

Saving the Maroon-Fronted Parrot

In the crevices of a rugged limestone cliff in northeastern Mexico, a rare bird has taken its last stand. The species only occurs within a 200-mile stretch of Mexico's *Sierra Madre Oriental*—a 9,000-foot occasionally snow-clad habitat.

But the remote wooded home that has protected this cold-weather parrot is now a popular site for vacation homes. Land clearing, especially in the pine forests on which the species depends for food, now threatens the maroon-fronted parrot.

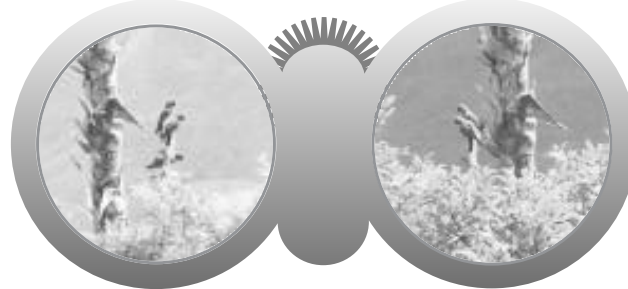
With financial and technical assistance from the Department of the Interior, the U.S. State Department, and private environmental groups, the Mexican government is coming to the aid of the endangered pigeon-sized bird. The international cooperation has enabled Mexico to establish the *El Taray* Sanctuary that includes the limestone cliff nesting site. The reserve will be administered by two private sector Mexican institutions—the Monterrey Institute of Technology and the Museum of Birds of Mexico.

"The sanctuary will protect about 100 pairs of the species, a quarter of the total breeding population," said **Brooks Yeager**, Interior's deputy assistant secretary for policy. Yeager recently led a U.S. delegation that took part in a ceremony officially opening the reserve. The delegation also visited other Interior-supported environmental projects in the northern Mexican states of Nuevo Leon and Coahuila, meeting with Mexican authorities as well as local partner organizations.

The U.S. Fish and Wildlife Service provided a \$55,000 research grant for the *El Taray* project. "Not a great deal of research has been done on wild parrots," said **Bonnie Cohen**, Interior's assistant secretary for policy. "In addition to protecting one of North America's only parrots, the *El Taray* project will generate new knowledge. This is a prudent investment that can be useful not only to Mexico but also to other nations with endangered populations of wild parrots," explained Cohen, who was instrumental in obtaining financial support for the project.

Mexican conservationists also hope that the colorful parrot—a species that people can identify with and care about—will become an environmental ambassador. The environmental movement in Mexico is about where the movement was in the United States 25 years ago. *El Taray* is extremely unusual because it is fundamentally a private sector operation.

The endangered parrot is mostly green with a stark maroon forehead and yellow eye rings. The entire population numbers about 1,500 birds, which live on 24 cliffs in the states of Coahuila and Nuevo Leon.



"The parrot is an easily recognizable, charismatic symbol, like the panda," said **Herb Raffaele**, the chief of international programs at the U.S. Fish and Wildlife Service. "Mexican conservationists hope that the species' preservation will motivate the Mexican public to become more directly involved in protecting the diverse natural resources that are under increasing pressure from development and overuse."



Interior representatives join Mexican conservationists at the base of the *El Taray* cliff. Standing, from left, are **Dr. Noel Snyder**, ornithologist, Wildlife Preservation Trust International; **Brooks Yeager**, Interior's deputy assistant secretary for policy; **Dr. Rodolfo Garza Gutierrez**, director general of ecology of Coahuila, SEMARNAP (Mexican Environment Ministry); **Snr. Aldegundo Garza de Leon**, director of the Bird Museum of Sotillo; and **Dr. Ernesto Enkerlin**, parrot project leader, *El Taray*, Monterrey Institute of Technology. In foreground is **Anya Schoolman**, special assistant to **Brooks Yeager**.

The U.S. delegation also took part in an opening ceremony for an environmental management training course developed with the support of the U.S. Fish and Wildlife Service. The Latin American Reserve Manager Training Program, initiated in 1989 by the FWS's Western Hemisphere Program, is a pioneer effort that trains managers for refuges, parks, and natural areas in Mexico and Latin America.

The 3-month course, held twice a year in the states of Nuevo Leon and Yucatan, addresses a major problem affecting protected neotropical areas, i.e. the lack of appropriately trained personnel to manage the resources. Thirteen courses, which graduated 96 professionals, have been conducted thus far.

The course is coordinated by the Mexican non-profit, non-governmental organization Ducks Unlimited de Mexico. Project partners include Mexico's federal environment and natural resource agency (SEMARNAP), the Monterrey Institute of Technology, and the National Fish and Wildlife Foundation. The project

has previously received assistance from the USDA Forest Service, the Illinois Audubon Council, and Ducks Unlimited Inc.'s Institute for Wetland and Waterfowl Research.

Yeager and the U.S. team also met with officials of PROFAUNA, A.C.—a non-profit, non-governmental organization in Coahuila that is carrying out several projects supported by Interior and the FWS. These initiatives include a training course in protected area management, conservation of monarch butterflies during their migration from Canada to

the Mexican state of Michoacan, and development of management plans for *Maderas del Carmen* Wildlife Refuge and *Cuatro Ciénegas* Ecological Reserve.

The *Maderas del Carmen* refuge is part of a transboundary biological corridor that begins in the Chisos Mountain in Big Bend, Texas. The *Cuatro Ciénegas* reserve is a 30- by 40-kilometer valley harboring a remarkable diversity of wetlands and biodiversity of endemic species. The refuge and the reserve are located in the State of Coahuila.

The PROFAUNA project also is developing a teacher training manual, entitled *Our Desert, Our Garden*, dealing with the biodiversity of the shared ecosystems along the U.S.-Mexican border.

Entire ecosystems are shared by the U.S. and Mexico. "The Sonora Desert is shared by Arizona and the Mexican state of Sonora," Yeager pointed out. "The biological corridor between Big Bend and Coahuila is a priority transboundary conservation area."

"These joint conservation efforts reflect the fact that Mexico and the United States are bound not only by geography, cultural links, and trade, but also by a complex biological web," said Yeager.

Six Decades of Cross-Boundary Cooperation

Mexico is the third most important country in the world in terms of biodiversity and endemic species. It plays a vital role in providing stopover and wintering habitats to a myriad of migratory species.

The U.S. Fish and Wildlife Service has a long history of collaboration with Mexico in biodiversity conservation and management partnerships. These initiatives address endangered species, wetlands, migratory birds, land enforcement, and CITES (the law prohibiting the illegal trade in endangered wildlife).

The U.S. delegation's September 10-13 visit to northern Mexico came during an important milestone in U.S.-Mexican cooperation on wildlife preservation. Sixty years ago the two nations signed the 1936 Migratory Bird Treaty.

Building on this relationship, Mexico, Canada, and the U.S. Government this year signed an agreement creating the Trilateral Committee for Wildlife, Plants, and Ecosystem Conservation and Management. The pact will make it easier for North American nations to develop new partnerships for the conservation and management of natural resources of mutual interest.

A Partnership With the Sun

Harnessing Desert Energy

is Davis

The sun breaks over the crest of the thousand-foot high Navajo sandstone cliffs that surround Dangling Rope. Summer's heat was stifling before dawn. Now the oven is reignited for another day, as the sun beats relentlessly on the blackbrush, Mormon Tea, beaver cactus, lizards, people, and photovoltaic panels.

beads of sweat roll down our faces as we leave the marina and trudge up the long, steep access to the top of the mesa. The tableland is dropped by the towering orange cliffs and noted by the crystal clear water of Lake Powell. A hundred degree heat and merciless sun are instant reminders of why this desert environment is an ideal site for our project.

group includes **Jeff Burks**, the director of the state's Office of Energy and Resource Planning, **Tim Reed**, an energy specialist in Burks' office, and **Vic Knox**, the chief of Facilities Management at Glen Canyon National Recreation Area.

Dangling Rope Marina sits in one of Lake Powell's many bays, near Rainbow Bridge National Monument. It can only be reached by boat, and is the sole location in the 90 miles between Wahweap and Bullfrog Marinas where boaters can get gas and picnic supplies, and find National Park Service rations and services.

Lake Powell, formed by the Bureau of Reclamation's Glen Canyon Dam, is one of the world's most spectacular reservoirs—the centerpiece of Glen Canyon National Recreation Area, which encompasses 1.25 million acres of the Colorado Plateau. The area also has one of the most abundant supplies of sunshine in the United States with 300+ sunny days each year.



Knox, left, and Denis Davis, right, review plans and specifications for the Dangling Rope project.

Dangling Rope over the past four and a half years, working to make the photovoltaic project a reality. But the roots of the initiative stretch back to the 1970s, when the floating Rainbow Marina in Lake Powell's Forbidding Canyon needed to be replaced.

Through a detailed planning process, the National Park Service selected Dangling Rope as the site for a new marina and support facilities, including NPS housing and utilities. The marina opened in the mid-1980s.

But electric power production at the site was expensive and environmentally hazardous. Diesel generators provided power at an average cost of 38 cents/kWh (kilowatt-hour)—about four to six times what a consumer on the nation's power grid pays.

All materials, supplies, and personnel had to be transported 40 miles by boat from Wahweap Marina near Page, Arizona. Thirty barge trips a year brought about 65,000 gallons of diesel fuel to Dangling Rope's generators. Minor diesel spills plagued the operation and the specter of a major spill gave me nightmares!

In Search of a Solution

The generators also spewed air pollution and broke the splendid night-time silence of the area for employees living there. The situation begged for a better energy source, but tying into the nation's power grid was not an option because of the marina's splendid isolation.

Though determined to solve the problem, the Park Service needed alternative energy expertise and money. When I met Reed, I found the expertise and enthusiasm that were essential for a solution. He and others in Utah's Office of Energy and Resource Planning conducted an economic feasibility study that examined energy options. The results looked good for a photovoltaic system.

Their energy audit of the residential and marina operation identified several ways that NPS and our concessionaire, ARAMRAK Lake Powell Resorts and Marinas, could reduce electric consumption by more than 25 percent.

From the study and audit, we developed a proposal and cost estimates for a photovoltaic energy system with battery storage. It would be a hybrid system with propane-fueled generators as the backup. We had worked to interest partners in the general concept along the way, but now we had a specific proposal.

The NPS wanted to protect the area's environment, save money, and use sustainable energy technology. Utah's energy planning office promoted energy

efficiency and clean, reliable, and cost-effective alternative energy technology.

ARAMARK welcomed reduced electric bills and was committed to protecting Lake Powell's environment. Pacificorp/Utah Power wanted to explore alternative power production technology, get hard data on the system performance, and reap carbon credits for reduced air pollution emissions.

The U.S. Environmental Protection Agency wanted to reduce air pollution emissions, while the U.S. Department of Energy sought to reduce energy consumption at federal facilities around the country and demonstrate new energy technology.

Working together, this group was able to accomplish what none of the partners could do individually. They came together with unique talents and expertise, zeal for a common mission that achieved

High Tech for the Third World

The Dangling Rope system should provide more than 80 percent of the marina's energy needs from photovoltaics. The scale and leading-edge technology of the project makes it a model that utility companies are likely to follow as they delve into Third World markets with small communities that cannot afford major hydroelectric or coal-powered energy projects.

The project is the second largest stand-alone photovoltaic system in the United States and the specially-designed power inverter is pushing the envelope of the current technology. An inverter is essential for translating and modulating between direct and alternating currents of electricity.

The inverter converts the direct current (DC) produced by the panels and stored in the batteries into alternating current (AC), which is carried on the area's electric distribution system. The backup generators also produce alternating current power.

The U.S. Department of Energy's Sandia National Laboratory designed the inverter for the Dangling Rope system. The Kenetech 250 kVA (kilovolt ampere) unit has 500 kVA surge capacity to handle the pumps and compressors (which use up to 40 horse power) needed in the area. Sandia also provided technical assistance, testing, and quality assurance. Demonstrating the inverter technology was a key attraction for Sandia and the Energy Department in supporting the project.

A Stillness at Dangling Rope

Utah's Governor **Mike Leavitt** flipped the switch and there was silence—the silence of success—as diesel generators wound to a halt and 384 photovoltaic panels began converting the sun's rays into electric power.

The hush of friendly, clean technology was an appropriate way to mark the conclusion of a public-private partnership that over four years had brought a \$1.5 million solar energy system to Dangling Rope Marina and moved Glen Canyon National Recreation Area into the realm of sustainable power production.

Congressman **Jim Hansen**, Chairman of the House Subcommittee on National Parks, Forests, and Lands, Utah Governor **Mike Leavitt**, Glen Canyon Superintendent **Joe Alston**, and many other dignitaries boated to Dangling Rope Marina August 30 for the dedication ceremonies of the photovoltaic project.

Congressman Hansen spoke eloquently about his family's long term affection for Glen Canyon and Lake Powell, going back before Glen Canyon Dam was constructed.

"For all the units of the National Park System, I want technology that will enhance them," Hansen said. "The reason this country is ahead of the rest of the world is technology. Here today is an example of technology that blows your mind."

"Another beautiful thing about this particular project is the partnership," Hansen continued.

"This is such a great, great example of what partnership is all about. Thanks to each and every one of you for the part you have played in this. That's how America works."

Utah Governor **Mike Leavitt**, below, flips the switch to activate the system. Utah Congressman **Jim Hansen**, at right, congratulates state, federal, and private sector partners at the dedication ceremony. **Joe Alston**, below at right, is superintendent of Glen Canyon National Recreation Area.



Governor Leavitt also extolled the virtues of the state, federal, and private partnership that had made the project possible. "This is a victory for cooperation. It is a victory for environmental balance. And when I use the term photovoltaic, it's a victory for vocabulary too," Leavitt said.

"It is amazing what you can do when people work together with limited resources and a clear logical idea. Thank you to those who had the foresight to do it, and the tenacity to stick with it."

Joe Alston, superintendent of Glen Canyon National Recreation Area, expressed the Park Service's gratitude for the cooperative effort, noting the project would not only cut power costs by more than \$2 million over 20 years but also help educate two million visitors to Lake Powell about the



environmental and economic benefits of solar energy.

"The National Park Service is committed to using clean, alternative energy sources and Dangling Rope Marina is an ideal location for demonstrating the benefits of solar technologies," Alston said.

their individual goals, and provided \$1.5 million to design and build a photovoltaic-propane generator system.

Augering Well in the Desert

We crest the mesa top, walk through the NPS and ARAMARK housing area, continue past a basketball court, follow along a utility corridor that has been cut through the desert shrubs, and arrive at the photovoltaic panel installation.

NPS Foreman **Pete Howard** is operating a specially-equipped backhoe, drilling twelve foot long pipes tipped with auger blades into the soil. Each row of vertical pipes is then connected along the top by a long horizontal pipe. That's all the foundation needed for the panels.

"It's gone in quickly because it's so easy to install," says **Tim Ball** of Applied Power Corporation, which designed and built the photovoltaic system. "That's why we're ahead of schedule. And it's less expensive than a conventional concrete foundation—one of the reasons we won the contract with our low bid," Ball adds.

Floyd Johnson, of ARAMARK, nods in agreement, also pleased with the rapid progress. He has been working as construction supervisor for the partnership to ensure compliance with the plans and specifications.

The NPS is thrilled with the auger system, because it produces the least possible disturbance. Excavation is not required. Desert shrubs and cactus may have been damaged during installation, but they will recover.

We walk over to the battery building, which is next to the NPS Maintenance Shop and Generator Building. Our conversations are loud now in order to be heard over the drone of the diesel generator.

"When the system is operational, we won't have the diesel stink at all," Reed shouts above the noise. "The propane generators run so much cleaner and should run less than 20 percent of the time as backup," he explains. We can see the black exhaust from the old diesel generator's muffler.

Jeff Burks notes that the project will result in huge cuts in annual air emissions, ticking off the expected reductions: More than 500 tons of carbon dioxide; 27,000 pounds of nitrous oxides; 2,000 pounds of sulfur dioxide; and 5,000 pounds of carbon monoxide.

21st Century Solar Technology

"These are the largest batteries I've ever seen," Burks says, as we examine the 44 cells that will store the power produced by the panels. Each weighs 4,200 pounds and is about as big as a dog house. The entire battery bank is designed to have a 2,400 kWh capacity.

We walk over to the NPS Maintenance Shop where the propane generators are waiting to be installed. Because NPS didn't have as much cash to bring to the table as some of the other partners, we offered as much as we could through in-kind services.

Vic Knox explains the active role the NPS employees have had in the project, barging all of the project material—including the generators—to the site, operating all of the heavy equipment, and installing energy-conserving lighting and soft-start units, which reduce surges in electric demand on large motors and compressors. NPS employees also are installing the propane distribution system.

As the group heads back toward the marina along the hot and dusty service road, the sun continues beating down on us and we all want water. But our enthusiasm for the project doesn't dry up.

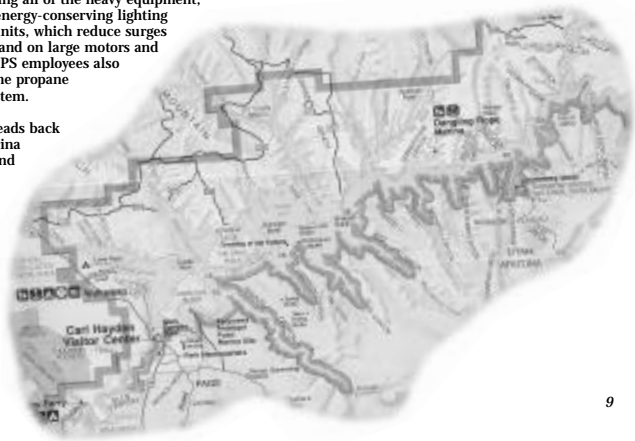
The initiative will allow the NPS to save more than \$2

million over 20 years due to the reduced cost to produce power. It will demonstrate photovoltaic-propane generator system technology and a new generation of large-scale power inverters necessary for remote, stand-alone solar power systems.

And perhaps most importantly, it will protect the environment by using renewable solar energy, eliminating the risk of diesel spills, improving air quality, and reducing noise pollution.

After refreshing ourselves at the marina, we board the boat and slowly cruise out past the bustling activity of the marina. Even on Lake Powell it is still hot and the sun still shines brightly, holding out the promise of a sustainable future that will allow us to protect the environment and conserve our precious resources and dollars.

Denis Davis served as chief of facilities management and chief of administration at Glen Canyon National Recreation Area. He recently was named superintendent of Cumberland Island National Seashore.



Working With the West



n Holt

Interior troops have been engaged in a long, quiet war. But its battle victories are rarely heralded. The strategic goal is to win back wetland and river habitats that were lost to decades of neglect and deterioration. And the most highly effective tactics in restoring these natural resources have been cooperation and partnerships with Western communities.

A typical battle took place at **Muddy Creek**, a tributary of the Sun River near Great Falls, Montana. The stream has been the problem child of the Upper Missouri River Basin for decades. Agricultural development and increased irrigation return flows caused extensive erosion of banks and loss of farmland.

Eventually, the creek carried 200,000 tons of sediment annually into the Sun River, severely degrading the water quality in both the Sun and Souris Rivers. The stream's steady deterioration led Montana officials to designate Muddy Creek the state's number one source of non-point pollution.

In the early 1980s, the Bureau of Reclamation's Rehabilitation and Betterment Program began working with the Greenfields Irrigation District to make operational changes and modifications in the district's delivery system.



Erosion along Muddy Creek, like that shown above, has cut the bank so severely that it forms a 20-foot vertical wall above the stream bed. Low-profile rock grade control on both sides of the creek, at right in foreground, has improved riparian areas in the Muddy Creek corridor. Photos by R. Wittler



Based on its success, the Task Force has won additional funding to continue the restoration of Muddy

"Muddy Creek is a perfect example of how teamwork can bring positive results and solutions to a major water quality problem," says **Alan Rollo**, Task Force Coordinator for Muddy Creek Project. "It's been a great thrill to be a part of this worthwhile project."

Low profile rock structures were used to control the grade and protect the eroding banks, giving the riparian vegetation a chance to establish. Limiting livestock access revitalized root systems and reduced physical trampling, further resulting in bank stabilization and improved riparian habitat.

Reclamation provided funding and technical assistance, while the Natural Resources Conservation Service worked with farmers, ranchers, and landowners to improve farming and ranching practices in the watershed. The Conservation Service provided surveys, fencing, and grazing recommendations. The District provided the work force and equipment for the project.

In 1992, local interests formed the Muddy Creek Task Force, which called on Reclamation and the Natural Resources Conservation Service to demonstrate the latest river restoration and watershed planning technology in the most severely eroded reach of the stream. The objective was to evaluate a low-cost grade control and bank protection design along a 4-mile stretch.

In a cooperative effort between the water users, the U.S. Natural Resources Conservation Service, and state agencies, changes in farm irrigation methods reduced return flows to the creek by about 20,000 acre-feet annually by the late 1980s.

Creek and the overall Sun River Watershed. The grants came from the Montana Legislature, the U.S. Environmental Protection Agency, and the National Fish and Wildlife Foundation.

Tactics and Tools

Partnerships like the Muddy River Task Force are one of the most effective tools available to Interior agencies to launch new projects or complete ongoing work despite tight or declining budgets.

Cooperation can produce new expertise, materials, and equipment, unlock public and private agencies' resources, and mobilize a veritable army of workers, from special interest groups and volunteers, to members of the public and Native American Tribes.

To more efficiently and economically accomplish its mission, for example, Reclamation has entered into Memorandums of Understanding and Cooperative Agreements with a myriad of partners over the last decade.

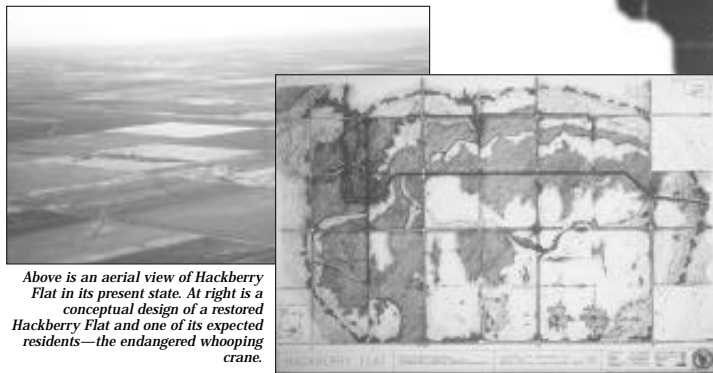
The goals are as varied as the partners: restoring and enhancing wetlands and riparian habitat; posting interpretive signs along wetlands; providing fishing education and opportunities for disabled children; providing nesting habitat for birds; constructing handicapped facilities at state parks; stabilizing lake shorelines; and conducting cultural resource inventories and site evaluations.

And **President Clinton's** new Executive Order on recreational fisheries is serving as a springboard for additional partnerships to increase sport fishing opportunities on public lands—like the one at **Butte Creek** in Northern California.

The creek historically supported viable populations of fall- and spring-run chinook salmon. But the stream also is a major source of water for wetlands on the Upper Butte Basin Wildlife Area, which provides important habitat for migratory waterfowl in the Pacific Flyway. As water was diverted from the Creek for agricultural and wetlands flooding, concerns arose over possible loss of salmon in the process.

Reclamation forged a partnership with U.S. Fish and Wildlife Service, Ducks Unlimited, the M&T Ranch, and Parrott Ranch to help install a fish screen at the diversion point. The California Department of Fish and Game provided most of the funding but Reclamation contributed \$22,000 for site preparation.

Restoring Waterfowl Habitat



Above is an aerial view of Hackberry Flat in its present state. At right is a conceptual design of a restored Hackberry Flat and one of its expected residents—the endangered whooping crane.

The screen protects the fish while water is diverted for wetland flooding and post-harvest shallow inundation of rice straw for migratory waterbirds. The diversion will no longer damage important anadromous (migrating) fish runs.

Hackberry Flat and Las Vegas Wash

Another major focus of partnership efforts is restoring waterfowl habitat. In a project in Hackberry Flat, Oklahoma, Reclamation teamed up with **The Williams Companies, Inc.**, in an effort led by the State of Oklahoma to restore a 3,750-acre natural basin.

Prior to its drainage and conversion to farmland, it was the largest isolated wetland in the state and an important stopover for thousands of migrating waterfowl and shorebirds. The partnership includes numerous local, state, and federal agencies, as well as non-government organizations and groups.

The basin is part of a 7,250-acre parcel purchased by Oklahoma's Department of Wildlife Conservation for use in its Hackberry Flat Wetland Restoration Project. Once the area is restored, it is expected to be used by more than 200,000 waterfowl and shorebirds, including the endangered whooping crane.

Reclamation and the Mountain Park Conservancy District will provide 2,352 acre-feet of water per year, and The Williams Companies have agreed to donate 16 miles of steel pipe to deliver water to the basin from the supply source.

"The opportunity to partner with the State of Oklahoma and the Bureau of Reclamation for such a worthwhile project is exciting, and we look forward to doing what we can to make this effort a success," said **Keith Bailey**, Williams chief executive officer.

The donated pipe will be collected from Williams' five natural gas pipe companies—Transcontinental Gas Pipe Line Corporation, Northwest Pipeline Corporation, Kern River Gas Transmission Company, Texas Gas Transmission Corporation, and Williams Natural Gas Company. It will be gathered over the next year and made available to the Oklahoma Department of Wildlife Conservation in the fall of 1997.

Another Reclamation partnership with the National Park Service and the Lake Las Vegas Corporation is restoring a section of wetlands at **Las Vegas Wash** in the Lake Mead National Recreation Area in southern Nevada. Las Vegas Wash flows year-round from the Las Vegas Valley into Lake Mead's Las Vegas Bay.

Treated wastewater effluent and intermittent storm drainage from the Las Vegas Valley are the primary sources of water for the wetlands. Exotic tamarisk (salt cedar) formerly dominated the area and increased flows into the Wash from population growth in southern Nevada caused severe bank erosion. The wildlife habitat was significantly degraded.

Reclamation's Denver Technical Service Center provided design for the project, and the Grand Canyon and Yuma Area Offices are cooperating to complete the construction. To bring a portion of this wetland area back to its original condition, crews have removed the tamarisk from the area by cutting, burning, and use of heavy equipment.

Rock berms are under construction to form two pools of water totaling 7.5 acres of wetlands and riparian habitat. The berms also will reduce the rate of water flow, and therefore, erosion. The Lake Las Vegas Corporation donated 20,000 cubic yards of rock for this portion of the project.

When construction is complete, the National Park Service will take the lead in vegetation management of the area by planting ten acres of native trees and shrubs, including emergent species such as spikerush and sedge and riparian plants like cottonwood and willow.

The wetlands will provide a degree of water treatment to the effluent while also providing enhanced wildlife habitat and visitor recreational experiences. As funding permits, the Park Service also will develop a network of trails, interpretive



At left, a Bureau of Land Management fire crew burns exotic tamarisk (salt cedar) along Las Vegas Wash. Below, is an aerial view of Las Vegas Wash before restoration work began. Lake Las Vegas is in the background.



exhibits, and observation platforms.

When completed, the project will be staffed by NPS employees and volunteers from the local community. It will complement the proposed Clark County Wetlands Park. Together, they will provide opportunities to educate and involve the public through a visitor center and research campus, trails, and interpretive displays along the riparian areas.

These examples are just a few of the many meaningful projects that Reclamation, the National Park Service, the Fish and Wildlife Service, and other Interior bureaus are involved in with a variety of partners throughout the West. As agencies continue to downsize and budgets continue to shrink, partnerships will continue to grow as a viable means of winning the struggle to restore the nation's degraded natural resources.

Restoration wetland and riverside habitat for wildlife is especially critical in the arid West. Though those areas make up less than 10 percent of the land in the region, they are home to 75 percent of the area's wildlife, which depend on them for survival.

Lynn Holt is a public affairs specialist with the Bureau of Reclamation's Denver Service Center.

Collaborating in Nature's Classroom

Interior Scouting Promotes Stewardship

by Mona Schermerhorn

A crew of Scouts, exhilarated by the challenging trail and rocky slope, reaches the 12,441-foot peak of New Mexico's Baldy Mountain and sits down to rest, drink some water, and marvel at the vista. Obscured by haze or dust, they can clearly see the horizon.

Phil Harraden, a geologist at the Bureau of Land Management's Cimarron office, greets the Scouts with a smile and fields questions about the geology of the vast landscape stretched before them.

Harraden asks, "What's your job and what do you guys do?" The geologist explains the concept of public lands (virtually unheard of in the Big East), the Bureau's mission to manage and protect these lands, and his role as a petroleum geologist.

After a day of hiking, the crew heads down the trail to the next station with a better understanding and appreciation not only of the geology of the magnificent Sangre de Cristo Mountains but also of the vital role of the West.

Harraden is one of a number of BLM professionals who volunteer their time and talent to provide education to thousands of boys and girls from across the country. Through instruction in geology, mineralogy, and BLMology as part of a cooperative effort with scouting groups in the West.

Harraden is one of a number of BLM professionals who volunteer their time and talent to provide education to thousands of boys and girls from across the country. Through instruction in geology, mineralogy, and BLMology as part of a cooperative effort with scouting groups in the West.

The Big Bang Theory of Scouting

More than 20,000 Scouts from all over the country hike the trails at Philmont every summer for their country camps," Carlson explains. "The BLM professionals serve as counterparts to Philmont's



Philmont's instructors dress and act the part of Old West blacksmiths and muckers. From left, Susan Panttaja, geologist, Harding Lawson Associates; Chris Ferguson, Atlanta, Georgia; David Cavins, Moline, Illinois; Marsh Howard, Tahlequah, Oklahoma; Stu Carlson, BLM's National Minerals Outreach Coordinator; Rusty Morris, Downers Grove, Illinois; and Claudia Newbury, a DOE geologist. At right, Gina Ross, a mine engineer with Phelps Dodge Corporation of Morenci, Arizona, encourages Girl Scouts to think about earth science careers. Photos by Mona Schermerhorn



Above at right, Greg Wilkerson, a BLM geologist with the Bakersfield District Office in California, teaches Scouts from Shelbyville, Kentucky, the art of panning at Philmont's French Henry Camp, once a working gold mine. Photo by Mona Schermerhorn

camp directors at each wilderness experience."

Founded in 1938 on 214 square miles of wilderness, Philmont is the largest, high-adventure Boy Scout camp in the nation, known in the scouting world as the BIG BANG. Philmont's leaders, who constantly enhance their programs to keep up with today's enlightened youth, eagerly welcome the collaboration with BLM professionals.

At historic mining sites, Scouts visit abandoned mines and study mining relics. They are taught how gold ore was processed from placer and lode deposits and try their luck at gold panning. Technical skills camps teach rope climbing, map reading, and orienteering. Mountain Men activities give lessons in black powder muzzle loading rifles and hatchet throwing.

In each of the camps, Philmont directors dress in interpretive clothing depicting the time in which the activities were a reality. Cabins are replicas of the era and are equipped with authentic tools used by original wilderness inhabitants.

"The BLM instructors also serve as role models for the Scouts and the directors," Carlson says. "I'm counseling them on careers in earth sciences and federal employment."

"BLM professionals have shown me where I want to go with my career," says Hunter Seim, a Philmont camp director. "I like the caliber of the guys I've met



here with the BLM... what they stand for... their integrity," adds Seim, who chose a career with the Bureau and works in California.

Carlson also launched the project that brought professional women volunteers to Elliott Barker Girl Scout Camp to teach earth sciences and serve as role models, opening the girls' minds to the variety of career options, especially in non-traditional fields.

Non-Traditional Role Models

Begun in 1993, the program at Barker reaches 700 Girl Scouts each summer. The 536-acre camp, near Angel Fire (30 miles from Philmont), participated in the BLM's geology-paleontology program.

Carlson recruits nation-wide for instructors at federal and state minerals agencies, and the private sector. Retired scientists also join the program. The volunteers at Barker have included a paleontologist, geologists, mine engineers, a geohydrologist, an environmental engineer, and a metallurgist.

Their lessons include the structure of dinosaur bones and the eras in which they lived. While conducting a demonstration for one of these classes, the first geology instructor unearthed a bed of invertebrate fossils from the Paleozoic era on camp property. The fossils are estimated to be 300 million years old.

There also are talks on gold panning, hydrology, minerals used in everyday lives, rock formations, and locations of mineral deposits on the campgrounds.

Each year, several of the camp counselors are recruited from foreign countries, which adds a global perspective to the discussions and develops an awareness of universal environmental concerns.

Carlson's pilot project is now a permanent part of Barker's camping experience and has been "borrowed" by Philmont. Noting the high caliber of women mineralogy instructors volunteering at Barker, Philmont placed women instructors in its backcountry camps and opened its gates to high-school age girls in the Exploring program (for older teenage girls).

The collaboration between the Philmont and the BLM will be featured in a segment of a video magazine piece, called Scout Challenge, that is scheduled to be aired nationally this year on the Outdoor Life Network. For details, call Chris Brock, Irving, Texas, (800) 395-2452.

For more information about the volunteer instructor program, contact Stu Carlson, BLM Utah State Office at Salt Lake City, at (801) 539-4244, or Mona Schermerhorn, BLM New Mexico State Office at Santa Fe, at (505) 438-7515.

Mona Schermerhorn is a mineral leasing specialist for the BLM in Santa Fe, New Mexico.

Promoting Scouting Nationwide

Linking Girls To The Land

Jan Carroll

In an unprecedented move, five federal natural resource agencies have united with the Girl Scouts of the USA and the National Environmental Education and Training Foundation to develop a program encouraging girls to become involved in conservation issues and careers.

Designed to complement each agency's existing conservation partnership with the Girl Scouts, "Linking Girls to the Land" provides a means for adults in Girl Scouting to learn how to implement those partnerships on the local level; where local units of the agencies can be found; and whom to contact for help with conservation programs— badge work, service projects, Silver and Gold Award projects.

Currently, the program consists of 1-1/2-day state-specific training sessions and 3-day national training sessions to get Girl Scout adult volunteers together with agency professionals. At these training sessions, participants explore ways to accomplish their common missions and goals. Several other learning tools are being developed.

These include a pamphlet describing the various Girl Scout proficiencies that have science, conservation, or other out-of-doors themes and how they can fit into agency programs; modules for additional training; a nationwide multi-agency patch program for girls. A video and a new exhibit are expected to be completed in time for the 1999 Girl Scout National Convention to be held in Kansas City, Missouri.

Agencies involved in "Linking Girls to the Land" are the Fish and Wildlife Service, National Park Service, Bureau of Land Management, U.S. Department of

Agriculture Forest Service and USDA's Natural Resource Conservation Service.

For more information, contact Jan Carroll in the Fish and Wildlife Service at (202) 208-5634, Leslie Heffner-Schwager in the Bureau of Land Management at (202) 452-7733, Minerva Woodard in the National Park Service at (202) 343-1429, Bill Boyer in USDA Natural Resources Conservation Service at (202) 720-0307, and Ann Fege, USDA Forest Service, at (619) 674-2901.

National Boy Scout Jamboree

The Fish and Wildlife Service is once again gearing up for the National Boy Scout Jamboree. This year's theme is Character Counts: Be Prepared for the 21st Century.

Service personnel from all over the country participate in the interagency conservation trail, which features exhibits highlighting conservation practices and career opportunities. They also staff the Service's exhibits, run merit badge booths, and conduct orientation sessions. The staff of Harrison Lake National Fish Hatchery is raising 10,000 catfish for the Jamboree's very popular fishing program.

This is the Service's sixth appearance at the quadrennial jamboree. More than 35,000 Scouts are expected to participate in this year's event, which will be held July 28 through August 5, 1997, at Ft. A.P. Hill near Fredericksburg, Virginia.

FWS Presents National Scouting Awards



Lund

Hundreds of Fish and Wildlife Service employees nationwide volunteer their time and energy in Scouting. To acknowledge their efforts, seven Service employees, one from each of the Service's regions, recently received the Director's 1995 Special Achievement Award for Scouting.

The recipients are Andrew Yuen, Region 1; Daniel Knous, Region 2; Michael Vanderford, Region 3; Eric Alvarez, Region 4; Steven Atzert, Region 5; Allan Lund, Region 6; and Carol Hale, Region 7.



Hale

The Service's annual national awards program helps promote support for Scouting activities. Under Interior's formal agreements pledging support for Boy Scout and Girl Scout conservation programs, the Service has developed partnerships to implement that support. Service manual chapters spell out the Service's role with both organizations.

For more information on Scouting programs, contact Dan Stiles or Gary Stolz at the National Education and Training Center, (703) 358-1781, or Jan Carroll, Media Services, at (202) 208-5634.



Megan Larkin, a Girl Scout at New Mexico's Camp Elliott Barker, demonstrates one way to become attached to natural resources.

Interagency Exhibit a Hit at Girl Scout National Convention

Interior agencies presented a multi-agency conservation exhibit at the 47th National Council of Girl Scouts of the USA. Every three years, adult and older girl members of the Girl Scouts gather to set policy for the ensuing three years, elect the national board of directors and officers, and decide on directions for the future in Girl Scouting. This year, the national convention was held in Ft. Worth, Texas.

When the delegates and visitors, several thousand strong, are not participating in council sessions, they can be found strolling through the exhibit hall where agencies and organizations publicize their various Girl Scout partnerships.

The Fish and Wildlife Service has provided an exhibit and staff members at the last three national conventions. This year, however, the Service got together with the Bureau of Land Management, the National Park Service, and the U.S. Department of Agriculture's Forest Service to put together a multi-agency exhibit.

The result was a dynamic presentation of agency conservation partnerships with the Girl Scouts, including street theater; an interactive display; and hand-outs in both English and Spanish explaining the partnerships, background on the agencies, and how to implement the partnerships. One of the most popular offerings was state-specific lists of BLM offices and national forests, parks, and wildlife refuges.

For information about working with Girl Scouts, contact Jan Carroll in FWS Media Services, (202) 208-5634.

Bald Eagles Attract A Crowd

Montana's Canyon Ferry Bald Eagle Viewing Program is well underway this fall with more than 1,000 bald eagles expected to migrate through the area. Each year, the bald eagles stop at Hauser Lake to feast on the kokanee salmon that die after spawning. This popular program includes a hosted viewing area, school tours and a visitor center with excellent exhibits on bald eagle ecology. Nine local, state, private, and federal cooperating organizations take turns hosting the viewing site on holidays and weekends. The BLM serves as the lead agency under an interagency agreement with the Bureau of Reclamation. Chuck Neal, BLM Park Ranger, and Walt Timmerman, Seasonal Park Ranger, direct the program and, along with over 30 volunteers, enhance the eagle viewing experience for about 13,000 people each fall.

U.S. Geological Survey



Gordon P. Eaton, Director
Kathleen Gohn, Bureau Editor

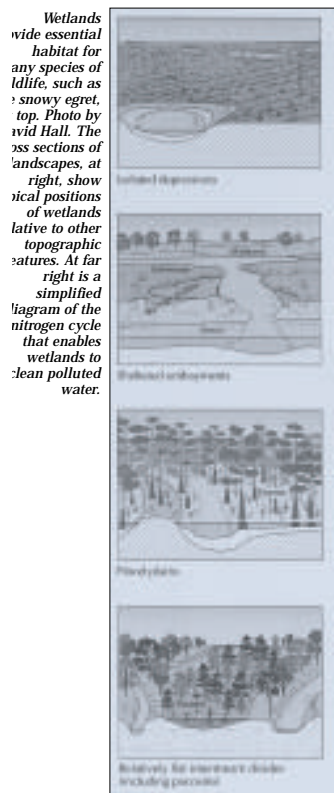
Interagency Effort Inventories National Wetlands Resources

by Fretwell

National Water Summary on Wetland Resources, a state-by-state overview of wetland resources in the United States, was recently released by the USGS. The attractive, full-color book describes the types and distribution of wetlands, trends of wetland losses and gains, and conservation efforts in each state.

The book offers a spectrum of articles discussing wetlands from many different perspectives and documenting the values of wetlands not only to wildlife but also to society in terms of flood control and water quality improvement. It provides information on history, legislation, habitat, hydrology, research, assessment, mapping, restoration, and recovery.

Wetlands are a wide essential habitat for many species of wildlife, such as the snowy egret. Photo by David Hall. The cross sections of landscapes, at right, show typical positions of wetlands relative to other topographic features. At far right is a simplified diagram of the nitrogen cycle that enables wetlands to clean polluted water.



The book is a cooperative effort of scientists from federal and state agencies and other organizations, including the U.S. Fish and Wildlife Service, the former National Biological Service (now the Biological Resources Division of the USGS), the U.S. Environmental Protection Agency, and the U.S. Army Corps of Engineers.

Its publication concludes a series of eighth volumes begun in 1983 to document national water resources. Earlier summaries addressed hydrologic events and issues, selected water-quality trends and ground water resources, surface water resources, ground water quality, water supply and use, floods and droughts, and stream water quality.

A Tour of America's Wetlands

There are many types of U. S. wetlands, known by several familiar names, including swamp, marsh, bog, playa, tidel flat, prairie pothole, and pond. Lesser known and localized names are cienega, pocosin, muskeg, wet pine flatwoods, and willow carrs. They are distributed unevenly throughout the United States and occur in widely diverse settings ranging from coastal margins to high mountain valleys.

Wetlands are among the most productive habitats in the world. About one-third of North American bird species use wetlands for food, shelter, or breeding and half of the 188 animals that are federally-designated as endangered or threatened depend on wetlands.

When they are associated with lakes and streams, wetlands store floodwaters by spreading the water out over a large area. This temporary storage decreases runoff velocity, reduces flood peaks, and distributes stormflows over longer time periods, causing flow in tributaries and main channels to peak at different times.

Wetlands can maintain good quality water and improve degraded water. The ability of wetlands to filter and transform nutrients and other constituents has resulted in the construction and use of artificial wetlands to treat wastewater and acid mine drainage.

Watersheds with more wetlands tend to have water with lower concentrations of chloride, lead, inorganic nitrogen, suspended solids, and total and dissolved phosphorus than watersheds with fewer wetlands. Wetlands are a major sink (where material is trapped and held) for heavy metals and sulfur, which combines with metals to form relatively insoluble compounds.

Of the original 221 million acres of wetlands in the conterminous United States, 103 million acres remain today. Although the rate of wetland conversions has slowed in recent years, wetland losses continue to outdistance gains. Wetland alterations have changed the migratory patterns of birds, the local climate, and the composition of plant and animal populations.

States are becoming more active in wetland protection, adopting programs to protect wetlands beyond those enacted by the federal government. Wetland restoration and creation, which result from mitigation projects, help maintain the benefits of wetlands and accommodate the human need for development.



Alaska Volcano Observatory staff set up equipment for a system that tracks volcanic ash clouds and provides warnings to airline pilots flying the North Pacific route.

Alaska Observatory Honored For Alert System

Karen Wood

Employees of the Alaska Volcano Observatory developed a system to warn airline pilots of ash clouds from erupting volcanoes, earning the team one of Vice President Al Gore's Hammer Awards, a special recognition for contributions in support of the President's National Performance Review Principles.

The award was presented by Deborah Williams, special assistant to the Secretary of the Interior for Alaska, on October 22 in Anchorage. It is given for efforts that demonstrate the principles of putting customers first, cutting red tape, empowering employees, and getting back to basics.

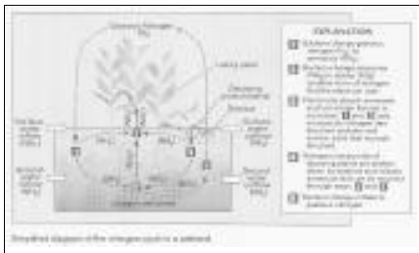
Congratulatory statements were also made by the Chancellor of the University of Alaska Fairbanks, by representatives of Alaska Senators Ted Stevens and Frank Murkowski, and by the Governor of Alaska.

Observatory employees were honored for playing a key role in implementing an effective mitigation strategy to reduce human and economic losses from aviation hazards due to volcanic ash. These employees monitor Alaskan volcanoes and provide near real-time eruption warnings and the prognosis of likely activity to the National Weather Service, which uses satellite imagery to help identify and track volcanic ash clouds.

The Federal Aviation Administration uses the information from the Observatory and National Weather Service to alert pilots and air traffic controllers of volcanic activity, so planes can be rerouted safely and efficiently around the ash clouds.

In the past 15 years, about 80 jet aircraft are known to have entered volcanic-ash clouds, putting thousands of passengers at risk. Although no aircraft have been lost, there have been several near misses, as intake of volcanic ash caused jet engines to stall temporarily. The busy air routes of the northern Pacific are especially vulnerable to such hazards, due to the 100 frequently active volcanoes in Alaska and the Russian Far East.

The Alaska Volcano Observatory is a cooperative effort of the USGS, the University of Alaska Fairbanks Geophysical Institute, and the Alaska Division of Geological and Geophysical Surveys.



For more information visit <http://hzo.usgs.gov/Lookup/get?wsp2425/>

Tracking Grizzlies in the Yellowstone Ecosystem

Gail Keirn

Grizzly bears once roamed over most of the western United States from the high plains to the Pacific coast. However, between 1850 and 1920, grizzly bears were eliminated from 95 percent of their original range through hunting.

Because of this dramatic decline, grizzly bears in the contiguous United States were listed as a threatened species under the Endangered Species Act in 1975. Today, grizzly bears persist in five areas in the lower forty-eight states: the Northern Continental Divide, Greater Yellowstone, Cabinet-Yaak, Selkirk, and North Cascade ecosystems.

In 1973, the Interagency Grizzly Bear Study Team was formed to assist with the management and recovery of the grizzly bear. The team, whose members come from USGS, NPS, BLM, FWS, the Forest Service, and the States of Idaho, Montana, and Wyoming, has been conducting research on grizzly bears in the Greater Yellowstone Ecosystem for more than 15 years.

The results of their studies are providing valuable information to resource managers for the immediate and long-term management of grizzly bears in the Yellowstone area.

As part of the team, scientists from the USGS Biological Resources Division's Midcontinent Ecological Science Center are working to gain a better understanding of the ecology of grizzly bears. To do this, individual bears are captured and fitted with radio transmitter collars and marked with ear tags and tattoos.

The collared bears are monitored by weekly aerial surveys to provide data on movements, home range, habitat use, and population parameters. After these locations are pinpointed, ground crews investigate the areas to determine food habits and habitat use.

The information gained from these monitoring activities is being used to develop a Geographic Information System-based cumulative effects model. The model will aid scientists and resource managers in predicting the impacts of human

Grizzly Bear Facts

Grizzlies are relatively long-lived, some surviving up to 40 years in zoos. The oldest grizzly captured in the Greater Yellowstone Ecosystem lived to be 28.

Adult male grizzlies normally weigh 400-600 pounds, but have reached close to 800 pounds. Adult females weigh 250-350 pounds.

Adults stand 3.5-4.5 feet at the hump when on all fours and may rear up on their hind legs to a height of eight feet.

Grizzlies are omnivores, eating both plants and animals including fish, ground squirrels, ungulates, carrion, roots, fungi, tubers, berries, and nuts.

Scientists estimate that there were a minimum of 245 grizzly bears in the Greater Yellowstone Ecosystem during the 1990-1994 period.



Reproductive rates and population trends are determined by monitoring individual female grizzlies over several years. At top left a male grizzly surveys his habitat, while above right a mother is on the move with her cubs. Until 1975, grizzly bears were hunted extensively throughout the lower forty-eight states. Today, only five remnant populations remain in locales indicated on the map at top right. These are found in the Northern Continental Divide (NCDE), Greater Yellowstone (GYE), Cabinet-Yaak (CYE), Selkirk (SE), and North Cascade (NCE) ecosystems.

activities and land use practices on grizzly bear habitat.

Center scientists and other members of the Interagency Team have learned a great deal about the population trends and habitat needs of the grizzly bear in the Greater Yellowstone Ecosystem, and data show the bear population is increasing. Unfortunately, human impacts on bears and bear

habitat are the biggest threats to the species' recovery.

Reducing human-bear conflicts, primarily by managing levels of human activity in areas best-suited for grizzly bear, remains one of the primary concerns of resources managers working to recover the species.

USGS Ohio Team Wins Lake Erie Protection Grant

Ohio Governor George V. Voinovich presented Donna Francy, Water Quality Specialist in the USGS Ohio office, with a 1996 Lake Erie Protection Fund Grant during the Fifth Annual Ohio Lake Erie Conference.

Francy is project chief of a 3-year study of bacteria in nearshore sediments of public bathing beaches in Cuyahoga County, Ohio, in the Cleveland area. When bacteria stored in the lake sediments are resuspended in the lake water, they may impair the quality of water for swimming and other recreational uses.

Francy and her team are studying when, how, and why this occurs by analyzing the distribution and concentrations of fecal-indicator bacteria in water and lake-bottom sediments throughout the recreational season, the effects of physical disturbances on lake-bottom sediments, and other related factors.

The Lake Erie Protection Fund Grants are awarded by the Ohio Lake Erie Commission and are intended to assist the state of Ohio in protecting and enhancing Lake Erie through research and monitoring studies and educational programs. The commission consists of the directors of the Ohio Environmental Protection Agency and the Departments of Natural Resources, Agriculture, Health, Transportation, and Development.

Currently the Lake Erie Protection Fund is supported by the Great Lakes Protection Fund, Ohio's Lake Erie license plate program, and donations from individuals, organizations, and corporations.



Above, Donna Francy, center, receives the Lake Erie Protection Fund grant from Donald Schregardus, Director of Ohio Environmental Protection Agency, left, and Ohio Governor George Voinovich. Below, a USGS field crew collects sediment samples.



The Lake Erie Conference in late September was the centerpiece of Ohio's Coastweeks '96—A Celebration of Lake Erie. Coastweeks is a national program designed to increase citizens' awareness of the importance and role of the nation's waters and coastlines.

The Avid Media Composer 4000 (above), performs off-line (to 2-channel special effects generator and digital D2 recorder that simultaneously plays back and records video signals.

Mountains, Plains, and Plateaus

The complexity and variety of our nation's topography are shown on the popular map "Landforms of the Conterminous United States," which the USGS recently reprinted. This computer-generated relief map shows landforms from the Appalachian ridges in the East to the San Andreas fault in the West, even those as small as one mile.

The map, which looks like a black-and-white aerial photograph, was produced by computer manipulation of elevation data. It is accompanied by a pamphlet explaining how image processing and computer graphics have automated the art of landform portrayal. The pamphlet identifies topographic features, geographic regions, and state boundaries of the United States.

"Landforms of the Conterminous United States-A Digital Shaded Relief Portrayal" (I-2206) is available from USGS Branch of Information Services, Box 25286, Denver, CO, 80225, for \$4 plus \$3.50 handling per order. Fax credit card orders to (303) 202-4693.

U.S. Geological Survey (Continued)

Geographic Data Committee Honored

hored for their vision and efforts in creating ational, readily accessible source of accurate spatial data, the 14 federal agencies represented on the Federal Geographic Data mmittee received **Vice President Al Gore's** mmer Award at a recent ceremony held at Interior Department.

e award is the Vice- sident's special gnition for tributions in support the President's National 'ormance Review niples for putting stomers first, cutting l tape, empowering loyees, and getting ck to basics. The honor gnizes new standards excellence achieved by ms helping to reinvent 'ernment.

ecretary **Babbitt**, who sent the award, cifically recognized the mmittee members for : progress they've made an initiative that has involved hundreds of licated federal employees working peratively with their counterparts at the te and local level, in academia, and in the spatial technology industry. Better rdination to avoid costly duplication and the



Secretary Babbitt presents the Hammer Award to representatives of the Geological Data Committee during a recent ceremony at the Main Interior Building. Photo by Rosa Wilson, NPS

establishment of common standards, has resulted in significant time and cost savings.

Vice President Gore called for the creation of a National Spatial Data Infrastructure in the report of the National Performance Review. Through an Executive Order in April 1994, the Committee was charged with leading federal and state agencies and other organizations that

annually spend billions of dollars producing geospatial data.

Members of the Committee include the U.S. Departments of Agriculture, Commerce, Defense, Energy, Housing and Urban Development, Interior, State and Transportation, the Environmental Protection Agency, Federal Emergency Management Agency,

Library of Congress, National Aeronautics and Space Administration, National Archives and Records Administration and the Tennessee Valley Authority. USGS provides staff support to the Committee.

Powell Awards Recognize Public Contributions

The John Wesley Powell awards of the USGS, named in honor of the second USGS Director, are presented each year to individuals or organizations who have made significant contributions to achieving the USGS mission. Three Powell awards were presented recently to people whose actions have significantly advanced USGS programs.

Jack Dangermond of Environmental Systems Research Institute, Redland, California, received the Powell award for achievement in industry. As a worldwide leader in developing and distributing geographic information systems, his work has transformed the way USGS data can be analyzed and presented to customers.

W. Jacquelyne Kious, a private citizen and dedicated USGS volunteer, was honored for the thousands of hours she has given over the past five years as a co-author, with USGS volcanologist **Robert Tilling**, of the new, informative, and colorful general-interest publication *This Dynamic Earth: The Story of Plate Tectonics*.

Nancy L. Parke's personal and professional efforts, especially as Government Affairs Director of the American Congress on Surveying and Mapping, have supported the surveying and mapping community throughout the United States, including the USGS mapping program. Her vigorous and untiring efforts benefited the USGS and its workforce without compromising her unquestioned professional credibility.



Dangermond



Kious



Parke

Science Education Pact for Native Americans

USGS has joined with the Bureau of Indian Affairs to enhance science education for American Indian students and their teachers. **Patricia Beneke**, assistant secretary for Water and Science, and **Ada Deer**, assistant secretary for Indian Affairs, announced the joint effort at the 27th annual convention of the National Indian Education Association in Rapid City, South Dakota, on October 15. Nearly 3,000 Indian educators attended the meeting.

The USGS sponsored a booth at the convention to display educational resources available from the agency, such as teacher packets, booklets, and resource lists, and provided information on accessing the USGS Homepage on the World Wide Web.

The agreement will 1) establish liaisons to serve as points of contact in states with BIA Office of Indian Education Programs; 2) identify and distributing educational resources offered by the USGS; 3) Seek comment from teachers on how to improve these resources; 4) foster mentor programs for students and science teachers; and 5) develop opportunities for USGS employees to highlight career options in science and to create hands-on science and environmental technology experiences

Following the convention, Beneke visited the USGS District Office in Rapid City and then traveled to the Pine Ridge Reservation, accompanied by USGS District staff members **Dan Driscoll** and **Allen Heakin**. Both assistant secretaries addressed a large group of Oglala Sioux tribal government officials, educators, parents, and students. Driscoll and Heakin described the educational information and materials available and presented educators with copies of posters and teachers packets.

OSM



*Katherine L. Henry, Acting Director
Peter M. DuFore, Bureau Editor*

Grants To Restore Brier Creek...

OSM has awarded a \$300,000 grant to assist in the restoration of Brier Creek in Mullen County, Kentucky. The creek is polluted by acid mine drainage. Acting Director Henry announced the award on October 23.

The money will be used by the Kentucky Department for Surface Mining Reclamation and Enforcement under the terms of the Appalachian Clean Streams Initiative. The state can use the funds to apply for matching grants from the U.S. Environmental Protection Agency, the Army Corps of Engineers, and other agencies cooperating in the clean effort.

Congress appropriated \$4 million from the Abandoned Mine Land Reclamation Fund for more than a dozen Appalachian Clean Streams Initiative projects, including Brier Creek. The initiative has made a substantial start reversing the toll of damage to streams and rivers.

...And Agreements with Partners

Acting Director Henry attended a signing ceremony for a Statement of Mutual Intent among OSM, the Corps of Engineers, and the Environmental Protection Agency in Chattanooga, Tennessee. The agreement, signed in October, will help federal and state wildlife agencies combat the effects of acid mine drainage in the rivers and streams.

The parties hope the agreement will create a solid foundation, ensuring cooperation for the Appalachian Clean Streams Initiative. The Corps of Engineers has been given \$25 million to assist in carrying out its Clean Streams mission. Jim Tait, ARCC, handled preparations for the event.

Joan Shaw Retires

Joan Shaw retired from federal service on November 1, completing an exemplary 32 years of government service. She was a Program Specialist with OSM's Office of Communications in Washington, D.C. Headquarters.

Shaw was detailed to OSM in 1978 as a Survey Statistician and wore many hats during her service. She received a Congressional Fellowship from October 1992 until 1993 and also served as vice-president of the Washington, D.C. chapter of the Women In Mining.

On November 14, her colleagues in the Office of Communications presented her a tribute. Her co-workers fondly recalled Shaw's extraordinary courtesy, integrity, conscientiousness, professionalism, common sense, and willingness to help. And they vowed not to forget her.



OSM Tours Mine Site

OSM employees from the Applicant-Violator System Office, Lexington Field Office, toured the Starfire Mine in Perry County, Kentucky, with 11 other Interior employees. In from row, from left, are Emma Dee, Amy Willoughby, and Kim Loesch, all from the Lexington Field Office. In the Applicant-Violator System Office. In the



Deputy Secretary John Garamendi presents the Hammer Award to the Appalachian Clean Streams Team.



Students from Chartiers Valley High School received recognition for their participation in the Appalachian Clean Streams Initiative, they each received a Hammer pin from Acting Director Henry.

Hammer Award For Clean Streams Team

Deputy Secretary **John Garamendi** presented Vice President Al Gore's Hammer Award to OSM's Appalachian Clean Streams Team in a ceremony at the Scrubgrass Run Stream reclamation site near Pittsburgh, Pennsylvania.

The Clean Streams Team, composed of 16 OSM employees and three employees from the U.S. Environmental Protection Agency, was honored for reinventing the process OSM and other federal agencies use to clean-up more than 7,000 miles of streams in nine Appalachian states which are polluted by acid mine drainage from abandoned mines, according to Garamendi.

Students from **Chartiers Valley High School**, partners in the Appalachian Clean Streams Initiative, were recognized for spearheading the clean-up effort at Scrubgrass Run. Secretary Babbitt visited the Scrubgrass Run site last spring, describing it a national model for the Appalachian Clean Streams Initiative.

Appalachian Artistic Impressions

Kathrine L. Henry, OSM's acting director, helped kick-off an OSM-sponsored art exhibit at Interior's museum. The exhibit of work by six faculty members from the Appalachian State University art department, which opened in November, will run through January. Its goal is to heighten awareness



Artists Marianne Stevens-Suggs, left, and Judy Humphrey, center, receive a plaque for the Appalachian State University from OSM Acting Director, Kathrine Henry. Below, Interior Chief of Staff Anne Shields, left, and Museum Curator, Debra Berke, right, make welcoming remarks.



back row, standing from left, are Carol Montgomery, Shirley Hardin, Susan Napier, Jama Randolph, and Linda Rainey, all from the Lexington Field Office. David Schindler, FWS, and Michael Staples, Applicant/Violator System Office.

The work of the Clean Streams team has resulted in an unprecedented degree of cooperation by federal, state, and local government agencies, as well as non-government partners, making this a unique initiative to reclaim the environment in the most cost-effective manner, with the best on-the-ground results for the American people, Garamendi said.

Acting Director Henry announced at the ceremony that OSM will provide an additional \$15,000 to assist with the Scrubgrass Run clean-up project. Henry also said that Congress has appropriated \$4 million in fiscal year 1997 funding for Appalachian Clean Streams Initiative. "This will let us accelerate our work aimed at making Appalachian streams and rivers clean again after so many years of pollution from acid mine drainage," Henry said.

Thanks to all the public and private cooperation and support the program has received over the past year, the Appalachian Clean Streams Initiative has the potential to be one of the federal government's most successful activities in 1997 and beyond, Henry said.

of the cleanup of acid mine drainage from the abandoned coal mines. Also attending the kick-off were Chief of Staff Anne Shields, of the Secretary's Office, and Ed Kay, OSM's deputy director.

The exhibit's message was conveyed in a variety of media. A piece by Judy Humphrey, entitled *The Polluted Water Garden*, was a collage that cleverly incorporated pictures and debris such as cigarette butts and hyperdermic needles, showing that what appears clean on the surface may be dangerously contaminated beneath.

In *The Life Boat Apron*, Marianne Stevens-Suggs, weaves various shades of blue string unto branches, making her statement about water. *Half Done* by Gail Weitz is a striking table, whose legs are of a woman. On the table's surface is a glass of water.

The second part of the exhibit opened, which opened in December, features oil paintings by another Appalachian State University artist, *Joan Smyly-Durden*. Durden visited and photographed mine sites, reclamation areas and interviewed people as background for the project. The solo show will remain on display until January 31.

In Memoriam

On September 26, 1996, OSM lost a very dear friend. **James C. Blakenship, Jr.** served as the director of the OSM Charleston, West Virginia, Field Office since 1985. Known to everyone as "Jim" he was a pleasant individual, unassuming and unpretentious, who always had time for his fellow employees. Jim was also known to have a good joke or story to tell, and his amiable personality extended to both the press and the public.

Jim had a very colorful career, and spent a lifetime around coal mining. After serving in the U.S. Army during World War II, he began digging coal, and in 18 years, had worked his way up to mine superintendent. He also served under the U.S. Mine Safety and Health Administration from 1962 to 1979. In May 1968, Jim was responsible for rescuing six nearly-starved miners trapped for 10 days inside a flooded underground mine. He will be greatly missed.

Panning for Gold Takes a Strong Back

ree geologists from the Eastern Minerals m recently visited the Navy Elementary ool in Herndon, Virginia, to teach more than 4 fourth-grade students about rocks and erals at the invitation of teacher **Mrs. Elsie od**.

ring morning and afternoon sessions on ober 24 and 25, **Andrew Grosz**, **Bruce in**, and **Jason Greenwood** from the USGS in ton worked with each class, including one h autistic children. Hands-on gold panning in school's courtyard introduced the children :oncepts in economic geology, mineralogy, eral availability, and physical properties of erals.

and the students used was specially pared so that it contained plain sand spar and quartz), ilmenite, zircon, and gold. : students learned that the minerals will sort in the pan according to their relative sities. Many students showed a real talent for ming. Each student was asked to write a brief er explaining what they had learned from the erience. Some excerpts from their letters:

"I really liked panning for gold. I learned ... that gold was so small and that people in California didn't just pick gold out of the ground then announce that they were rich."

"I learned gold sinks to the bottom of the pan."

"I learned that you have to have a strong back, which I don't. I always thought you could just pick up pieces of gold...I never knew that it would be such hard work...there's a slim chance that I might be a geologist..."

"...and now I know why gold is so expensive..."

"What I learned before you become a geologist you have to have good parents and a good back..."

"I have one question. Can you do this at birthday parties?"

"I never knew that glass was made from melted quartz! Do you really have to melt it at 2000 degrees F? Ouch! I'm not even sure that anything can get that hot! Well the sun. I think it is 270,000,000 degrees F or C. Maybe I'll be a geologist. Maybe."



Geologist Bruce Lipin and Navy Elementary School students pan for tiny grains of gold and other heavy minerals.



Bureau of Indian Affairs



Ada E. Deer, Assistant Secretary
Ralph Gonzales, Bureau Editor

New Policy Will Speed Up Construction of Indian Schools

anks to a newly developed process that eamlines the planning, design, and construction Indian schools, BIA will be able to complete new rools in half the time or less. The current seven eight years that it takes to build or renovate a ool will now require only three years or less.

le are extremely pleased to announce this major nefit to tribes and Indian students," said **Assistant Secretary Ada Deer**. "The Clinton ministration is committed to improving Indian ucation programs and this fast-track delivery of w Indian schools is a major step toward this goal.

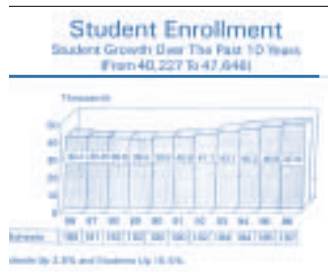
mbers of the team that is carrying out the new ccess include: **Anthony E. Howard**, Contracting d Grants Administration, BIA; **Dr. Kenneth ss**, Office of Indian Education Programs, BIA; **erman Suazo**, Facilities Management and nstruction Center, BIA; **Stanley Thurber**, Office the Secretary; and **Nolando Neswood**, ployees Union Representative.

le now call on Congress to fulfill its ponsibilities by funding the more than \$600 ilion in unmet Indian school construction and air needs," Deer said. "With a rapidly rising rollment of Indian students, we have a critical pportunity to ensure that Indian students have cent learning environments to help them cceed in the 21st Century."

A has selected four new school construction pilot jects. Tribes and schools boards will then be le to decide if they want their proposed schools be a part of the new expedited program. These ot school projects will be selected from the 14 rrently funded proposed school construction jects.

a part of the Clinton Administration's inventing Government program, the new school unning, design, and construction process was veloped by a Reinvention Laboratory Team of BIA d other Interior employees. Copies of a report scribing the new process have been distributed the leaders of tribes that have BIA-funded ools, school principals, and BIA line officers.

r more information and copies of the report, nact **Norman Suazo**, Program Planning and lementation, BIA Facilities Management & nstruction Center, P.O. Box 1248, Albuquerque, I, 87103.



Tribes Tackle Welfare Reform

The goal is to reduce the cost and increase the effectiveness of federally-funded skill training and employment programs in Indian Country. More than 177 federally-recognized tribes representing 18 tribal grantees have joined the demonstration project.

And some already are reporting that job placements have increased, application requirements have shrunk, and \$17 million in federal funding has been shared by participating agencies.

"The program has been a great success and is an example of the Administration's efforts to make government more responsive and flexible," said Assistant Secretary Deer.

The Indian Employment, Training and Related Services Demonstration Act of 1992 is known as the "477 Program" because it was authorized under P. L. 102-477. It responds to the 1994 findings of the General Accounting Office, which identified 154 federal work force development programs which provide similar or overlapping services to the same populations.

The GAO concluded that conflicting eligibility requirements and differences in annual operation cycles hampered the ability of programs to provide participants needed services. Differences in ineligibility criteria created a complex process that confused clients and frustrated administrators.

"The 477 demonstration program changes all that", Deer said. "Instead of operating ten different federal programs, tribal governments now operate just one—commingling all federal funds. Instead of ten separate tribal accounts, tribes have one. Instead of ten reporting requirements with 166 pages due quarterly, tribes now have one annual reporting requirement."

Some tribes initially expressed reservations due to funding transfer delays, or skepticism due to



Assistant Secretary Ada Deer joins Joe Martin, the Head Man Dancer at a November 20 powwow marking American Indian Heritage Month. Martin, a Justice Department solicitor, wore traditional Plains Indian attire to performed a Feather Dance. Story, page 2.

years of frustration, according to Deer. "The same tribes now express their pleasant surprise because the 477 program has made it easier for staff at the tribal government level to do their jobs and to be more successful," Deer said. "The Cook Inlet Tribal Council increased their job placement from 500 the first year to 1,000 in the second year," Deer added.

All federally-recognized tribes are eligible. The program receives formula-funding for employment, training, and related services from the Department of Labor's JTPA and Summer Youth Program, the Department of Health and Human Services' JOBS and Child Care Programs, and BIA's General Assistance, Tribal Work Experience, Adult Education, Adult Vocational Education, Johnson O'Mally, and Direct Employment Programs.

For more information, contact the Office of Economic Development, Division of Job Placement & Training, (202) 219-5270. Bureau of Indian Affairs, MS 1458, MIB, 1849 C Street, NW, Washington, DC, 20240.



Stamps Celebrate Native American Dances

Five traditional Native American dances are celebrated on a U.S. stamp issue now on sale nationwide. The U.S. Postal Service commemorative stamps depicts the Fancy, Hoop, and Traditional Dances, which are performed at powwows by many tribes, and are a twentieth century phenomenon arising from the dances of the Plains and Pueblo Indians.

The stamps also show the Raven Dance, which is performed by Pacific Northwest tribes, and the Butterfly dance, a creation of the Southwest Pueblo Indians. Authenticity and accuracy were stressed during the design of the four-color stamps. Indian dancers perform to assure the continuation of ancient life ways, to honor deities and each other, and to affirm their Indian identities.

"Realizing that all Native American eyes would be upon us, our goal was to maintain the integrity of the dances and represent them as faithfully as possible," said **Keith Birdsong**, the American Indian artist who created the images.

"Every detail, including markings, facial expressions, and dance movements, was approved by a panel of Native American experts," said Birdsong, who is of Cherokee and Creek heritage.

The Postal Service will print 139 million of the stamps, which are printed with black, Cyan, Magenta, and Yellow inks. The first printing was unveiled at Oklahoma City's Red Earth Festival, one of the largest celebrations of Native American culture in the United States.

In addition to **Bert Mackie**, postal governor of the Postal Service, the ceremony was attended by Senator **Enoch Kelly Haney**, a member of the Red Earth Board of Directors; **Ann Simank**, vice-mayor of Oklahoma City; and **Mary Fallin**, lieutenant governor of Oklahoma. Special guests included **Phil Lujan**, president of the Red Earth Board of Directors; **Ken Bonds**, vice-president of the Board; **Don Moses**, district manager for Postal Service; and **Clarence Hopkins**, postmaster of Oklahoma City. Call (800) STAMP24 for purchasing information.

Native American Profile: A Look Out at Life

Curt Gustafson

Gary Paxson's life changed forever in a fiery Oregon forest ten years ago. When a hot log broke loose and pinned the Fort Apache Hotshot, the gravely injured firefighter had to decide whether to live or die.

He chose life. And ten years later, after another life-or-death struggle with his injuries, Paxson made another courageous decision—to contribute. This past summer he returned to work with the Bureau of Indian Affairs as a fire detection specialist trainee to help protect the forests he loves.

Paxson had joined the BIA firefighters immediately after high school, married, had two children, and enjoyed seven productive years. "I sure liked being out there," he recalled.

That life ended on August 6, 1986, when he was dispatched with the Hotshot crew to a blaze in the Klamath National Forest. Near the fireline, he was assigned to help a logger free a pinched saw from a felled, smoldering tree. The logger had been trying to "buck out" the logs, cutting them at angles to get at the fire burning beneath.

Paxson chopped around the saw blade to free it. "The terrain was steep, a bad place to be," he said, "because you never know which way it's going to roll." Suddenly one of the logs broke loose, rammed into Paxson, and steamrolled him down the hill, pinning him against a standing tree.

The arteries in both of his arms had been crushed and he was bleeding badly but fought against going into shock and refused a bandanna his co-workers offered to shield him from his severe wounds. Paxson barked out orders while his crew boss, **Ralph Thomas**, pulled him out the instant the standing tree was felled.

Paxson was carried on a litter for three-quarters of a mile over rough terrain to a clearing where the helicopter could land. At a series of hospitals, he underwent surgery seven times, including the amputation of both arms. He received 18 pints of blood—twice the amount of blood in an adult body.

"I was up and walking around the next day after the surgery," Paxson recalled. But while he was strong and brave enough to quickly regain his physical

health, he wasn't prepared for the emotional devastation his injuries caused.

"I lost my arms, I lost my family, and I turned it over to drinking," he said. For eight years, he went through rounds of drinking, jail, hospitalization, and treatment. But his children, Garret and Garry, who he treasured and wanted to care for again, were always in his thoughts.

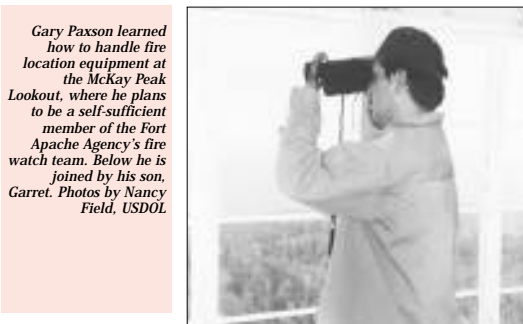
"I saw that my kids were going to give up on me," Paxson said. "Then something snapped somewhere. I saw people drinking and suffering out there, and I didn't want to be like that anymore."

He entered a treatment program and joined a vocational rehabilitation project. "I've never seen anyone so dedicated," said **Nancy Field**, his vocational rehabilitation specialist, who works for the U.S. Department of Labor. "His case is one of the most challenging and most rewarding I've had."

"She's one lady who didn't give up on me," Paxson said. After extensive physical therapy, he became so dexterous that he was ready to enter the job market. His love of the forest led him to McKay's Peak Lookout this past summer as a trainee.

"He learned to operate a fire finder and other fire locating equipment, and issue fire warnings and collect and disseminate fire weather information over a two-way radio and telephone," said **Dallas Massey**, forestry information officer for the Fort Apache Agency. Paxson also instructed visitors on fire hazards and fire prevention regulations.

When the fire season ended, Paxson returned to Phoenix to



earn his driver's license so that he can drive to work on his own. Next year, after some modifications to the McKay Peak Lookout, Paxson will be self-sufficient at his fire watch station and hopes to live there with his sons, who now are 15 and 11 years old.

"My dreams have come true," Paxson said. "Some believe I should have stayed home and just received my monthly check, but I love to get up in the morning and look forward to going to work. It feels good."

Curt Gustafson is the editor of the Fort Apache Scout, the official newspaper of the White Mountain Apache Tribe. This article was excerpted from the September 27 issue of that newspaper.

Court Upholds Indian Land Law

The United States Supreme Court has upheld the constitutionality of a 60-year old Indian land law that protects Native Americans' rights to self-government.

"The Supreme Court's ruling is a significant victory for all Indian tribal governments," said Assistant Secretary Deer, who had urged the Interior and Justice Departments to defend the law. "The ability of Tribal governments to govern hinges on jurisdiction over land and its use."

In upholding the Indian Reorganization Act, the U.S. Supreme Court voided an earlier ruling of the U.S. Court of Appeals for the Eighth Circuit, instructed that court to void the judgment of the United States District Court, and sent the matter to the Secretary of the Interior for reconsideration of his administrative decision.

In 1990 the Lower Brule Sioux Tribe bought 91 acres of fee land—private non-Indian ownership—to develop an industrial park. The Tribe requested the Secretary of the Interior, under Section 5 of the Indian Reorganization Act, to place the land in trust for their benefit.

Bald Eagles Attract A Crowd

Montana's Canyon Ferry Bald Eagle Viewing Program is well underway this fall with more than 1,000 bald eagles expected to migrate through the area. Each year, the bald eagles stop at Hauser Lake to feast on the kokanee salmon that die after spawning. This popular program includes a hosted viewing area, school tours and a visitor center with excellent exhibits on bald eagle ecology. Nine local, state, private, and federal cooperating organizations take turns hosting the viewing site on holidays and weekends. The BLM serves as the lead agency under an interagency agreement with the Bureau of Reclamation. **Chuck Neal**, BLM Park Ranger, and **Walt Timmerman**, Seasonal Park Ranger, direct the program and, along with over 30 volunteers, enhance the eagle viewing experience for about 13,000 people each fall.

National Park Service



Roger G. Kennedy, Bureau Director
Ricardo Lewis, Bureau Editor

Mountain Lions Studied

The Biological Resources Division of the United States Geological Survey and staff of Yosemite National Park have begun a four-year study of mountain lions in the Wyoming park. During the past 10 years, mountain lion sightings in Yosemite have increased. The goal of the study is to gather the information needed to develop management and visitor education programs that minimize the potential for conflicts between mountain lions and human beings. The study will be conducted through December 2000.

New Dinosaur Unearthed

Researchers at Dinosaur National Monument, Utah, have discovered the skull of a new meat-eating dinosaur in a vertical sandstone cliff. The skull was found just a few feet from the site where a remarkably complete, but readable, skeleton of a new specimen of a carnivorous dinosaur, about 15 feet long, was discovered 6 years ago. The complete skeleton, housed at the park's Quarry Visitor Center, is now undergoing extensive study. The discovery of the skull will provide park paleontologist Dan Chure with critical information to determine whether the find is a previously unknown species of *Allosaurus* or a new kind of dinosaur. The *Allosaurus* was a 2.5-ton, 30-foot long carnivore that roamed the western half of today's North American continent during the late Jurassic period.

Preservation Law Course Offered

Students at Boston's Suffolk University School of Law now find archeological and historic resources law in their environmental law courses, thanks in part to an initiative launched by the National Park Service archeology and ethnography program. The first-ever law course co-sponsored by the NPS is an effort to persuade colleges and universities that archeological and historic preservation should be included in the teaching of environmental law.

Chaco Monument on Endangered List



The World Monuments Fund has included Chaco Culture National Historical Park, New Mexico, in its first annual list

of the world's 100 most endangered monuments. The list is part of World Monuments Watch, a five-year project to identify and preserve threatened natural landmarks. The process of nominating a site was started by Loretta Neumann, president of Conservation, Environment, and Historic Preservation, Inc., a company that provides preservation services for government and the private sector. The nomination was supported by the National Park Service, archeologists, and others concerned about the park's future.

National Register Marks 30th Year

Roger G. Kennedy, Director of the National Park Service, praised the National Register of Historic Places, as it celebrated its 30th anniversary this past October. As the keeper of the National Register of Historic Places, the National Park Service is entrusted with recognizing the places that reflect and commemorate the historic contributions of all Americans, said Kennedy.

"Today, we renew our commitment to the places that helped shape our nation's heritage. We pledge our assistance in preserving them as living parts of our communities," Kennedy said.

The National Register has more than 66,200 listings of national, state and local importance. These include the historic and cultural units of the National Park System, 2,196 National Historic Landmarks designated by the Secretary of Interior for their exceptional value to the nation, and places nominated by States and federal agencies.

Building a bridge to the future, the Park Service entered into agreements with seven American Indian tribes, this past year, under which they will nominate historic places on tribal lands to the National Register. This remarkable partnership, under the National Historic Preservation Act, allows federal, state and local governments, American Indian tribes, and the American people to participate directly in the National Register program.

Director Kennedy pledged to continue to make the National Register and its programs accessible to the public, through educational and interpretive programs, publications, videos, conferences, the Federal Historic Preservation Fund matching grant program, and federal tax incentives for rehabilitation. For more information, write the National Register of Historic Places, National Register, History, and Education, P.O. Box 37127, Washington, D.C. 20013-7127, visit the web site at <http://www.cr.nps.gov/nr/nrhome.html>, or call the National Register reference desk at 202/343/9559.



Roger Kennedy
Director
National Park Service

Onofrey Earns Tilden Honors



Joseph Onofrey, education specialist at Gettysburg, is this year's national Freeman Tilden Award winner for his program, which was entitled *Citizen, Soldier, and Conflict—A Path to History*. Director Kennedy noted the program embraced new audiences in the community and helped participants frame the idea of conflict in everyday lives based upon the Gettysburg community experience in the Civil War.

The Freeman Tilden Award is given to a park service employee who has enhanced the public understanding of the park and the NPS mission; was creative, original, and significantly advanced the practice of interpretation and education; made a significant effort beyond the normal day-to-day operations; and made a positive difference in the experience of park visitors or off-site park audiences.

Battlefield Preservation Awards

The National Park Service, through its American Battlefield Protection Program, presented four 1996 Battlefield Preservation Awards at the recent Third National Conference on Battlefield Preservation in Chattanooga, Tennessee.

The NPS award recognizes outstanding efforts by public and private organizations to preserve the nation's historic battlefields. The awards went to the following organizations:

The Siege and Battle of Corinth Commission, Mississippi, for garnering local, state, and national support for Corinth's Civil War resources, and exhibiting considerable skill in attracting diverse state and federal funding; **The Fort Davidson State Historic Site**, Missouri, for working with the Iron County Historical Society to use American Battlefield Protection Program funds to conduct research on the Battle of Pilot Knob, erect a series of historical markers, and begin developing a battlefield preservation plan;

The Rich Mountain Battlefield Foundation, Inc., West Virginia, for acquiring more than 400 acres of

core battlefield land with support from the Association for the Preservation of Civil War Sites, The Civil War Trust's commemorative coin funds, and considerable private fundraising; and **The Chattanooga Area Civil War Sites Assessment Planning Team**, Tennessee and Georgia, for initiating a multi-state partnership planning effort to document and evaluate Civil War battlefield land in the Chattanooga area outside the park boundaries.

The American Battlefield Protection Program works to protect significant battle sites associated with all wars fought on American soil, and represents the federal government's commitment to help communities identify, assess, and protect our nation's historic battlefields. The Program's mission is to help communities save these battlefields without costly outlays of public tax dollars and to work with private land owners and local, regional, and state officials so that they can become the nation's foremost stewards of our country's remaining battle sites.

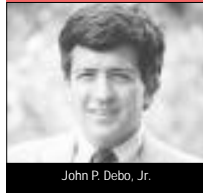
Independence Mall Plan Revised

Independence National Historical Park, Philadelphia, will modify the draft General Management Plan for Independence Mall. While the Plan covers planning for the entire 45-acre park in Center City, the main modifications deal specifically with the Mall. They include: moving the Regional Gateway Visitor Center from Arch Street to the northside of Market Street on the Second Block of Independence Mall and relocating the National Constitution Center from the Third Block to the southside of Arch Street on the Second Block of Independence Mall.

"In revising the plan, we carefully weighed all the comments and recommendations we've received with the park's operational needs," said park superintendent **Martha Aikens**.

"Although no plan with as many opinions will reach 100 percent consensus, a great number of people with different interests, goals and perspectives have joined together to create the foundation of what will be an exciting yet dignified setting for this national park."

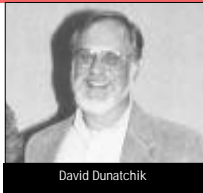
Sequoia Awards



John P. Debo, Jr.



Connie Rudd



David Dunatchik

David Dunatchik, Connie Rudd, and John Debo are the recipients of the 1996 Sequoia Awards. The honors recognize significant, long-term contributions to NPS Interpretation and Education in the areas of Professional Excellence, Evaluation, Education, Partnership, and Interpretative Media.

Dunatchik was recognized in the professional excellence and partnership categories for his stellar contributions to the NPS through his work with cooperating associations. Rudd was honored in the professional excellence category for her work in helping to implement *Ranger Careers*, leading interpretation through the reorganization, developing the *Compelling Story Think Book*, and

working to formulate the Comprehensive Interpretive Plan.

Debo was a recipient for his contributions in the areas of interpretation, education, and partnerships for his park, Cuyahoga, and the Service. His initiatives have included the creation of a Junior Ranger Program to serve disadvantaged, inner-city children of the Cleveland/Akron/Canton metropolitan area; establishment of four major interpretive facilities along the Ohio & Erie Canal Towpath Trail; and the development of the non-profit Cuyahoga Valley Scenic Railroad partnership which brings more than 35,000 visitors through the park each year.

Wind Cave Marks Milestone



Wind Cave National Park Superintendent Jim Taylor presents a certificate to the park's five millionth visitor, Melodie Tyson and her family. From left to right, Andrea, Greg, Garrett, Melodie and Bill Tyson, and Superintendent Taylor.

South Dakota, Chamber of Commerce provided gifts, meals, and lodging from several of its member businesses.

Recording the five millionth visitor also was noteworthy because it occurred on August 25, the 80th anniversary of the establishment of the National Park Service in 1916. Wind Cave National Park, established in 1903, was one of the earliest national parks and the first established to protect a cave. Cave tour visitation records date back to 1903 when 2,515 persons visited the cave. Today, about 100,000 visitors tour the cave annually and another 700,000 enjoy the park's superb prairie, forest, and wildlife resources.

McLaren Honored for Lifetime Contributions to Ski Patrol

Linda Olson

The Utah Ski Archives have recognized former Grand Teton National Park ranger Doug McLaren for his contributions to the development of ski patrolling in the United States.

McLaren works with the Snow King Mountain ski patrol in Jackson, Wyoming, and was instrumental in creating the patrol at the Jackson Hole Ski Area in Teton Village, Wyoming. In 1994, he received the **Distinguished Service Award** of the National Ski Patrol—the highest patrol award. In 1988, he was named patroller of the year and received the **William Judd Award**, recognizing him as a national role model for patrollers. McLaren wrote the National Ski Patrol's first mountaineering manual and has contributed to its avalanche safety programs. He has written several manuals and books about mountain safety and rescue as well.

McLaren came to work as a ranger at Grand Teton National Park in 1952 and retired as a Teton park ranger in 1987. During his 35 year career he served as a Jenny Lake mountaineering ranger, south district ranger, north district ranger, and assistant chief ranger with a nine-month detail as chief ranger. McLaren received three Interior Meritorious Service Awards for his work on specific mountain rescues.



Ski patrol expert Doug McLaren receives his lifetime contribution award from the Utah Ski Archives.

McLaren lives in Jackson, Wyoming, and is a decorated war veteran, having received the bronze star while serving in the U.S. Army 10th Mountain Division in the Italian Alps during World War II.

After he officially "retired" in May of 1987, McLaren came back to work as a volunteer in Grand Teton's auto shop that July. He works four days a week for the park, and ski patrols at Snow King on Saturdays.

Linda Olson is the public affairs officer for Grand Teton National Park.



An African-American family sits for a early photograph in front of a frontier home on land the family settled under the 1862 Homestead Act. Photo courtesy of the Solomon D. Butcher Collection, Nebraska State Historical Society.

Homestead National Monument Hosts "Parks as Classrooms" Visit

During a visit to the Homestead National Monument of America, 72 students, parents, and teachers from Mars Elementary School in Omaha, Nebraska, learned more about the Homestead Act of 1862 and its effects on the life of American Indians, the prairie, and the homesteading families that ventured west.

The three fourth-grade classes were provided bus transportation through the National Park Service's Parks as Classrooms program to make this special field trip on October 4. Youth-at-risk at elementary schools in Omaha and Lincoln, Nebraska, will be able to visit the Monument because of a grant of \$3,000 in funding for this special program.

Though these students live only 85 miles from the only national park in eastern Nebraska, many of them have not visited this park because of the limitations on school budget's for field trips.

A video tape sent to the schools introduces teachers and students to the history and significance of the Homestead Act of 1862 and the resources available to study in this national park. A curriculum related teacher's guide produced in 1996, provides teachers with lesson plans for their visit and for classroom reinforcement.

At the park itself, Park Ranger **Lorna Lange** presented the program, *Follow the Buffalo*, demonstrating the use of the bison by the American Indian tribes of the Great Plains. Students handled the bison pelt, bones, stomach and bladder, learning how every part of the animal was put to unique use by Great Plains tribes.

The second program contrasted the daily life of homesteaders with that of the American Indians. In this teacher guided activity, students dressed as pioneers in bonnet and apron, or hat and suspenders, hurriedly moving from daily chore to daily chore in a relay race. Pounding nails, beating batter, collecting cow chips, and cultivating the garden were four of a dozen activities that were completed efficiently and swiftly by the winning team.

Activities also included a picnic lunch and a tour of the park's museums. Then, the three hours of fun and learning came to a close as students and teachers boarded the buses heading back to Omaha. No doors were closed behind; only new doors opened to national parks and new relationships. Teachers signed up to attend curriculum related workshops on October 11 and 12, and students will learn more about their national parks in the coming year.

Bureau of Land Management



Mike Dombeck, Acting Director
Patrice Junius, Bureau Editor

Bob Armstrong, assistant secretary of land and minerals management, helps build a fence to protect a riparian area in Red Rock Canyon National Conservation Area on National Public Lands Day. In far right photo, a young volunteer helps out others in the construction of the fence at Red Rock Canyon National Conservation Area.



Loomis Named Planner of the Year

in Sweetland, Carson City District

ve Loomis, environmental planner in the Carson City, Nevada Office, was awarded the Planner of the Year award by the Nevada Chapter of the American Planning Association at the Nevada State Planning Conference in Boulder City on October 4, 1996.

Association recognized Loomis' work on iterative electronic warfare site planning in the central Nevada counties of Churchill, Lander, Elko, Nye, and Mineral. His efforts have helped protect the quality of life in central Nevada in a way that facilitates future site development.

Loomis has been a strong advocate of professionalism in the planning field, serving for the last seven years as the Association's Professional Development Officer for Nevada. He has helped more than 40 Nevada planners earn their professional certification.

Watershed Connections

in Hoffmeister, Coos Bay District

unique partnership of local, state, and federal agencies and groups recently completed the Watershed Connections project in Coos Bay, Oregon, to enhance environmental education and tourism opportunities.

Project, dedicated in September 1996, was spearheaded by Chris McAlear, Coos Bay BLM interpretive specialist. The BLM provided technical expertise, vehicles, tools, and materials. BLM engineers designed a trail, boardwalk, and covered viewing platform.

These BLM contributions augmented a \$48,675 grant from the Oregon State Watershed Health Program, and funds and personnel time from the Coos Watershed Association, City of Coos Bay, Sossom Gulch School, and Coos Bay School District. Coos Bay Lions Club, South Slough National Estuarine Research Reserve, Oregon Department of Fish and Wildlife, and Southwest Oregon Community College.

The Graduate



Lily Haverly, a Bureau of Land Management specialty specialist, still doesn't understand what all the fuss was about. Haverly, who has 43 years of federal service and is still going strong, completed her Bachelor's Degree in Sociology over four decades. She began her undergraduate work after high school, but a series of interruptions over the years kept her from completing the degree requirements. Her coworkers at the Green River Resource Area and Rock Springs District Office hosted a reception for Haverly to mark the occasion. There were lots of congratulations, a gift, cake and punch, but no talk of post-graduate work—not yet anyway.

Public Lands Day Offers Volunteers a Sense of Ownership

Leslie Schwager, Washington, D.C.

If you plan it, they will come. At least that's what's happened in the past three years when thousands of volunteers from New York to California have gathered at National Public Lands Day events armed with shovels, axes, picks, hammers and rakes to help improve America's public landscape.

On September 28, 1996, the National Environmental Education and Training Foundation joined forces with federal land management agencies—the U.S. Army Corps of Engineers, Bureau of Land Management, Forest Service and National Park Service—to sponsor National Public Lands Day, a celebration of the natural resources on public lands and an opportunity for Americans to get hands-on experience in public lands conservation.

This program is a national effort to call attention to public lands and build a sense of ownership of these resources by the American public through personal involvement and conservation education. This year,

about 2,000 volunteers helped construct trails, rehabilitate picnic areas, restore riparian areas and enhance campgrounds and other public places.

The Bureau hosted three of the events. At Red Rock Conservation Area, volunteers expanded a system of hiking trails and participated in several riparian restoration projects. A little farther north at Ward Mountain Winter Sports Area, participants expanded the trail system of a cross-country ski area, constructed warming huts and a parking lot that accommodates 200 vehicles. And on the East Coast at Pohick Bay Regional Park, volunteers refurbished portions of various hiking trails and bridle paths, cleaned up the shoreline and built bird houses.

Formerly known as Public Lands Appreciation Day, National Public Lands Day was initiated in 1994 as a joint venture between Times Mirror Magazines and the BLM. The two organizations viewed the event as an exciting opportunity to mobilize a large number of volunteers to help complete maintenance and protection projects on public lands.

Waterfowl Award A Bureau First

Craig Flentje, Lewistown, Montana

Ramone McCoy, a waterfowl biologist in the BLM Phillips Resource Area was recently presented with the 1996 Award of Excellence by her peers in the Montana Fish, Wildlife and Parks, the Fish and Wildlife Service, and Ducks Unlimited for her contributions to waterfowl and waterfowl habitat in the Prairie Pothole region of northern Montana.

The award is part of the annual waterfowl tour which has taken place for about the past 10 years. This tour provides an opportunity



for university, state, and federal agency professionals and private organizations to meet and discuss waterfowl management and on-the-ground programs.

Ramone is the first BLMer to receive such an award and is the principal author of a North American Wetlands Conservation Council grant application which would fund waterfowl habitat improvements on both public and private lands. This September, she was officially notified that the application had been selected and the project would receive almost \$300,000 in grant funding.

Alaska Honors BLM Employees

Tom Gorey, Washington, D.C.

The State of Alaska has given its Excellence in Government Service Award to the employees of the Joint Pipeline Office. State Pipeline Coordinator Jerry Brossia and BLM Acting Authorized Officer Gary Reimer presented the award to the 60 state and federal employees who work in the Office, which oversees the operation of the 800-mile Trans-Alaska Pipeline Systems and other oil and gas pipelines in Alaska.

The Excellence in Government Award, given by Alaska's governor, recognizes individuals who have made outstanding contributions in the cause of better government service. In conferring the awards, Governor Tony Knowles said the Joint Pipeline Office, which is a consortium of six state and five federal agencies, is a great example of an effective government-industry partnership. Among other accomplishments during the period from July 1993 through June 1996, the office had compiled an unparalleled record in achieving efficiency in government, providing one-stop shopping for the oil industry's permitting needs, Knowles said.

Bob Armstrong, Interior assistant secretary for Land and Minerals Management, commended Office staffers, saying, they had seen the Trans-Alaska Pipeline System through a revolutionary period in its history. The diligence of the staff has helped ensure that the pipeline system remains available into the 21st century to safely transport North Slope oil.

In 1994, Vice President Gore conferred a Hammer Award on the Office for its efforts to reinvent government.



Bob Armstrong

Russians Spelunkers Visit Torgac's Cave...

Mike Bilbo and Jerry Ballard, New Mexico

"This is truly a magnificent cave—the only one like it in Russia and the other republics were destroyed by a government sulphur-mining operation 10 years ago," said Vladimir Maltsev, a Russian cave geologist.

Located in Southeast New Mexico and managed by the BLM, Torgac's Cave is a National Natural Landmark and is known throughout the world for its unique gypsum stalactites and chandeliers. The main purpose of Maltsev's visit was to study the similarities and dissimilarities between the Guadalupian type of karst (eroded limestone) and Kugitangou karst.

The Russians have been visiting America's caves, both wild and commercial, and had just been to the National Speleological Society annual

convention in Salida, Colorado, before visiting Torgac's.

"The chandeliers of the Torgac's cave are equivalent to the chandeliers of the Fata-Morgana cave in Russia," Maltsev said. "It appears that the Fata-Morgana Cave, like Torgac's, has thick gypsum beds 10-20 meters above the cave, providing their (chandeliers) growth from rapid dripping." Maltsev explained.

There are no public land management agencies and few national preserves (parks) in Russia or the republics, and Americans are fortunate to have public land management and conservation ethics, Maltsev said. In Russia, government-sponsored cottage industries actually remove cave formations and flowstone to make ash trays, figurines, and chess pieces. It is important to see the accomplishments of American cave management, Maltsev said.



World renown cave photographer Ann Bosted tours Princesses Place at the Torgac's Cave.

...While Russian Students Visit School

Lars Johnson, Eastern States, Jackson District Office

The Piney Woods Country Life School in Piney Woods, Mississippi, recently hosted an international student exchange under the EcoBridge School Linkages Program. EcoBridge is a partnership between American and Russian secondary schools for long-term collaboration in environmental research and cross-cultural learning.

Through electronic mail and exchange visits, students investigate together their watersheds, compare the results, and present their findings. The BLM Jackson District Office participates in the EcoBridge Program each year in conjunction with the ongoing Piney Woods School-BLM Cooperative Agreement which promotes minority student



Russian and Piney Woods students on a field trip into a wetland on a cold Mississippi day.

Roswell Opening A Big Success

Howard Parman, Roswell District

"It's a beautiful building that reduces our overhead costs, increases our efficiency and allows for better customer service," said Acting District Manager Ed Roberson of the new office in Roswell, New Mexico. More than 60 guests heard Roberson's description of the building at the Grand Opening on November 4, 1996.

The new office unites the Roswell District with the Roswell Resource Area. Also under the same roof are the fire dispatch center, the firefighting station and a warehouse. Employees and guests were treated to a line dancing performance by Applications Examiner Mary Lou Ormseth of the District and other locals. In addition, the musical talents of Roswell Geologist Jim Pattengill and Statistical Assistant James Brasfield were featured in the group Silver & Lace, their country and western dance band.

Construction on the 40,000 square-foot building began in November 1995 and was completed at the end of August 1996. About 3,000 square feet of the office space will be sub-leased to the New Mexico Department of Health.



Roswell Geologist Jim Pattengill cranks up the volume during the performance of Silver & Lace for the Grand Opening.



Marilyn Krause, Miles City, Montana

The Pryor Mountain Wild Horse Range and wild horse specialist, Linda Coates-Markle has been receiving national and international attention from commercial filmmakers. As a result of an article she wrote for the magazine, EQUUS, Coates-Markle was contacted by the British Broadcasting Company, which is working on a documentary that will focus on the Pryor Range and the Montgomery Pass horses in California.

The filmmakers have selected a few of the family groups of horses and will film their migration, behavior, foaling, and other activity during different times of the year.

White Iron Production Company of Calgary, Alberta, also is working on a multi-segment documentary on wild ungulates (animals with hooves like horses, moose, antelope, etc). They are exploring how the horses got here and to whom the horses may be biologically related. The company has interviewed Coates-Markle and will be filming in 1997.

In response to the public and commercial interest, a committee has been formed to revise the publications relating to the Pryor Range to make them current and focus on the entire range rather than just the horses. The joint effort will look for partnerships and outside funding to produce a top quality publication.

interest in the science fields. The EcoBridge Program is assisted financially by the United States Information Agency, Bureau of Education and Cultural Affairs under the authority of the Fulbright-Hayes Act of 1963.

At Piney Woods, six students from the Rostov-on-Don region of southern Russia and Piney Woods students learned about stream sampling techniques and analysis of macroinvertebrate populations as indicators of water quality. The rural 2,000-acre Piney Woods campus provided an excellent site for learning about the environment with several streams and lakes to investigate, 1,300 acres of woods, and a working farm with pigs, goats, sheep, and cattle raising operations.

Bald Eagles Attract A Crowd

Montana's Canyon Ferry Bald Eagle Viewing Program is well underway this fall with more than 1,000 bald eagles expected to migrate through the area. Each year, the bald eagles stop at Hauser Lake to feast on the kokanee salmon that die after spawning. This popular program includes a hosted viewing area, school tours and a visitor center with excellent exhibits on bald eagle ecology. Nine local, state, private, and federal cooperating organizations take turns hosting the viewing site on holidays and weekends. The BLM serves as the lead agency under an interagency agreement with the Bureau of Reclamation, Chuck Neal, BLM Park Ranger, and Walt Timmerman, Seasonal Park Ranger, direct the program and, along with over 30 volunteers, enhance the eagle viewing experience for about 13,000 people each fall.

BLM Contracts For Surveying And Mapping Assessment

By Dana Hunt, Washington, D.C.

The Bureau of Land Management has awarded a contract to the National Academy of Public Administration to complete a study assessing the surveying and mapping activities of federal civilian agencies, state and local governments, and the private sector. The study will be a collaborative effort involving the BLM, the U.S. Geological Survey, the National Oceanic and Atmospheric Administration, and the U.S. Forest Service, all of which are funding the project. The work began in early October and is expected to be completed by June 1997.

This initiative is designed to help the BLM and other federal agencies advance their efforts to improve mapping and surveying activities. Questions about the study may be directed to Ray Brady of the BLM Land and Realty Group at (202) 452-7773 or via e-mail (rbrady@wo.blm.gov) or to the Academy's co-project directors, Roger Sperry and Arnold Donahue at (202) 347-3190 or via e-mail (napa@tmn.com). The Academy will issue a final report on the study that be available through the Academy's publications office, which can be reached at (301) 617-7801.

U.S. Fish and Wildlife Service



John G. Rogers, Acting Director
Janet L. Carroll, Bureau Editor



John Rogers

Tom Jorling

Service Seeks New Ways to Protect Endangered Species

ENDANGERED



More than 950 species of animals and plants are at risk of extinction, including the red wolf of the Southeast, top, whose population numbers about 100 and the Wyoming toad, above, whose population totals about 200. Photo courtesy of the National Geographic Society

Missouri Lands \$15 Million Hatchery Award

Larry Dean

One of the Nation's largest capital improvement projects to be completed with funds from the Federal Aid in Sport Fish Restoration program, the Missouri Department of Conservation will receive a total of \$15 million during the next six years to build the Lost Valley State Fish Hatchery.

The total cost of the project, located near Warsaw, Missouri, is estimated at \$20 million.

Department of Conservation Fisheries Chief James G. Smith said, "This project will revolutionize Missouri's warm-water hatchery system and meet our needs for sport and for fish management purposes, in an economical manner well into the next century."

The hatchery will directly benefit anglers who contribute to the Sport Fish Restoration program, producing a variety of species for statewide stocking and ponds.

Operating as a user-pay program, the Sport Fish Restoration program began in 1950 and is funded by

Michael L. Smith

Twenty-five major landowners from across the country—including representatives of home builders, timber companies, farmer co-ops, livestock ranchers, utilities, and energy development companies—came together in mid-November to look at new ways of protecting endangered species on private lands. The forum was developed by the Fish and Wildlife Service in conjunction with The Conservation Fund, the International Paper Company, and Anheuser-Busch.

"This pioneer forum was a resounding success," said Acting Service Director John Rogers. "Our goal went beyond merely bringing different groups together. We wanted to learn from one another and build levels of trust in working with endangered species. Landowners learn more about flexible and workable strategies for saving species and Service personnel learn to look for solutions that meet the economic needs of private landowners."

The forum focused on Endangered Species Act conservation tools directly applicable to private lands—habitat conservation plans, candidate conservation agreements, and safe harbor agreements. Presenters included private landowners as well as experts from the Service and conservation organizations.

"This was a very exciting process," said John Turner, president of The Conservation Fund. "We had very open and frank discussions about common-sense approaches to save declining wildlife while allowing profitable activities to proceed on private property. Since much of remaining habitat is on private lands, we must all learn to work together to find ways for landowners to safeguard wildlife on their lands."

"We must develop conservation leaders for the next century," said Tom Jorling, vice president for environmental affairs at International Paper. "Collaborative training and working together to meet common goals will lead to exciting new conservation approaches for the future."

The endangered species gathering also provided an opportunity for the group to tour the Service's new National Conservation Training Center, currently under construction. Resource professionals from government, corporations, academia, and the nonprofit community can meet at the training center to learn from one another and forge consensus approaches to the complex and controversial resource issues of the future.

"We are very encouraged that the center can play an important role in addressing some of the major conservation topics of the day," said John R. Lemon, director of the new center. "We see this as a place where people can train together, share perspectives, and work toward lasting solutions to tough resource questions."

Staff at the new center are developing curricula for a wide range of subjects that will engage representatives from the private sector, state and Federal Government, and conservation groups in partnership training. The training center is scheduled to open in mid-1997.

Up Close and Personal

They don't keep the neighbors awake, don't have to be fed, and don't require much space. So, the nine threatened and endangered species were welcome additions this summer at Dakota Zoo in Bismarck, North Dakota.

The zoo teamed up with the U.S. Fish and Wildlife Service and local artist Dave Ely to develop a kiosk featuring computer-generated reproductions of the bald eagle, piping plover, western prairie fringed orchid, least tern, whooping crane, peregrine falcon, pallid sturgeon, black-footed ferret, and gray wolf.

In addition to the artwork, the kiosk contains information about other listed species and explains how zoos help preserve endangered species through education, research, and conservation. Mike Olson, endangered species biologist, believes zoo exhibits can play an important role in saving rare plants and animals. "Zoos bring people and wildlife together and provide us an opportunity to teach the public about wildlife, how protecting rare species can protect people, and what needs to be done to protect endangered species," he said.

It didn't take long for word to spread about the new exhibit. Endangered species kiosks are now being planned for zoos in two other North Dakota cities. And Bismarck zoo officials are so pleased with the kiosk that they're seeking other opportunities to work with the Service.



Steve Fowler, Residential Programs Officer, Mingo Job Corps Center



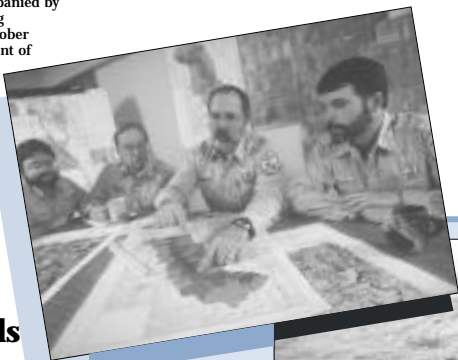
Job Corps Students Make a Difference

It's always a learning experience to help others, especially those less fortunate than we are. Ten students from the Service's Mingo Job Corps Center near Puxico, Missouri, got the chance during Make A Difference Day, sponsored by USA Weekend Magazine. The students, accompanied by three Mingo staff members, became fishing instructors and assistants during a late October fishing trip with residents of the Department of Mental Health Southeast Missouri Residential Services.

The group tested their fishing skills at a catfish farm, where the anglers were sure to catch fish. Mingo students are members of the Job Corps Center's Anglers Club and each were assigned to a resident to assist with baiting hooks, casting, and reeling in fish.

The event was rewarding not only to the residents of Mental Health Services but also to the students of the Mingo Center. Afterward, the students wrote about their experience:

"I realized that helping others is a good thing, and rewarding. It made me feel good and helpful. At one point, I felt needed. Let's do it again." John Moran



Walnut Creek Nation Wildlife Refuge Manager Dick Berger, third from the left in photo alone, reviews preparations for introduction of buffalo to Iowa prairie, at right, which took place on October 9.

Minnesota's Governor Honors Service for Wetlands Inventory

Susan Dreiband

On behalf of Minnesota Governor Arne H. Carlson, John Gunyou, head of the Minnesota Office of Technology, presented a Certificate of Commendation to Fish and Wildlife Service Regional Director Bill Hartwig at the September 27 Minnesota Geographic Information Systems conference. The award, one of only two presented this year, recognizes the Service's achievements in developing Minnesota's portion of the digital National Wetlands Inventory.

In accepting the award, Hartwig noted, "We are pleased and honored to have our efforts recognized by the State of Minnesota. It is the strong partnership that has evolved between the state and the Service that made this possible and for which we are most proud. We would also like to thank the state for helping to build the wetlands layer of the National Spatial Data Infrastructure. This would not have been possible without the state's interest and cooperation."

The Governor's Council on Geographic Information noted in an accompanying letter to the Service: "... Your pioneering approach to data access through the Internet has provided Minnesotans with an exceptionally valuable, cost-effective and readily available source of data. ... You deliver a product that is exceptionally useful to the citizens of this state."

The main purpose of the National Wetlands Inventory is to map the wetlands of the United States and its territories and then disseminate the information. More than 18,800 digital wetland map files are available on the National Wetlands Inventory HomePage at <http://www.nwi.fws.gov>. Nearly 169,000 digital wetlands maps were downloaded from the HomePage in the last 2 years, saving users nearly \$1.6 million.

At far left, Michael Grant of the Mingo Job Corps Center and his fishing partner show off their catch during a fishing trip for "Make a Difference Day." At near left, Students from Mingo Job Corps Center, including Gwen Ludy, center left, helped make a difference to residents of the Missouri Department of Mental Health. Photos by Rickey McLean



"Helping people who are handicapped in some kind of way makes me feel real good, knowing they don't really get the opportunity to catch a fish. My partner's name was Linda. . . . It made me happy to see her having fun and catching fish. I wouldn't mind doing it again." Gwen Ludy

"Helping these people really made me feel good. . . . Helping others not only makes you feel good but it makes them feel loved and wanted." Nicole Speer

"I liked participating in Make a Difference Day because when helping people I feel better about myself. And I know that the person I helped knows it's OK to have help from someone else." Robert Holland

The Mingo Job Corps Center is a vocational-educational training center for socially and economically disadvantaged youth, ages 16 to 24.

Buffalo Returned to Iowa Prairie

Larry Dean

With the sun beginning to peek out across the rolling hills of Walnut Creek National Wildlife Refuge, a group huddled near a trailer containing a treasure once in great abundance on the Iowa prairie. Inside the trailer were eight bison (also called buffaloes): four calves, two yearlings, and two 2-year-olds. The trailer was backed up to the opening of an acclimation pen and, at 7:15 a.m. October 9, the first two animals stepped out into the pasture, settling in quickly to feed on the lush plants. Within 2 hours, all eight bison were calmly feasting at their new home.

These buffaloes were the first wildlife reintroduced to the prairie as part of the Fish and Wildlife Service's unprecedented effort to reconstruct 8,000 acres of prairie south of Prairie City, Iowa (and 20 miles east of Des Moines). They were brought in from Fort Niobrara National Wildlife Refuge, Nebraska, and were joined by six more bison from Wichita Mountains at the end of October.

On October 10, the gate of the acclimation pen was opened to permit the bison to wander out into their permanent pasture. The eight new residents of Walnut Creek seemed not to notice the open gate. They were comfortable feeding on the rich plant life and would exit the pen in their own time.

Approximately 150 years have passed since buffalo roamed the state. This reintroduction is one of many steps taken at Walnut Creek to complete the largest tallgrass prairie restoration in the country. Refuge Manager Dick Birger noted, "We've come a long way. Bringing back the bison is a symbolic thing."

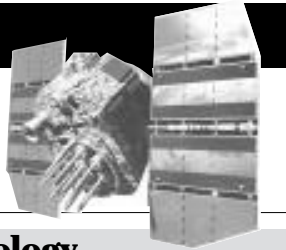
The refuge encompasses nearly 5,000 acres of restored prairie, with plans to expand to 8,654 acres as land becomes available. Restoration efforts have been successful in attracting prairie birds seldom seen on the Iowa farm landscape, including upland sandpipers and bobolinks. The refuge is based on a tract of land originally purchased by a utility company for a nuclear power plant. When plans to build the plant changed, Congressman Neal Smith led the effort to restore prairie in that area.

Construction continues at Walnut Creek for a state-of-the-art Prairie Learning Center offering a full range of environmental education within its prairie compound. The center, slated for a spring opening, offers a wealth of exhibits, outstanding views of the surrounding prairie, and a chance to see the majestic bison that once again are home on the range.

Minerals Management Service



Cynthia Quarterman, Director
Suzanne Melancon, Bureau Editor



Around MMS

In November, generous-spirited MMS employees helped fill Thanksgiving baskets for needy families. **Dora Hardy**, of headquarters Administration, reported that D.C. area MMS staff provided turkey and trimmings for 20 local families 55 boxes of food in all. **Monica Contee** coordinated MMS employee contributions in the main Interior Building.

To mark American Indian Heritage Month, in November, **Edythe Ferguson** used E-mail to remind MMS employees about the contributions of Native Americans and pre-Columbian civilizations in Central America passed on to the Europeans who settled in the Americas after 1492. For example, potatoes, corn, and peanuts, domesticated by American Indians, represent most half of today's world wide food supply.

In December, after 50 children entertained MMS staff with holiday songs at the Atrium Building in Ardmore, **Santa** gave out presents from each child's wish list. **Dora Hardy** matched children's wishes with MMS surrogate Santas who volunteered to do the shopping and wrapping.

The holiday season was wrapped up in fine style in Denver, where the Denver Federal Executive Center again sponsored gift-giving to children through Child Opportunity Centers and to senior citizens through the Volunteers of America. **Michele Lee** and **Ruth Bowers** were the MMS coordinators.

Beverly Wilson, of Administration, was delighted with the response to this year's Combined Federal Campaign. Inspired by her enthusiasm, headquarters keyworkers **Wallace Adcox**, **Paulene Cross**, **Edith Darry**, **Kent Dirlam**, **Janice Durham**, **Barbara Evans**, **Frederick Gray**, **Kathleen Kurek**, **Sandra Lawson**, **Glen Lyddane**, **Suzanne Melancon**, **Janet Moore**, **Inger Powell**, **John Rowland**, **Valerie Russ**, **Janice Shay**, **Karen Smith**, **Maggie Weber**, and **Cheri Yoesting** helped net a total of \$38,478, or 14% of Headquarters goal, by November 25. This kind of success couldn't have been achieved without the participation of MMS staff willing to share a bit of their own good fortune.

Minerals Leasing Specialist **Elverlene Williams-Atts**, of MMS's Pacific Regional Office, and **Sue Taylor**, of the Dallas Compliance Division, are busy completing the Women's Executive Leadership program. The program coordinator for MMS is **Pauline Marshall**.

Offshore Field Trip

Ann Bull and **Vilere Reggio**, of the MMS Gulf of Mexico Outer Continental Shelf Region's Leasing and Environment staff, spent three days offshore inspecting several studies funded by MMS at Mobil's production platform Green Canyon-18. This platform stands at the outer edge of the continental Shelf in a little more than 700 feet of water. Bull was surprised at platform's size. It is about 12 stories tall the stairs were killers and had 74 people on it.

We were able to gain a valuable piece of information needed for an upcoming Platform Remediation Workshop. Using a remotely operated vehicle, we determined that, at this platform anyway, there were few fish below 400 ft. This kind of accurate scientific data will help MMS make important decisions in the future."

Global Positioning Technology Helps Track People, Aircraft, and Whales

In late September 1996, a Twin Otter plane lifted off from Deadhorse, Alaska, and flew out over the frigid Beaufort Sea in search of bowhead whales. On board, a Global Positioning System (GPS), used in flying special survey patterns over the water, was accurately recording the geographic location for each whale sighting and broadcasting the location of the plane.

Meanwhile, in the sky over the tropical Pacific Ocean west of Quito, Ecuador, a geo-stationary satellite called Spacenet 3R received and used this GPS information to track the aircraft as it flies its survey pattern over the icy Arctic water. The plane is part of MMS Alaska Region's Bowhead Whale Aerial Survey Project, which has studied bowhead whales during their fall migration from the Canadian and Alaskan Beaufort Sea to the Chukchi Sea for the past 10 years.

For several years, the aerial survey has investigated the use of satellites to improve the tracking of aircraft in the Arctic. Should the survey plane go down in the freezing waters of the Beaufort Sea, rapid rescue of survivors would mean the difference between life and death.

Until 1993, the survey planes could only be tracked by Very High Frequency (VHF) radio communications with the Deadhorse Flight Service, by a dedicated transponder frequency issued by the FAA's Anchorage Center, and by hourly High Frequency communications with the Office of Aircraft Services in Anchorage. These systems provided only sporadic coverage over the whole Beaufort Sea study area.



Headquarters CFC Team (L-R): Janet Moore, Paulene Cross, Sandra Lawson (Partially hidden), Valerie Russ, Maggie Weber, Kent Dirlam, Janice Shay, Wallace Adcox, and CFC Coordinator Beverly Wilson. Not pictured: Edith Dary, Barbara Evans, Frederick Gray, Kathleen Kurek, Glen Lyddane, Suzanne Melancon, Ginger Powell, John Rowland, Karen Smith, and Cheri Yoesting.

Pipeline Inspections Standardized

Because federal, state, and local agencies in California have different inspection requirements on the same pipelines, MMS' Pacific Region helped to organize a multi-agency group to promote consistency and reduce the number of duplicate pipeline inspections. The Pipeline Inspection Quality Improvement Team reviews existing federal and state requirements for inspecting pipelines on the California Outer Continental Shelf and develops guidelines to improve survey quality.

Team members included representatives from MMS, the Department of Transportation, the California State Lands Commission, the California State Fire Marshall's office, and the California Department of

Then MMS and the Office of Aircraft Services began testing an experimental Radio Determination Satellite System for tracking survey aircraft. In 1993, MMS funded the design and testing of this system aboard the Office's contracted aircraft used by the whale project.



Many different antenna configurations were field-tested to determine the best type and placement of the antenna for providing consistent radio contact between the aircraft and the satellite. Of the antennas tested, the most successful was a small patch antenna attached to a transmitter by a cable.

Data from the onboard GPS showing the latitude, longitude, time, heading, and altitude were sent from the transmitter to the satellite every minute. The satellite relayed the signal to the system designer, Mobile Datacom Corporation in Clarksburg, Maryland. The Office queried the satellite system every 15 minutes to track the aircraft; the information received was displayed in map form on a computer screen.



During the fall of 1996, the whale survey project continued to test the satellite system to track survey aircraft. For the first time in Alaska, a third antenna was placed in the nose of the aircraft. This three-way test antenna system, which included two previously tested antennas attached to each side of the aircraft, was automatically activated by a toggle switch as the aircraft changed course.

The new system helped eliminate blind spots by increasing the number of aircraft signals received by the satellite no matter which way the plane was headed. This year, the plane's position also appeared on the Internet for additional tracking by project managers.

Oil, Gas and Geothermal Resources. Over 18 months, the team developed the Offshore California Pipeline Inspection Survey Plan, which demonstrates that cooperation can result in a quality product that meets the needs of all the parties involved.

The inspection plan will permit pipeline operators to develop inspection strategies tailored to the needs of individual lines, based on their actual condition. This will improve pipeline safety and reduce the risk of failure, while affording industry an opportunity to reduce survey costs as a benefit of diligent and innovative inspection and maintenance.

Warning Fish Away from Oil Rig Explosions

A Volunteer research project headed by the Minerals Management Service is working to make a recording of fish-like sounds that will frighten fish away from an off-shore explosion.

Oil companies annually remove about 100 offshore oil rigs in the Gulf of Mexico by exploding the anchors that attach the rigs to the ocean floor. The shock waves kill thousands of fish, said **Dr. Ann S. Bull**, an MMS marine biologist.

To save the fish, researchers are donating their time and effort to begin testing four species of fish that typically can be found near offshore rigs to isolate and copy the sounds that would scare them off.



"The sound should be effective enough to drive the fish from an area in several hours, but not cause them to panic and freeze up in fear. This has never been done before with warm water species," Bull said.

To begin the test, researchers collected 75 spade, amberjacks, and small grouper and red snapper in a 12,000-gallon tank in New Orleans at the Aquarium of the Americas. Working with one variety at a time, the scientists then moved the fish from the large tank to a small tank. The transition caused panic and the fish began communicating by making clicks, squeaks, and whistles.

Energy Engineering Services of Fort Lauderdale, Florida, a private contractor on the project, then recorded the fish sounds with special equipment to capture the frequency which that variety of fish hears best, said **Paul Loeffelman**, a senior biologist with the company. When the sounds are understood, Energy Engineering will develop a synthesized recording that the fish will interpret as a warning to clear the area.

The company is optimistic that it can find a workable system for the Gulf because of its past experience. Using similar technology, the firm developed sound barriers in Northern California waters that prevent salmon and herring from entering the cooling intakes of power plants.



Oil companies would have to adopt whatever system is developed voluntarily, Bull pointed out, because it is unlikely the government can mandate use of the alert. None of the fish species involved are endangered, Bull said.

MMS Group Joins Rescue at Sea During Beach Sweep '96

MMS volunteers all along the Gulf Coast joined more than 250,000 participants worldwide for a day of cleaning the nation's beaches in September. The work was done in conjunction with Beach Sweep, part of the 1996 Annual International Coastal Cleanup. Even **Secretary Babbitt** pitched in to help volunteers in Florida.

But few of the volunteers could match the drama that Cleanup Coordinator **Ted Stechmann** experienced during his team's project. Twenty-three MMS volunteers, including **Nick Wetzel**, **Mike Conner**, **Anne Allen**, **Jan Blake**, and **Frank Yam** along with family and friends, were scheduled to spend the morning picking up and bagging marine debris along the south shore of Ship Island, located 12 miles south of Gulfport, Mississippi.

MMS has participated in the cleanup twice a year since 1988, when the Adopt-a-Beach Program was initiated in Mississippi. In the past, their trips to

and from Ship Island have been fairly routine. Not so this time, because members of the group were involved in a rescue at sea.

"I was up at 6:30 a.m., nervously monitoring the Weather Channel and expecting to receive a phone call from Park Ranger **Gail Bishop** informing me that the trip to the island was canceled due to anticipated severe weather," Stechmann recalled. "The phone call never came, so we headed to the port to meet our 9:00 a.m. departure time. Although the sky was dark and overcast, with some foreboding clouds to our west, the rangers assured us that conditions on the island were fine, so we shipped out on schedule.

"About a third of the way to Ship Island, we noticed that a man and his young son were following us in a small runabout. The man's wife, young daughter, and mother-in-law were on the ferry. At about the 8-mile beacon, a ferocious thunderstorm hit,

bringing with it gale-force winds, 5-foot seas, and driving rain. The small boat was battered about, and after a fierce struggle and several near misses, the man was able to bring the boat alongside the ferry, which had slowed to a crawl.

"He then threw a tow line to a group of young men who were standing near the stern, including my son, **Daren**, and future son-in-law, **Robert**. One man held the rope as the man passed his son up to another. Daren and Robert then leaned over the rail, grabbed the man's arms, and launched him onto the ferry.

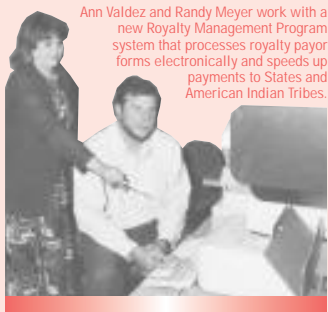
Somehow, during the excitement that followed, the runabout slipped away and drifted off behind us. A short time later the storm ended, and it was clear sailing to the island. We learned later that our skipper radioed the Coast Guard, who located the drifting boat and towed it to the island," Stechmann recalled.

New Technology Cuts Costs

MMS has made information technology improvements that could save \$1 million in operating costs during the next few years. The initiatives, recommended by a National Performance Review Laboratory, also will increase efficiency and improve customer service.

The improvement process began in 1994, when MMS's Royalty Management Program's reinvention lab focused on improving the oil and gas Payor Information Form. The paper form is submitted by the royalty payor - a company extracting natural gas or oil from areas under federal jurisdiction when production begins. The form establishes a payor's account and identifies selling arrangements and revenue sources. The more quickly and accurately the forms are filed, the sooner state and American Indian shares of these royalty payments are distributed.

In 1995 a pilot program tested a new computer imaging system that allows forms to be processed electronically. Test results showed that with the new system, MMS was able to reduce its processing time from 14 to three working days. The bottom line? More timely distribution of both data and revenue to customers.



Ann Valdez and Randy Meyer work with a new Royalty Management Program system that processes royalty payor forms electronically and speeds up payments to States and American Indian Tribes.

Overall, more than two-thirds of MMS's Royalty Management Program data were transmitted electronically during fiscal year 1995. The goal is to receive 100 percent of incoming reports electronically by the end of 1997.

Bald Eagles Attract A Crowd

Montana's Canyon Ferry Bald Eagle Viewing Program is well underway this fall with more than 1,000 bald eagles expected to migrate through the area. Each year, the bald eagles stop at Hauser Lake to feast on the kokanee salmon that die after spawning. This popular program includes a hosted viewing area, school tours and a visitor center with excellent exhibits on bald eagle ecology. Nine local, state, private, and federal cooperating organizations take turns hosting the viewing site on holidays and weekends. The BLM serves as the lead agency under an interagency agreement with the Bureau of Reclamation. **Chuck Neal**, BLM Park Ranger, and **Walt Timmerman**, Seasonal Park Ranger, direct the program and, along with over 30 volunteers, enhance the eagle viewing experience for about 13,000 people each fall.

Fortunately, the remainder of the day went as planned. The skies cleared, the sun came out, and the volunteers purged their adopted beach of marine debris. In just over an hour they collected 18 full garbage bags—substantially less trash this year than there was in either the spring or fall cleanups last year.

Cleanup Coordinator **Vilere Reggio** reports that he and other MMS regulars **Mary Ann Curry**, **Dennis Chew**, **Jeff Brooke**, and **George Franklin**, along with newcomer **Michele Aurand**, brought family, friends, and Boy Scout Troop 85 to help document and remove trash from Fourchon Beach.

Joining an estimated 500 volunteers, mostly organized youth groups from Louisiana's Lafourche Parish Schools, about ten miles of recreational beach were rid of the ugly remnants of human activity and returned once again to attractive Louisiana seashore. Thanks to the sponsorship and hard work of **Chevron** and its Leeville employees, volunteers were rewarded with food, drinks, and souvenir caps in appreciation for their public service commitment on a rainy day.

The Pevoto Beach cleanup effort was spearheaded by **John Schollian** and **Leo Dartez** of the Lafayette District. A group of 30 volunteers, including Schollian's and Dartez's families, **Rufus Lormand**, **Gerald Gonzales**, **Joe Gordon**, **David Suire**, **Pat Sarsfield**, and **Cliff Delouche** hit the beach. They cleaned one mile of beach and filled 155 bags with approximately 800 pounds of trash.

Bureau of Reclamation



Eluid Martinez, Commissioner
Colleen Dwyer, Acting Bureau Editor

A Marine Corps ribbon bridge provided transportation and a dry work area for Reclamation's heavy equipment at this site on Lake Mohave on the lower Colorado River. BOR Photo by Andy Pernick



Work Begins on Willow Creek Dam

Erice, Great Plains Regional Office

Reclamation and the Greenfields and Fort Shaw gation Districts have begun repairs on Willow Creek Dam, located 45 miles west of Great Falls, Montana. The work follows the discovery of a hole in the dam's crest on June 28.

When the sinkhole was discovered, Reclamation and Greenfields took immediate emergency measures to stabilize the dam. These included filling the hole, patching the outlet tunnel beneath the hole, and lowering the level of the reservoir.

Since early July, Reclamation has been conducting investigations and preparing designs for more permanent repairs. This work will involve excavation and replacement of part of the dam's right abutment, cement grouting of the foundation rock beneath the dam, and adding a steel liner to the outlet works tunnel.

During the work, the reservoir level will be lowered by about 28 feet, leaving about 5,000 acre-feet of water in the reservoir. The normal capacity of the reservoir is 2,300 acre-feet. Drawdown of the reservoir is not anticipated to damage the fishery. The reservoir will also remain open for recreational use, and access roads will remain open to the public.



The Great Plains Regional drill crew performed investigative drilling. Photo by Lovell Parish

Work is being performed in the Districts, which will rate and maintain the dam under contract with Reclamation. Work is in part through Reclamation contracts. The \$6 million repair project began September 9 and will be complete by spring 1997, said Kurt Spleter, the resident engineer overseeing the construction.

Cispus Workshop

Redding, Pacific Northwest Regional Office

The Pacific Northwest Region will join other federal and state natural resource management agencies in a five-day Cispus Workshop aimed at improving communication skills for those involved in resource management and working with the public. The workshop will be held March 3-7, 1997, at the former Job Corps Center on the Cispus River in Rainier, Washington, in the western Cascade Mountains. The \$285 registration fee includes room and board, training sessions, and materials.

The workshop helps professionals find better ways to communicate with the public to resolve natural resource management issues. Over the past 25 years, the workshop has honed the communication skills of executives, program managers, public affairs specialists, resource specialists, and interpreters. Participants find that the communication skills they learn apply to everyday work lives as well.

The workshop relies almost entirely on volunteer staff from federal and state agencies for development and delivery of their interactive workshop sessions. For further information about this training opportunity, contact Chris Jansen-Lute at (208) 378-5319.

Reclamation, NPS Join Marine Corps in Repairing Colorado River Backwater

Terry Murphy and Steve Belew of the Lower Colorado Regional Office recently completed work with the National Park Service and the U.S. Marine Corps to repair a damaged backwater on Lake Mohave on the Colorado River. Called Davis Cove, the area is used as a grow-out facility for endangered razorback sucker spawn as part of a multi-agency Native Fish Rearing Project.

In 1994, an earthen berm was constructed at the mouth of Davis Cove to create a backwater where endangered Colorado River fish could be raised isolated from predatory fish species. The berm partially collapsed and was no longer effective in protecting the cove. To rebuild this section, the agencies joined in a partnership that used the resources of each group to reduce the cost of project.

For the \$30,000 program, the Lower Colorado Region provided overall project management

and coordination. Denver Office staff furnished design support and construction management, the Yuma Area Office and U.S. Marine Corps supplied survey and construction equipment and crews, and the Park Service provided environmental compliance.

Because of the cove's remote and inaccessible location, Reclamation work crews and equipment were transported to the site by means of a Marine Corps barge. Called a ribbon bridge by the Marines, the barge has a capacity of 60 tons and is used for ferrying vehicles and heavy equipment across waterways. The barge remained in place near the cove during the October 21 through November 1 construction period to provide a dry work area for operation of heavy equipment.

Ultimately, the project benefited everyone. During this operation, the Marine battalion, made up of active duty soldiers from Camp Pendleton, California, completed required field training and experienced practical application of their engineering skills. They also worked on other coves and roadways throughout the National Recreation Area for the balance of their two-week training period. This practice also reduced the amount of Reclamation and Park Service equipment and personnel that would have been mobilized, resulting in savings for both agencies.

Third Innovations Conference



Commissioner Eluid Martinez

More than 300 federal, state, and local government employees gathered September 26 in San Antonio, Texas, for Reclamation's third and final Innovations Conference. The Alamo Federal Executive Board joined Great Plains Regional Director Neil Stessman and Upper Colorado Regional Director Charley Calhoun in hosting the conference about government reinvention successes and challenges.

Conference speakers included Commissioner Eluid Martinez; Carmen Maymi, Manager of Administration and National Performance Review Initiatives; William Parent, Senior Administrator at the John F. Kennedy School of Government, Harvard University; and John Kamensky, Deputy Project Leader, National Performance Review Office in Washington, D.C.

The conference, organized by a team of employees from the Great Plains and Upper Colorado Regions, included a symposium of Vice President Al Gore's Hammer Award winners from the San Antonio area and an in-depth workshop on the Government Performance and Results Act. Other workshops focused on customer service, managing downsizing and restructuring, privatization of federal assets,

and streamlining regulations. Reclamation employees also presented seminars on the partnerships that had evolved as a result of its reinvention.

Much of the funding for the San Antonio conference, and its two predecessors in Sacramento and Denver, was provided by a \$100,000 grant to Reclamation from the Ford Foundation. The Innovations in American Government awards program, which recognizes successful innovation efforts at all levels of government, is administered by the John F. Kennedy School of Government at Harvard University. Reclamation was one of 15 winners in 1995.

Reclamation will now establish an Innovations Resource Center in Denver to disseminate information on techniques and approaches that were successfully applied in its reinvention effort.



This recent publication on Reinvention successes is available from the Government Printing Office. The catalogue number is ISBN 0-16-048770-6.

A Celebration of Firsts

Reflections on the Completion of the Glen Canyon Dam-Colorado River Test Flooding

Rick Gold, Deputy Regional Director, Upper Colorado Region

Secretary Babbitt signed the Record of Decision in the Environmental Impact Statement process for the operation of Glen Canyon Dam on October 9, 1996. That process began in July 1989 when the Department directed the Bureau of Reclamation to prepare the Statement.

As a major player throughout the seven years and three months of that process, I am proud of Reclamation's effort and accomplishment.

While the Secretary's focus at the signing was primarily the reporting of results of the controlled flood of 1996, I was moved by the significance of the moment as measured by the commitment and effort of those who gave major portions of their lives and careers to the processes and products of this major project.

I strongly feel that celebration is in order—a celebration of purpose and collaborative effort that when viewed in its historic perspective made a huge difference. Resource management in the United States was purposely changed by this collective effort.



Glen Canyon Dam Operations

In signing the Record of Decision, Secretary Babbitt exercised his authority and discretion to change the operation of Glen Canyon Dam to protect the Colorado River flowing through the Grand Canyon. The decision was based on the scientific evidence gathered during the Environmental Impact Statement process and after the seven-day test flood last March.

The Secretary's action establishes criteria that will protect the Colorado River and Grand Canyon. The management of the dam, particularly its periodic release of water, will now be regulated in a manner that promotes environmental protection of the river and canyon ecosystem in addition to the need to capture water for irrigation and power generation.

The Environmental Impact Statement program was set up in 1982 to gauge the changes to the river and canyon caused by the 1966 construction of the Glen Canyon Dam. By 1988 the program had determined that the dam had significantly altered the natural dynamics of the Colorado River and produced detrimental environmental consequences, eroding beaches and eliminating or damaging plant communities and wildlife habitat.

"This is a decision based on science, allowing us to protect the river and still operate very efficient hydroelectric power generation and water capture," Babbitt said in announcing the new guidelines for the dam's operation.



At left, Secretary Babbitt releases the March, 1996 test flood from the Glen Canyon Dam into the Grand Canyon. Jeff Robbins photo courtesy of the Associated Press. Below, four plumes of water shoot forth from the jet tubes at Glen Canyon Dam during the first ever Beach-Habitat Building Test Flow. Deseret News Photo by Tom Smart



This process represents several firsts that should not go unnoticed. For the first time, the Bureau of Reclamation successfully demonstrated that a new bureau approach could work, did work, and was a positive and professional contribution to a major resource issue.

For the first time, the federal, state, tribal, environmental, and power user interests in the West came together and, through honest effort and sincere attempts at understanding, crafted a balanced solution that was not immediately challenged by litigation from some quarter.

For the first time, the new bureau demonstrated that an interagency, interdisciplinary team could complete a major Environmental Impact Statement, which was approved, liked, and was, in fact, award winning!

Celebration is in order! Team work and individual professional bonds were formed and cemented which continue to benefit the entities and individuals, and current and future resource of the Colorado River Basin and the West.

I am particularly proud of the interagency team of specialists, supervisors, and managers who fought through the problems, believed in the outcome, and continued to work professionally toward our jointly-held objective of a balanced operational approach for Glen Canyon Dam.

When my role in this process began in May 1990 many, including myself, were not at all sure that completion, let alone success, were possible outcomes. I advised the Upper Colorado Regional Director at the time that if Reclamation was ever to become a new bureau and approach issues in a different way, this effort would be the bellwether test. Pass or fail, it was my view that as the Glen Canyon Environmental Impact Statement process went, so would go the future of Reclamation. We passed, we succeeded, we flourished—we should be proud.

I am professionally and personally very, very proud of every Interior employee who contributed in an honest and forthright way to our accomplishment. Those folks are far too numerous to name. They come from the Bureau of Reclamation, National Park Service, Fish and Wildlife Service, Bureau of Indian Affairs, Office of the Solicitor, and U.S. Geological Survey.

We were a very good team, we made a major accomplishment, we made a difference, and we did the right thing. Thank you all!

Hoover Dam Cable Still Hard at Work

Colleen Dwyer, Lower Colorado Region

Spanning the 1200-foot width of Black Canyon across the Colorado River, Hoover Dam's 150-ton cableway was recently tested, following a rehabilitation and overhaul of its carriage system.

The cableway was originally installed in 1932 to help lower equipment and large generator parts to the Hoover Dam construction site. Because the only other access to the base of the dam is by way of a narrow, winding roadway which passes through a tunnel, the cableway is still used to transport large equipment, including 18-wheel oil tankers and a 150-ton transformer.

During load-testing, slabs of concrete weighing up to 20 tons were supported on a cradle 700 feet in the air over the Colorado River. The cableway exceeded its rated capacity and successfully supported 187 tons.



Hoover Dam's 1932 cableway is still able to lift 187 tons. BOR photo by Andrew Pernick

Office of International Affairs



Allen P. Stayman, Director
Stephen Sander, Bureau Editor

Reinvigorating Guam's Mariana Crows

ew report from a committee of the National Earth Council recommends the reintroduction of five bred aga, or Mariana Crow, to the U.S. territory of Guam, to help stem the decline of the indigenous population of the species.

Report by the Board on Biology, Commission on Life Sciences, warns that the aga could become extinct on Guam unless action is taken to prevent the introduced brown tree snake, *Boiga irregularis*, from preying on the remaining few crows from spreading to other islands.

A high percentage of crows produced by the few crows surviving on Guam are infertile, leading scientists to wonder whether the population has grown too old to reinvigorate the species. To attempt to increase the productivity of Guam population, the report recommends that crows that have been bred in captivity be radiographed and released over the next three years. Careful monitoring of reintroduced young breeders will help researchers determine whether it is too late to save the aga.

Findings reflect the larger issues of biodiversity preservation common to all oceanic islands: systems as well as the catastrophic effects of introducing a non-native species to an island. OIA has been working with Department biologists and local officials to develop and carry out a research control program for the brown tree snake. The study, funded by the U.S. Fish and Wildlife Service, is chaired by W. Donald Duckworth, of Hawaii's Bishop Museum.

NS Seeks Draft Regs on Island Immigration

In response to a requirement in new U.S. immigration law, the Immigration and Naturalization Service has requested OIA's assistance in drafting regulations affecting closely associated state citizens in U.S. territories.

Relations with three Pacific island republics—Palau, the Marshall Islands, and the Federated States of Micronesia—are governed by compacts of free association, which provide citizens of these states with restricted entry into the U.S. from its territories. Over the past decade, several thousand of them have migrated to the U.S. territory of Guam and the Commonwealth of the Northern Mariana Islands in search of better-paying jobs.

However, the compacts also have the imposition of restrictions on the right of such

Secretary Babbitt signs an agreement with representatives of the Republic of the Marshall Islands that will allow residents of Rongelap Atoll, which was contaminated 40 years ago by fallout from U.S. nuclear tests, to return to their island, which has been rehabilitated by the U.S. Government. From left are the Honorable Banny de Brum, the Marshall Islands ambassador to the United States and the Honorable James Malayoshi, the mayor of Rongelap Atoll in the Marshalls.



An Expanded Leadership Role Urged for Island's Private Sector

OIA Director **Allen P. Stayman** urged business leaders in the U.S. Commonwealth of the Northern Mariana Islands to play a greater role in guiding the commonwealth's social development by helping to instill a "culture of compliance" for immigration and labor laws.

Speaking at a November 6 session of the Saipan Chamber of Commerce, Stayman noted that the substantial economic development that has occurred in the islands has been facilitated by more than half a billion dollars in federal funding for roads, bridges, port development, water and power utilities.

The U.S. Government also has granted the Commonwealth special privileges such as the exemptions from federal immigration control, minimum wages, shipping laws, and foreign trade laws. These privileges were extended to benefit the island's people—to provide for the economic and social development of a new community of United States citizens.

More recently, amendments to the Magnuson Fisheries Conservation and Management Act provide the local government with a greater role and benefits from fishing within the 200-mile Exclusive Economic Zone around the islands. "We have also worked with the Commonwealth and the Federal Communications Commission to ensure that the islands will be integrated into the North American Telecommunications Numbering Plan and domestic telecommunications rates. These changes in federal policy present significant new development opportunities for local entrepreneurs," Stayman said.

The commonwealth has become a thriving tourism and garment manufacturing center in part because of this unique insular commonwealth status and U.S. financial assistance. But

Stayman noted there also are major concerns in the islands as well as among federal officials and members of Congress regarding the social problems that have attended this explosive growth. Particularly troubling has been the treatment of foreign guest workers by local employers.

To respond to these labor and immigration problems, Congress and the U.S. Executive Branch joined with Commonwealth leaders to establish the current Joint Federal-Commonwealth Labor, Immigration, and Law Enforcement Initiative. The business community played an important role in supporting this initiative.

The Federal Government is now enforcing, and will continue to enforce, federal laws in the Commonwealth,

including many labor statutes. As part of the federal-local initiative, the presence of the Occupational Safety and Health Administration and the Wage and Hour Division of the U.S. Department of Labor has been increased. Training and technical assistance to local officials and businesses are improving local awareness and compliance. The initiative also is providing assistance and training to the local government to strengthen its institutional capabilities to implement and enforce local labor and immigration laws.

"The federal government is now seeking assurance that the local community is genuinely committed to dealing with these problems," Stayman said. "As a part of this community, the private sector has a crucial role in providing this assurance. It is up to you to create a culture of compliance with laws and regulations," Stayman said. "The private sector must join the rest of the community in taking responsibility, not only for economic development, but for social development."

"Federal and local agencies, and the Congress, can determine when local businesses are genuinely committed to compliance, and when they are merely trying to manipulate and out-manuever enforcement officials," Stayman pointed out. Businesses also may try to gain advantage over competitors by cutting corners. The new Labor and Immigration Identification and Documentation System especially needs cooperation from the employers of guest workers in order to function properly.

"From a federal perspective, the desired outcome is to combine effective local enforcement with self-policing by the local business community," Stayman said. One of the fundamental principles of the United States Constitution is the concept of uniformity among the States—that all states will compete economically on a level playing field. The Commonwealth is fortunate, however, that the application of uniformity is not a constitutional requirement in the territories and commonwealths.

"To assure that the Commonwealth's privileges continue, the local government and business community must demonstrate to the Congress that they will respond to problems of growth, balance the benefits of economic growth with the social impacts of that development, and see that the benefits of development flow to the entire community," Stayman said.

Endowment for Mariana College

The Northern Mariana College has received a \$3 million endowment from the Interior Department. The one time grant was appropriated by the Congress in lieu of providing federal land under the land grant status legislation. The Congress has provided lump-sum endowments to generate income for island-grant colleges. The college may use the interest income from the endowment to fund college activities. More projects on forestry research are one of the areas in which the money will be used. The endowment was presented by OIA Director **Allen Stayman** during a recent visit to the Commonwealth. College President **Agnes McPheters** accepted the grant on behalf of the school.

Focus on Technology

Say It Again, Sam This Time With Video

So what's your story? What does your staff or the public need to know to gain a wider understanding of your agency's programs, its accomplishments, and how you can help them?

If you have such a message and it needs telling, have you thought about saying it with video. It's one of the single most powerful tools to reach people in the shortest amount of time, and have the most impact.

The Department has an AudioVisual Center specifically created to meet your video needs. The Denver-based team produces high quality audiovisual programs—from simple videos to 35mm theatrical movies, from slide shows to intricate interactive CD-ROMS, from audio tapes to digitized video distributed through the World Wide Web.

And the Center has put together a sampling list of ideas on using videos internally, for general public distribution, or for a potpourri of other uses. Chances are, there's a few ideas on the list that could fit your needs.

The Center can meet office or bureau needs in a way that is virtually painless for your hard-pressed staff. This customer-friendly service philosophy resulted from the Center's early entry into the reinvention of government program.

Started in early 1994, the process began with a contract for a government-owned, contractor-operated facility. This arrangement provides contractor professional staff at the Denver Federal Center facility.

operating state-of-the-art video production equipment. It also offers full access to the contractor's extensive and technologically advanced home facilities. That includes all the video and sound personnel and digital equipment, as well as 3D animation and interactive multimedia programming capabilities.

The contracting process was revamped to take care of the paperwork hassles so that agencies can spend their time and their efforts concentrating on their programs. To get a project started, all any government agency has to do is sign a one-page interagency agreement. The rest of the paperwork, including the Statement of Work and Interior approvals (form 551), is done for you.

The Center also recognized that for those who've never produced a video before, the process might seem intimidating. What comes first? How long should the program be? What needs to be provided? How should the topics be treated?

To ensure that agencies feel comfortable, technically speaking, Center staff are ready to guide client agencies through the process in plain English and help them make decisions where necessary. The Center wants clients to feel like they're working with friends who have their interests first in mind.

The friendly guide technique goes hand in hand with the Center's ideas on how to make high quality videos: Answer: Engage the ideas of the experts right from the beginning, at the concept stage. Because the contractor is on-site, clients get to talk with the pros right away, during the "thinking" stage of their programs. That beats wading through the typical procurement process before even getting a chance to discuss concepts with someone in the industry.

The Center's staff—including the contract office—concentrates only on audiovisual productions. Agencies



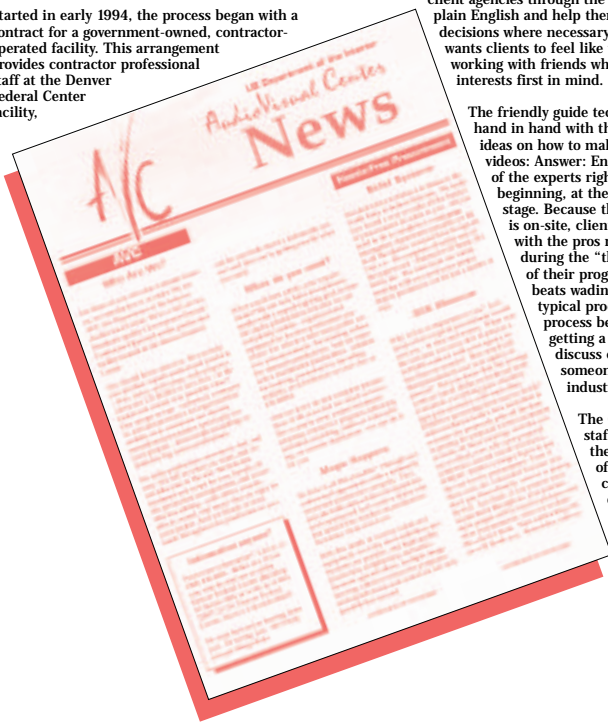
The Interior AudioVisual Center is capable of shooting on location anywhere in the United States. Above a Center crew shoots an interior video against the scenic backdrop of Colorado's Red Rocks area.

that come in will be working with people who know how to get the most for their money. These professionals know if something will or won't work, apply the most appropriate technology to each program, and talk to each other. With the contractor already on site, they have the luxury of being able to work closely together to make every program the best it can be.

And quality is inextricably tied up with equipment. With the dizzying rate of improvements in technology, the Center decided that digital non-linear was the way to go (see article in October-November, 1996, issue of PLW) and are in the process of upgrading an AVID non-linear editing system to the PCI version. That will improve picture quality even more and enhance the Center's capabilities to add more special effects and intriguing transitions to video productions (more bang for your buck).

Wouldn't your staff rather watch a 15-minute video than read a 30-page briefing paper? Wouldn't it be easier to train your staff by producing one video that they could watch at their convenience—and as often as necessary—than to send teams all over the country to provide the same training, hoping that everyone who needs the training can attend? You can reach as many people for less overall cost.

If you are interested in looking into video as a way of getting your story told, the Center's staff will send you a copy of their demo tape and a brochure on services. The Center also produces a quarterly newsletter, so if you want a copy, or want to be on the mailing list, call (303) 236-2001, or fax your inquiry to (303) 236-2005. The mailing address is Box 280982, Lakewood, CO, 80228. If you're in the area, stop by the Center in Building 67, Room 180, Denver Federal Center, Denver, CO, 80225. The Center soon will have a Web site.



Life With Interior

Ben Mammes Just Keeps on Going, and Going, and Going...

by Amy Strumpf, Gateway National Recreation Area

Ben Mammes joined the labor staff at Gateway National Recreation Area in New York City in 1975. Since then, he has rarely missed a day of work, commuting to the Breezy Point District as early as 6 a.m. during the summer.

Ben drives his own car most mornings, even if he has shovel snow from the front of his home during winter. He used to ride his 60-year-old bike with worn rims but gave that up in 1995 because he says, his knees just aren't what they used to be.

"I have no intention of retiring. I'm only 85," he says.

Ben Rosario, superintendent of the Jamaica Bay-Breezy Point District, does not know whether Mammes is the oldest active employee of the Park Service. He adds without equivocation, however, that the octogenarian is one of the hardest workers he has ever seen.

Ben always does his job, and he has the respect and admiration of co-workers and park visitors, many of whom are young enough to be his grandchildren," Rosario says.



Ben Mammes, center, stops to chat with Jose Rosario, left, the superintendent of Jamaica Bay-Breezy Point District of the Gateway National Recreation Area, and Vernon Butler, at right.

Mammes was born in Manhattan but his family moved to Queens when he was a boy to be near the family ice cream parlor. "I quit school to help in the business," he recalls.

For recreation, he took up bicycling and became so proficient that he was invited to the 1932 Olympic trials. After completing 62.5 miles in just two hours and 41 minutes, he qualified for the northeastern trials and finished third. At age 21, he competed in the Los Angeles Games, and although he did not win a medal, he kept the racing bicycle he had purchased for \$100. He then raced professionally.

With the advent of World War II, Mammes enlisted in the Army in 1942 and served four years, including duty in the Pacific. While stationed in Louisiana, he met his wife-to-be and upon his discharge with the rank of staff sergeant, he and his bride settled in Queens. Since the ice cream business was faltering, he worked for construction

and moving companies for many years.

In 1975, when Mammes "retired," he applied for a seasonal labor position at Gateway and was hired. He now has permanent status, cleaning Jacob Riis Park and performing maintenance functions throughout the Breezy Point District.

He also bowls one night a week with the same team and league he has competed with for more than 20 years. He does admit, somewhat reluctantly, that he "only bowls for a 149 average." His wife of 50 years accompanied him to the lanes every week until she died in 1995.

Mammes attributes his longevity to his diet, his lifestyle, and his family. He occupies an apartment in the three family home which is also occupied by two of his children and grandchildren, and regularly attends church where he was an usher and active parishioner.

He is up every day at 4 a.m. in order to do daily situps and aerobics "to clear my head of cobwebs." This is followed by breakfast of waffles, Wheaties with banana, and a glass of orange juice. His lunch consists of a peanut butter and jelly sandwich and a bowl of applesauce.

"Until my wife died, she made homemade applesauce. Now that she's gone, I have to buy it at the supermarket," Mammes says. His dinners alternate between beef stew and chicken pot pie. Recently, he supplemented his diet with Vitamin C, a multi-vitamin, and B12. "I've never smoked. I didn't even drink alcohol until I was 21," he says.

Retirement, Mammes emphasizes, is not in his plans. He does plan, however, to keep on going for several more years. "I'm going to live until I'm 100 unless I die sooner," he says with a smile.

U.S. DEPARTMENT OF THE INTERIOR

PEOPLE & LAND & WATER

A monthly newsletter for all employees of the U.S. Department of the Interior.

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Mailing Address: Phone: (202) 208-7291
People Land & Water Fax: (202) 208-5133
Building Stop 6013 Net: PLW@ios.doi.gov
9 C Street, N.W.
Washington, DC 20240



PEOPLE LAND AND WATER
is a graphic production
of the Department of
the Interior's Service
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Printed on recycled paper using vegetable-based inks

Viewpoint: Rec Fee Reaction

Having Public Lands Pay Their Way

The strategy is welcome and long overdue because many of America's national parks, wildlife refuges, wilderness and recreation areas, and other public lands are in trouble—victims of decreased federal funding and visitors loving them to death. The program, however, is disappointingly modest...The challenge to Interior is to show that it will work and make the case to Congress to extend it permanently to as many sites as necessary.

The Chicago Tribune, December 2

Fees Will Not Exclude Visitors

Even with these fee increases, the parks are still a bargain...and should be. They belong to the American people. We don't think these price increases will exclude people.

Carl Pope, Executive Director-Sierra Club, November 27

Help Our National Parks

Fees alone won't support national parks, refuges, and recreation areas. But they can help...Maintenance backlogs at national parks are estimated in the billions. Compounding the problem, the number of visitors is increasing annually. Some parks—including Grand Canyon, Yellowstone, and Yosemite—effectively have become "destination resorts..." Granted, the money raised is expected to be somewhat modest...Still, it is money that otherwise would not be available. There should be some applause that little things that can make a visit more pleasant or meaningful will now get done. But make it quiet applause...Parks, refuges, and

recreation areas are the people's perks. They will always need and warrant public subsidies.

The Miami Herald, December 2

A Reasonable Solution

Few in Washington or elsewhere disagree about the need for an infusion of new money to support the parks... It is a reasonable solution...Any fee increases should take care to avoid the possibility of pricing low-income people out of the unforgettable experience of visiting some of the most beautiful places in America. But considering that a night out for a family of four to a McDonald's and a movie means shelling out in the neighborhood of \$50, forking over a ten-spot or a \$20 bill for a gander at Half Dome and a climb to Yosemite Falls remains a real bargain.

The San Francisco Chronicle, November 21

A Worthwhile Investment

The fee increase should come as no surprise...The advantage to the new plan is that all of the additional money collected at the parks will stay within the park system, making the fee hike easier to swallow for visitors... We especially like user fees that are reinvested in the parks collecting them. A \$2 charge at the Chattahoochee Recreation area, for example, will not be difficult on the wallet. And anyone who has been to Yosemite knows a fee hike to \$20 to get in that park is definitely a worthwhile investment.

The Atlanta Journal-Constitution, November 2