

PEOPLE LAND WATER

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Layout by Mark Hall • ISC/CISS Graphics

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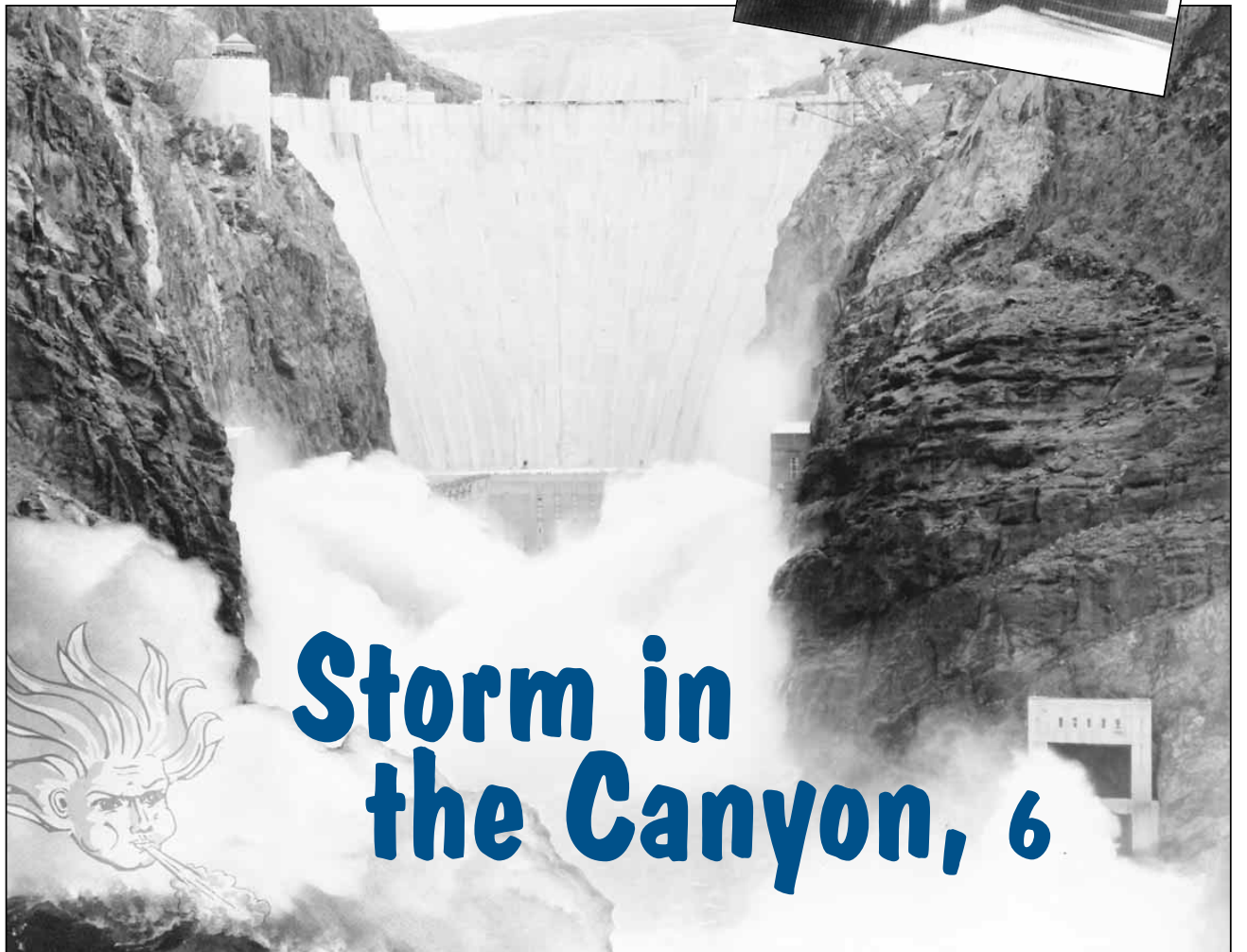
Memorial Fund for Kolodski Children



Joseph Kolodski

Endangered Legacy

She was denigrated by some as an emotional woman whose exposé caused unnecessary alarm during the Cold War and whose polemic earned the unmitigated hostility of the agri-chemical industry. But Rachel Carson, who found her literary voice as a Fish and Wildlife Service science editor, was honored by the nation and the world for changing the course of environmental history. Why, then, is her legacy being lost? 16-17



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Royalty In-Kind

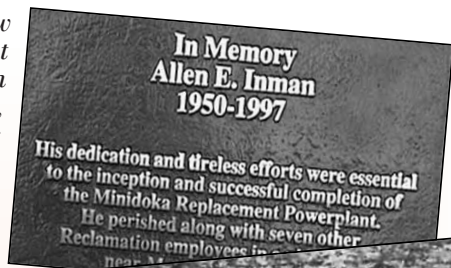
A House subcommittee has passed a bill to end cash royalty payments in favor of an in-kind system requiring the Federal Government to take payment in crude oil, natural gas, and other minerals. MMS evaluates the concept on page 26.

SUBSCRIPTIONS? LETTERS TO THE EDITOR?

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Interior People: In the Line of Duty

The new powerplant at Minidoka Dam near Rupert, Idaho has been named for Allen E. Inman, 29



NPS officials offer their support for Catoctin Mountain Park Employees Association's fund raising effort. From left are Gentry Davis, the deputy regional director for the National Capital Region, Marcia Johnson, president of the association, Terry Carlstrom, the regional director for the National Capital Region, Joe Lawler, the deputy regional director for the National Capital Region, and Mel Poole, the superintendent of Catoctin Mountain Park. Carlstrom holds a prototype of the 1:43 scale model NPS Ranger Vehicle that is available for park association fund raising and support projects. Contact CMPEA at P.O. Box 157, Thurmont, MD, 21788 (Phone: 301-663-9511)



John Antonio, a member and tribal councilor of the Laguna Pueblo of New Mexico, has spent his entire career working with Tribes to promote sound stewardship of fish and wildlife resources. The Native American Liaison for the U.S. Fish and Wildlife Service's Southwest Region received the 1998 Chief Sealath Award. 20

Dr. Kim H. Haag, a hydrologist with the USGS Southern Florida National Water-Quality Assessment Program, was elected treasurer of the North American Benthological Society, an international scientific organization with 2000 members that promotes understanding of the biotic communities of lake and stream bottoms and their role in aquatic ecosystems.



Bob Williams, left, the president of Trail Tenders, Inc., and Dave Hunsaker, right, the director of the National Historic Oregon Trail Interpretive Center, accepted national and state awards on behalf of 150 volunteers who have donated \$1 million in services to the center, 23.



Santiago Gonzales-Irizarry, a minority intern with the Minerals Management Service, waits for his helicopter to lift-off for a trip to an oil and gas platform in the Gulf of Mexico. 9

RANGER KOLODOSKI MOURNED

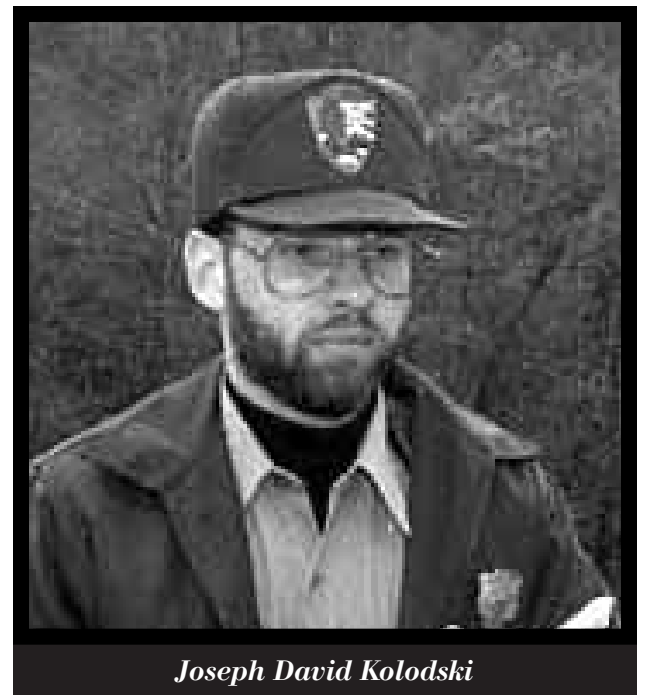
CHEROKEE, North Carolina—National Park Service ranger **Joseph David Kolodski**, 36, was senselessly gunned down on June 21 by a rifle-toting man who had earlier been reported threatening visitors along the Blue Ridge Parkway. Kolodski was the first of several rangers from Great Smoky Mountains National Park and the Blue Ridge Parkway to respond to a report of a man with a rifle walking along the parkway in the vicinity of Big Witch Overlook near Cherokee, North Carolina.

Kolodski reported that he'd spotted the man with his rifle. While other rangers were en route, Kolodski stood next to his marked patrol car and began to make plans, via radio, to cordon off the area. As a second marked park cruiser arrived on the scene, shots were fired. Kolodski was hit and fell to the ground.

He was evacuated to the University of Tennessee hospital, where he was pronounced dead from a single gunshot wound. The bullet, from a high-powered rifle, pierced Kolodski's body armor and struck him in the chest.

After an extensive four-hour manhunt, a suspect, Jeremiah Locust, 47, of Cherokee, was taken into custody and charged with first degree murder. Participating in the joint investigation were the National Park Service, FBI, U.S. Forest Service, North Carolina State Bureau of Investigation, North Carolina Highway Patrol, North Carolina Wildlife Resources Commission, Cherokee Indian Police, Cherokee Indian Fish and Wildlife Management Agency, and sheriff's departments in Jackson, Swain, Haywood, and Buncombe Counties.

NPS Director **Robert Stanton** expressed his sympathy and called the death "a devastating tragedy," a tremendous loss to the ranger's family, friends, and the National Park Service family. **Secretary Babbitt** expressed a profound sense of sorrow and outrage over Kolodski's death. Flags at the park were flown at half staff to honor the fallen ranger and Director Stanton attended the services for Kolodski.



Joseph David Kolodski

Kolodski was the 99th employee of the National Park Service to die in the line of duty. His loss has served as a reminder to NPS employees that the parks, despite their pastoral settings, are not insulated from the problems of American society.

"National parks are safer than they were three years ago," noted NPS spokesman **David Barna**. "And they were safer then than they were five years before that. But we are a microcosm of society." The rate of serious crimes in the 376 units of the National Park System has plunged in the 1990s despite a dramatic increase in visitors. With a record 279 million visitors last year, there were 14 murders in the national parks, compared with 24 in 1990; there were 170 assaults last year, down from 448 in 1990. Robberies also are down. The Blue Ridge Parkway is the busiest unit of the National Park System, receiving more than 18 million visitors last year.

MEMORIAL FUND FOR RANGER'S CHILDREN

NPS Ranger Joseph Kolodski, who was slain on Father's Day, is survived by his wife, also an employee at Great Smoky Mountains National Park, and three young children. A memorial fund has been established for Kolodski's three children. Those wishing to make contributions should make out their checks to "Friends of the Smokies" and specify that it is in memory of Joseph Kolodski. Contributions should be sent to: Friends of the Smokies, 130 West Bruce Street, Suite #1, Sevierville, TN 37862.

Bringing Joy to Her World

How do you recognize and say thanks to a person who has brightened the Holidays for hundreds of people over the past 16 years? Employees of the Bureau of Land Management's National Business Center decided to take the initiative and created a special, one-of-a-kind award for **Lee Krebs**, a.k.a.

Mrs. Santa. The certificate, signed by BLM Director **Pat Shea**, was presented by Deputy Director **Nina Rose Hatfield** at a ceremony in Denver.



Lee Krebs, aka Mrs. Santa, right, is recognized by Deputy Director Nina Rose Hatfield.

Lee helped organize the Santa Project back in 1982 with coworker **John Brewer** (Santa) to help a single parent with two small children and her parents. Over the years, the project grew as BLM employees generously pitched in to help needy families and seniors who were visited by Mr. and Mrs. Santa. To date, the project has reached out to 166 adults, 206 children, 21 teens, and 67 seniors.

The award certificate, which was custom-designed by the graphics staff of BLM's National Applied Resource Sciences Center, reads: "Lee has brought joy to the hearts of many children and adults in our community who are less fortunate. This certificate of appreciation is presented by fellow employees to recognize the countless hours she has devoted to organizing the yearly Santa Projects, collecting and wrapping gifts, and bringing the light and joy of the Christmas Season to so many people."

SES TRAINING PROGRAM SEEKS CANDIDATES

The Senior Executive Service Candidate Development Program is seeking candidates for the Career Development Program #10. The program will provide intensive developmental experiences for 15 to 20 selected candidates at the GS/GM 14/15 or equivalent levels, who have high potential for assuming executive responsibilities. This development, over a period 12 months, will include formal courses and seminars, as well as developmental assignments.

All eligible employees are encouraged to apply. Applications from qualified minorities, women, and persons with disabilities are encouraged and solicited to ensure representation among the nominations submitted for consideration and to meet the goals of the Department's strategic plan for improving diversity. For additional information, contact **Allen Naranjo** at (202) 208-7618. The full text of the announcement and application are at: <http://www.doi.gov/training/sescdp10.html> Copies also are at <http://www.usajobs.opm.gov> Or you can obtain them via FAX by calling (202) 219-1703 and pressing 2. The system will guide you through the other steps. The FAX information number for this announcement is 9171. For more information, call (202) 208-7618, or write to: U.S. Department of the Interior, Attn: SESCDP #10, MS 7124, 1849 C Street N.W., Washington, D.C. 20240. Announcement Number: OS-98-45; Closing—Aug. 31, 1998.

WINGS Help Women Balance Professional, Personal Lives

A group of veteran National Park Service female employees have decided to help each other fly higher. So they are developing WINGS for support. "We realized that there was a need and a desire for a program to assist and give direction to fellow employees on job related issues, guidance on career opportunities, and family real life situations," said **Sheila L. Smith**, the founder of the group who is with the NPS Information and Telecommunications Center.

WINGS aims to enhance the professional and personal growth of federal women employees through training, mentoring, education, networking, influencing attitudes, recognition of accomplishments not traditionally recognized, and support groups.

The critical relationship between their professional and personal lives is a key for some members of the group. "How many times have you worked side by side with someone who shows few signs of stress or preoccupation, only to find out later that your co-worker was experiencing a difficult situation at home," said **Audrey Scott White**, a WINGS member. "And how many of us have found ourselves in similar situations not knowing which way to turn?"

"Concerns about our mates, our children, parents, siblings, or our finances are an expected part of life, but can also present formidable obstacles to professional development," she explained. "What would help in a situation like that is a well defined support system that is easily accessible and informal," White said. "This is one of the many purposes WINGS will serve, while also helping up-and-coming young professionals achieve their career goals."



WINGS members include, from left, Tawana Jackson, Sylvia Wood, Diane A Gee, Sheila L. Smith, Audrey S. White, Dyra A. Monroe, Jackie L. Baum, Cathy Nichols, and Angela M. Scarborough. Dianne Spriggs is also a member. Below are Lucia Bragan and Victoria Clarke. NPS photos by Rosa Wilson.



"Both managers and employees would have a source of contact for career and developmental opportunities," Smith added. While WINGS falls under the auspices of the Federal Women's Program, the group will attempt to provide aid to all employees who seek assistance. The group's short-term goals are to recruit new members, sponsor activities that promote the mission, develop a WINGS website, and form committees to draft by-laws, develop communication tools, and identify funding sources.

WINGS' also benefits the NPS, Smith pointed out: "The members will conduct themselves with pride, integrity, honesty, and with efficiency to carry out the NPS missions and goals. They will strive to do their very best in assisting fellow employees by setting examples in leadership, positive attitudes, good work ethic, and family values as well as high self-esteem," she explained. "By nurturing these qualities and providing support, the employees and management will benefit from a stronger and more productive workforce." For information, contact Sheila Smith at (202) 565-1033.



Music in His Soul

Walter Bonora

NEW ORLEANS, Louisiana—The Big Easy. A city of Cajun spices, saxophone blues, gumbo ponds, and voodoo dreams. A city where summertime humidity clings to you like a wet blanket.

Under a hot sun in the French Quarter's Jackson Square, a Cajun band stomps out their version of *Louisiana Man*. Down a little further, a lone guitarist makes a valiant attempt at *Bobby McGee*. And inside a cool church in another part of town, the haunting sounds of a Bach cantata bring a soothing comfort to those in attendance.

It is in this city where **Steve Waddell** spends his time away from the office doubling as music director and organist

for St. Luke's Methodist Church. Waddell, an adjudication supervisor for the MMS Gulf of Mexico Region, has always felt that a commitment to practice will pay dividends.

for St. Luke's Methodist Church. Waddell, an adjudication supervisor for the MMS Gulf of Mexico Region, has always felt that a commitment to practice will pay dividends.

"Twenty five years of practicing and playing the organ has given me a continued sense of fulfillment and accomplishment that you can't trade for anything in the world," he said. "I feel that I have been blessed by the Lord and I want to give some of that blessing back. Kids look at me and ask how do you do that? And I say practice, practice, practice."

The 44-year old Louisiana native has played pipe organs for churches in the New Orleans and Lafayette areas for the better part of his adulthood. He has also served, on occasion, as a summer guest artist at the historic St. Louis Cathedral in the French Quarter. To the untrained ear, a pipe organist is a musician who sits in the back of a church and plays familiar church chorales. But to the player, the responsibility and stress of hitting the pipes right is enormous. Organists normally don't have the luxury of playing with other musicians who could cover a mistake.

"You're the only one up there," said Waddell. There is little margin for error, which is why you need to practice for a long time. You hit the wrong key on a pipe organ and everyone's going to know about it. But the feeling of successfully completing a program is exhilarating," he added.

Reverend **Wes Regan**, St. Luke's pastor, is one of Waddell's most enthusiastic supporters. "The man has music in his soul," Regan said. "Steve is an incredibly talented, bright, and energetic musician." Regan also noted that Waddell has an outstanding tenor voice. "His rendition of the Lord's Prayer is as good as I've ever heard in 40 years of ministry."

But playing and singing are not the only passions flowing through Waddell's veins. He also restores old pipe organs—a labor-intensive, tedious process that can take up to a year, and more in some cases. "I don't really give much thought to the time involved. It gives me great pleasure to complete the process," he said. "Restoration of a pipe organ is a slow evolution accomplished by hand. There are no assembly lines for this type of work."

Waddell, who is married and a father of two, is completing a pipe organ restoration while preparing an organ and vocal recital for the fall. He juggles office and family responsibilities, with church performances with the energy of several men. "The key is satisfaction. My job, my family, and my recitals, all give me great joy," he said.

TRANSITIONS

Don Barry Now Official

Donald J. Barry, who has served as acting assistant secretary for Fish and Wildlife and Parks since February, 1997 became official July 6 when Secretary Babbitt administered the oath of office. The U.S. Senate confirmed Barry's nomination on June 26.

"Don Barry is a capable and dedicated public servant who has been a key member of my team since the very beginning," Secretary Babbitt said. "He's an expert on the Endangered Species Act and has been making the many difficult decisions that fall under the responsibility of the assistant secretary for Fish, Wildlife and Parks for many months. I'm delighted the Senate has acted and given him the recognition he deserves."

Barry joined the Clinton Administration in May, 1993 as counselor to the assistant secretary for Fish & Wildlife & Parks and became deputy assistant secretary in 1995. After George T. Frampton Jr. resigned, Barry oversaw policy and management decisions for the National Park Service and the U.S. Fish & Wildlife Service.

A native of Monroe, Wisconsin, Barry received a bachelor's degree and a Juris Doctor in law from the University of Wisconsin, joining Interior in 1974 as a staff attorney for the Fish and Wildlife Service. He became chief counsel to the Service in 1980. Barry left Interior in 1986 to become general counsel for Fisheries and Wildlife for the Committee on Merchant Marine and Fisheries in the U.S. House of Representatives. From 1991-1993, he served as vice president for U.S. Land and Wildlife for the World Wildlife Fund. Barry and his wife, Teiko Saito, live in Alexandria, Virginia.

Kenneth L. Smith

who previously served with Interior in several policy positions, was appointed deputy chief of staff on June 10, succeeding **Susan Rieff**, who resigned in February. Smith will coordinate management issues for the Department, handle special assignments for the Secretary, and serve as special initiatives liaison to the White House.

"Ken is a distinguished public servant with an extraordinary state and federal career," said Secretary Babbitt. "I am delighted that he has accepted this new challenge and I look forward to working with him again as part of my leadership team." Smith, 46, joined Interior in May 1993 as deputy director for the Fish and Wildlife Service (1993-95). He later served as deputy director of Congressional and Legislative Affairs and director of External Affairs. In July 1997 he returned to Arkansas where he served with the Ozark Natural Science Center, near Huntsville.

Paddy J. McGuire

director of intergovernmental affairs, has left Interior to become senior policy advisor to the new chief of the Bonneville Power Administration, **Judi Johansen**. McGuire is originally from Portland, Oregon. He also served as head of the Department's Executive Secretariat.

Diversity, Discrimination, Minority Recognition Top Town Hall Topics

Ferretting out discrimination, holding managers accountable for hiring more minorities, women, and people with disabilities, and recognizing the Department's unsung heroes. Those were among the hottest topics at a Town Hall meeting that focused on human resources management and diversity.

The June 3 discussion in the auditorium of the Main Interior Building—the third led by Assistant Secretary **John Berry**—drew several hundred employees. Major presentations were made by **Mari R. Barr**, deputy assistant secretary for Human Resources and **David Montoya**, deputy assistant secretary for Workforce Diversity. Introducing Montoya, Berry challenged employees and managers to imagine a department where all parts of the national community are reflected. "It hasn't been easy, and it isn't going to happen overnight," he warned, "but our goal is to have all segments of American society participate in our programs and activities."

"I believe 99 percent of our workforce is made up of honest, dedicated, and hardworking people, and if given the chance, they will do the right thing to build diversity," Berry said. "This is not to say there aren't prejudiced people. I don't care if they are prejudiced as long as they do not allow their bias to influence their decisions. If prejudice dictates their actions, I'll get rid of them."

Montoya reported on the Department's *Strategic Plan for Improving Diversity*, describing the quarterly meetings that are being held with Berry and each bureau director and assistant secretary to evaluate progress on efforts to build a diverse workforce. He noted the Interior committees that are addressing diversity issues and advised the audience how to get more information on the initiative, for example, through the Diversity Council (chaired by **Tom Gomez**) and the Accessibility Committee. Montoya also discussed President Clinton's Race Initiative and Interior's panel discussions on race that are being held around the nation.



Joseph Codispoti, left, president of AFGE Local 3432, and Diane Dayson, right, superintendent of the Statue of Liberty and Ellis Islands, flank John Berry, the assistant secretary for Policy, Management and Budget, who holds the working agreement forming the North East Region's first working labor-management committee. Photo by Kevin Daley, NPS

NPS and AFGE Sign Historic Agreement

The first working labor-management committee for the National Park Service's North East Region was established by a recent agreement signed in New York by Assistant Secretary **John Berry**, Superintendent **Diane H. Dayson**, of the Statue of Liberty and Ellis Island, and President **Joseph Codispoti** of American Federation of Government Employees (AFGE) Local 3432.

"This is a milestone agreement for the Park Service and the AFGE," Codispoti said. Attending the March 26 ceremony in the conference room at Ellis Island National Monument were government officials from Washington, D.C., superintendents of several national parks in New York State, and union representatives from various park sites.

Local 3432 represents Edison National Historic Site, Fire Island National Seashore, Gateway National Recreation Area, Manhattan Sites, Martin Van Buren National Historic Site, Statue of Liberty and Ellis Island, Morristown National Historic Park, Sagamore Hill National Historic Site, Roosevelt Vanderbilt National Historic Sites, Fort Stanwix National Monument, Saratoga National Park, and Women's Rights National Historic Park.

The goals of the partnership are to improve Park Service effectiveness and efficiency; ensure a working environment that respects and values employees; promote an effective partnership committee and use of interest-based processes in lieu of position-based bargaining; and change the culture of labor-management relations. The committee will consist of two representatives of the Park Service and two from the employee union. Sub-committees, task forces, and working groups may be established at a later date.

The committee will address a number of issues, including workforce diversity; retraining; zero tolerance for discrimination; harassment or hostile work environments; implications of the Government Performance Results Act on the workforce; hiring older experienced employees; and avoiding arbitration; and cost savings. Park Service officials noted that under terms of the agreement signed, the progress and improvement in organizational performance and working environment will be evaluated annually.

President Clinton's Executive Order 12871 (1993) authorized labor-management partnerships in the Federal Government, directing agencies to form committees or councils to help reform government and create a more cooperative work environment.



More the 250 supervisors and managers at an Interagency Diversity Symposium in Anchorage, Alaska, were addressed by, seated from left, David Montoya, the deputy assistant secretary for Workforce Diversity, Mike Dole, administrator for the Affirmative Action Program (EEO), Armondo Rodriques, director of the Diversity Office (Office of Personnel Management), and Mari R. Barr, deputy assistant secretary for Human Resources. Standing, from left, are Heidi Kunkel, EEO and Employee Development Assistance (NPS-Alaska), Deborah Williams, special assistant to the Secretary for Alaska, and Brenda Mobley, associate regional director for EEO and Employee Development (NPS-Alaska). The March event was sponsored by the Department's Learning Center and the EEO and Human Resources staffs of Interior bureaus in Alaska.

Stressing the importance of the initiative that Montoya oversees, Berry urged Interior managers to develop targeted recruitment plans, use vacancies to recruit candidates, and develop career enhancement and upward mobility programs. He noted that managers can use special authorities for non-competitive hiring and national databases for women and minority candidates, emphasizing that recruitment pools must be diverse. "With diverse pools, there is opportunity; without them, things won't change," Berry said.

Berry and Barr outlined the Awards Convocation, scheduled for March 1999, which will celebrate the 150th anniversary of the founding of the Department. The event will emphasize employee recognition. In addition to the current award categories such as valor and meritorious and distinguished service, Berry described a Unsung Hero award that will recognize those who work behind the scenes and seldom receive Department-wide recognition, but deserve to be acknowledged for their contributions.

The award allows rank and file employees to nominate, evaluate, and honor their peers. Berry issued guidance to the bureaus to develop their unsung hero awards. From their recipients, Departmental heroes will be chosen by a committee of employees, including members of the union and other employee organizations. Those selected will receive cash awards. Barr also announced the Labor-Management Partnership Council Partnership Award to recognize successful partnerships throughout Interior and promote new ones.

During the question period, an employee complained that few minorities seemed to receive Interior awards and cited the recent Human Resource Conference in Santa Fe as an example. Berry said his Unsung Hero award is a way to provide greater opportunity for such recognition, but that he needed help—employees nominating candidates—to achieve that goal. After looking into the specific complaint, it was later determined that many of the awards in question were given to minority groups or individuals. Seven of the 24 awards went to Historically Black Colleges and Universities, Tribal, or Hispanic educational activities. Two awards were given to Hispanic individuals and nine awards went to bureaus to recognize special achievements, including partnerships with minority institutions.

An employee asked how the performance of senior executives on workforce diversity issues would be judged. Reiterating his commitment to promote diversity while adhering to merit principles for all, Berry said he is using performance appraisals and quarterly meetings with bureau directors to hold managers accountable—rewarding or penalizing them, depending on the quality of their diversity efforts. He assured the employee that efforts (or lack of efforts) to foster and improve workforce diversity would be considered in assessing the performance of senior executives.

Another employee asked why her office could not participate in an alternative work schedule. Berry, noting that he was not familiar with the specifics of the case, reminded the audience that while the Department supports family friendly initiatives, including alternative work schedules, Interior's mission requirements must come first. In some cases, this may preclude employee participation in such schedules. He assured the employee that he would continue to explore the issue with his staff.

More on the Sante Fe Conference, Page 32



At left, Dr. Erat Joseph Chair of Southern University and A & M College, and, at right, Felix Cook, Reclamation's director of the Technical Service Center, receive awards For Exemplary Partnering with Reclamation in Support of Historically Black Colleges and Universities-Safety of Dams Training Program. Deputy Assistant Director Mari R. Barr is at center.

ENVIRONMENTAL JUSTICE

Terence Plaskon

In the nation's capital, the **National Park Service, Army Corps of Engineers,** and the **District of Columbia government** restored 32 acres of sterile mud flats to tidal marsh wetlands in Kenilworth Aquatic Gardens—a haven within a high crime, low income neighborhood. Community residents are actively involved in managing the gardens through the NPS Junior Rangers and Volunteers in Parks programs.

In the *Colonias*—the rural, unincorporated subdivisions along the U.S.-Mexican border in El Paso County, Texas—the quality of life for poor Hispanic residents was improved when the **Bureau of Reclamation** provided \$1.15 million to install pipe that protected them from contaminated drain water in an open canal.

Native American communities in the Southwest benefited from a \$1.5 million **Bureau of Indian Affairs** survey of hazardous waste sites that led to the closing of harmful landfills affecting the Santee Sioux, Taos, Laguna and Isleta Pueblos, Grand Portage, and Red Lake Chippewa, Menominee, Hualapi, Hopi, and Washo Tribes. Other projects allowed the Manzanita Band of Indians (California) to remove asbestos from their buildings, helped the Modoc Tribe (Oklahoma) to test reservation water and soil for lead, and enabled the Quileute Tribe (Washington) to better manage petroleum waste.

Though it takes many forms, environmental justice is the fair treatment of all people in the development, implementation, and enforcement of environmental laws, regulations, and policies. Because minority and low-income groups have historically endured a disproportionate share of the nation's air, water, and waste problems, Interior's environmental justice initiatives are aimed at providing healthier environments and living conditions for these disadvantaged communities.

As part of this on-going effort, Interior's **Office of Environmental Policy and Compliance**, in partnership with the U.S. Environmental Protection Agency, co-sponsored the first Region IX Environmental Justice Implementation

Workshop. The unique one-day training and education exercise in Sacramento, California allowed two dozen Interior representatives from the region to share their efforts on environmental justice, while gaining valuable training.

Patricia Sanderson Port, the regional environmental officer for Interior's Office of Environmental Policy and Compliance, chaired the workshop with **Deanna Wieman**, EPA's Region IX deputy director of Cross Media. Together they welcomed participants from nearly all bureaus, as well as observers from the Forest Service, Marine Corps, Office of Solicitor, and nearby academic institutions.



The May 19 workshop dealt with Interior's Secretarial Order and Strategic Plan as well as the final guidance recently issued by the President's Council on Environmental Quality regarding compliance under the National Environmental Policy Act (NEPA). **David**

Farrel, EPA's Region IX federal activities officer, provided an EPA viewpoint on NEPA review, including proper documentation when addressing environmental impacts.

Interior's team hosted an interactive presentation by the bureaus, whose representatives discussed how they are confronting environmental justice in their agencies and the level of success each has enjoyed. **Brenda Steele** from the Office of Surface Mining in Denver, for example, explained how her bureau came to draft guidelines for dealing with local environmental justice matters.

The workshop concluded with a field-level perspective from community members. Representatives from two Bay Area non-profit organizations discussed the current state of environmental justice in their own work and offered advice on effective community outreach. **Dr. Willie Taylor**, director of Office of Environmental Policy and Compliance and the Secretary's designee on environmental justice, said that his office will hold similar workshops in the future.

Terence Plaskon is with the Office of Environmental Policy and Compliance in San Francisco.

The Department of the Interior's **1999 Conference on the Environment** will focus on the use of emerging technology for the cleanup of contaminated sites, prevention of pollution, and natural resource damage assessment and restoration.

With the theme of *Toward a Sustainable Environment—Learning From Our Successes*, the annual Department-wide conference will provide a broad forum for Interior staff to meet, exchange information, and learn about emerging technologies that can help us to work toward a sustainable environment, while carrying out our varied bureau missions. Think about a paper or presentation that shares your success in one of these areas, or make a suggestion for topics you would like to see addressed.

A CALL FOR PAPERS

Presentations, exhibits, and training sessions on these topics will be available at the gathering, which is scheduled for the week of April 5, 1999, in Denver, Colorado. The Office of Environmental Policy and Compliance is sponsoring the conference, which will be hosted by the Bureau of Reclamation. For more information, check out the Office of Environmental Policy and Compliance website at <http://www.doi.gov/oepec/> and click on *The DOI 1999 Conference on the Environment*. For additional information, contact **Erin Quinn** at (303) 445-2709.

COMPLEX CHALLENGES

Environmental Justice initiatives have increasingly found their way onto the agenda of federal agencies since President Clinton issued Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations.

Interior's environmental justice efforts often must address complex, multi-party challenges. For example, the State of California has requested a transfer of federal land at Ward Valley near Needles for use as a **low-level radioactive waste facility**. At least five lower Colorado River Indian tribes living in the vicinity claim Ward Valley as sacred land and believe the waste site would disproportionately impact them. The challenge for Interior is to address the tribes' concerns in the ongoing supplemental environmental impact statement and weigh the significance of their concerns in the record of decision regarding the land transfer.

Early in this century an irrigation project diverted water from the Truckee River, the **lifblood of Pyramid Lake and the Paiute Reservation**. Interior is negotiating with Reno area governments and the local tribe to improve the quantity and quality of water flowing to the reservation. To restore the spawning habitat of endangered fish native to Pyramid Lake, the Department has been negotiating with the States of California and Nevada, the Tribe, and others on a Truckee River Operating Agreement that would improve spawning flows while providing environmental and drought protection benefits to the reservation and region.

The city of Albuquerque's proposal for a **highway through Petroglyphs National Monument** has raised concerns by the National Park Service and a local Indian tribe, the Pueblo of Sandia, about the impact the road may have on the petroglyphs. The challenge for NPS is to ensure that environmental justice and Native American rights and concerns are fully and responsively taken into account in working with the city.



NEW HEALTH UNIT OPENS ON SCHEDULE

The Health Unit in the Main Interior Building reopened on schedule, July 1, as part of Assistant Secretary John Berry's Quality of Life initiative to improve working conditions at Main Interior. The clinic is in Room 7045, the same location as the previous health unit that was closed a few years ago as part of a cost-cutting move.

The new clinic has been updated and refurbished and provides all the services that had been previously available, including walk-in visits, allergy and flu shots, blood sugar tests, blood pressure checks, and physicals, including EKG and lab work (on a space available basis). The hours of operation are from 7:30 a.m. to 4 p.m., Monday through Friday. The new phone number is 208-7057.

At the reopening ceremony, Berry thanked **Tim Vigotsky**, the director of the Interior Service Center, and his staff for another "on-time delivery" of a Quality of Life Team project. Berry also commended **Dave Mathews**, the ISC division chief for employee and public services, for overseeing the refurbishing and contract negotiations with the medical services provider. Berry said Interior employees deserve a clinic and the new unit would help to improve the morale and health of workers at Main Interior, and increase productivity.



Assistant Secretary John Berry, left, cuts the ribbon officially opening the new Health Unit in the Main Interior Building. At center is Michael Rorie, the health unit's registered nurse, and, at right, is Dave Mathews, the ISC's leader for specialized employee services. Photo by Tami Heilemann, ISC

The ISC team that designed and carried out the refurbishing work included **Gordon Patrick**, planner-estimator; **Tom Hoffman**, architect; **Eric Lauch**, carpenter; **Frank Chemelewski**, **Dick Carnahan**, and **Quentin Parker**, electricians; **Ken Glover**, **James Williams**, and **Brian McNutt**, plumbers; **Keith Manthey**, and **Mike Platz**, telecommunications. The ISC nurse advisors are **Marion Baker**, RN, and **Marlene Groder**, RN.

Among other projects in the Quality of Life initiative, the Department team has completed a new security system for the building and hired a new security contractor, opened a roof top cafe for employees, held regular Town Hall meetings to address employee work concerns, and developed new employee recognition programs. Projects underway include refurbishing the basement corridor to brighten its environment, and upgrading the gym, workout area, and exercise equipment. In addition, major structural improvements to the building are either planned or underway, including roof repairs, replacing air chillers, access for employees and visitors with disabilities, and a new sidewalk for the C Street entrance.

Employees are encouraged to stop in and meet **Michael Rorie**, the health unit's registered nurse, and become familiar with the new facility and the services offered. If you have any questions, suggestions, or comments about the clinic, please contact Marlene Groder at 208-6632, or Marian Baker at 208-6642.



Storm in the Canyon

Colleen Dwyer

BOULDER CITY, Nevada—It started with just a small wave at river level and gradually built into a bubbling cauldron reminiscent of Niagara Falls. As high-powered jets of water shot from walls of Black Canyon, throwing off a rising mist and damp windstorm, crowds of visitors gathered to gaze in awe at the once-in-a-lifetime spectacle.

Moments earlier, at a helipad downstream of Hoover Dam, Reclamation Commissioner Eluid Martinez had spoken quietly into a radio, giving the order to release the deluge. Slowly, valves were opened to begin the dramatic test of the new gates on the dam's upper and lower penstocks—the huge pipes that carry reservoir water through the canyon walls to the turbines and the river.

As the torrent of water sent whitecaps rippling down the Colorado River on the morning of June 11, the 'jet-flow-gate-test' fascinated observers and brought several reporters, news helicopters, Congressional representatives, and members of the public out to the site. Satellite trucks bristling with antennas and transmission equipment sat atop the dam where reporters beamed images of the scene to local news reports and affiliates around the nation.

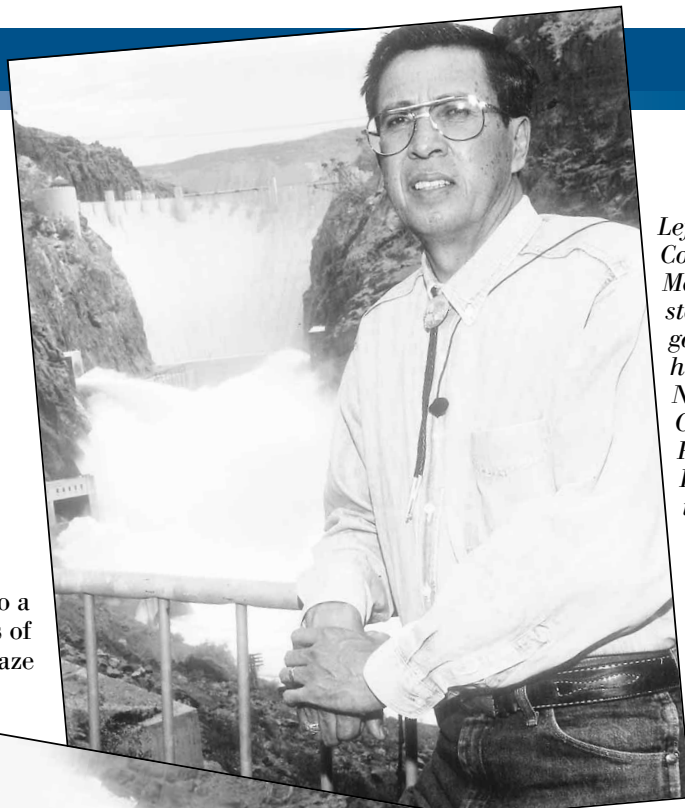
Mist and spray from the 180-foot waterfalls sprinkled some Reclamation employees on the lower deck of the dam's access road while other workers watched with their families from the helipad on the Nevada side of the river. The power of the splashing water even created a mini-windstorm that rained precipitation on spectators more than 500 feet above on the Visitor Center overlook and dam roadway. But spirits were not dampened by the fog and mist as the crowds gaped at the magnificent sight.

The jet-flow gates in the outlet works at Hoover Dam replaced 12 obsolete needle valves to meet flood emergency standards that require the dam to release 73,000 cubic feet per second without using the spillways. Four new gates were installed in the valves in the lower Arizona penstock, four in the lower Nevada penstock, and two each in the Arizona and Nevada upper penstock valves. The work was done by J.R. Jacks Construction of Las Vegas under a \$2,061,111 contract that was awarded in May 1997. The tests were performed to obtain water release data from the new gates, which may never be used again, except for maintenance purposes.

Designed to operate under high pressure, the gates have a steel plate that can be lowered or raised to prevent or allow water to be discharged from the structure, much like the faucet in your sink controls the flow of water. When operating simultaneously at full capacity, the 12 gates discharge 23 million gallons of water per minute—enough water to cover an entire football field 55 feet deep.

During the hour-long test, the average release from the dam was 58,000 cubic feet per second. About 1.56 billion gallons was discharged during this test, causing downstream Lake Mohave to rise about 1.5 inches! All 12 valves were tested individually from June 8th to 12th. About 4.25 billion gallons of water were used during the week—enough to supply up to 52,000 people for an entire year.

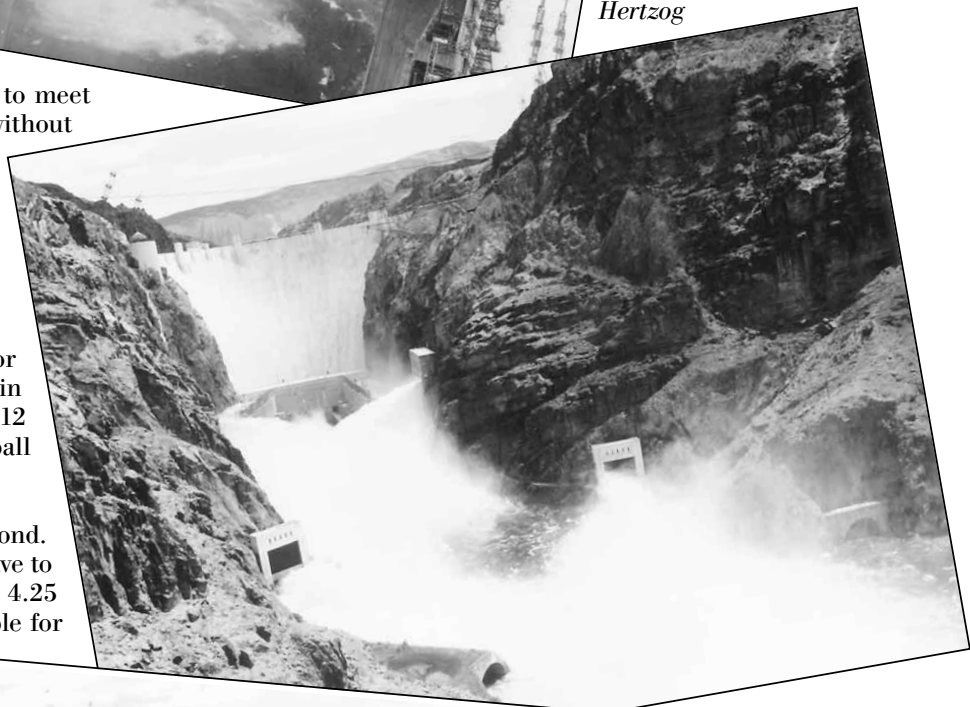
A few of the dam's operations were affected by the test, but all of the people involved were pleased to cooperate with Reclamation. Across the West, agencies that receive power from Hoover Dam agreed with the decision to bypass water from their generating operations for the test period. A concessionaire, who was required to remove several rafts from a mooring area downstream of the test, volunteered buses and drivers to transport guests and VIPs to and from the viewing site. Wildlife and fish habitats downstream of the dam were unaffected by the changing water levels.



Left, Reclamation Commissioner Eluid Martinez signals the start of Hoover Dam's gate test from a helipad on the Nevada side of the Colorado River. Photo by Andrew Pernick. Below left, the speed of the water coming out of the upper penstock valves at maximum flow was 120 feet per second, or 83 miles per hour. Photo by Kelly Conner



Below, Hoover's penstocks, the 30-foot diameter pipes that control the release of water from the dam and the flow to the turbines that generate electricity, run through 56-foot diameter tunnels that were bored into the walls of Black Canyon. The upper penstock valves are 180 feet above the river, while the lower ones, in the foreground, are at river level further downstream. Photo by Eugene Hertzog



A wide-angle lens captures the scene from the crest of Hoover Dam. At right is the popular Visitor Center. Below is the U-shaped building that contains administrative offices, machine shops, and the power plant which has 17 generators. At left, transmission towers sprout along the canyon rim. Photo by Kelly Conner



At left, the power of the release from the new jet flow gates in the upper penstock valves is captured from river level, downstream. At left and right are Hoover Dam's power plant. Photo by Steve Leon

Down River

Ben Ikenson

Eager for the change of pace that our nine-day excursion promised, **Luella Roberts** and I arrived in Las Vegas amidst the buzzes, bells, and clangings of the airport slot machines. Just an hour's drive from this Boschian jungle lay the serenity of Willow Beach. Surrounded on three sides by dry steep hills, Willow Beach National Fish Hatchery is situated along the beautiful Colorado River, 12 miles south of Hoover Dam. Temperatures here in mid-June average 110-115 degrees Fahrenheit. In such deathly heat, the mere sight of the river is a blessing, an affirmation of life.

And indeed, the river is a major source of life, providing habitat and attraction for a wide variety of species. Bighorn sheep can be seen posing Moses-like on the steep hills. Chuckwalla lizards zig-zag over the rocks, rabbits and rodents scurry around, and bats flutter through the night skies. Various birds hunt along the river and many pillage the raceways—the long, rectangular concrete fish tanks—for easy pickings.

When we arrived, some workers were hauling fish food and supplies in golf carts. In obedience to the strict laws of western Arizona regarding facial grooming, the men all wore mustaches. The first mustache that approached was attached to **Bob O'Brien**, a burly giant and Nascar Racing Fan Extraordinaire. "Lots of water," flopped the mustache, "drink lots of water. I drink two of these a day." He raised an enormous plastic jug. "Welcome to Willow Beach," and he was off, pedal to the metal of his golf cart, the tiny clunky vehicle and his massive body defying laws of aerodynamics.

Luella and I were put to work almost immediately. Willow Beach is known for its success in producing rainbow trout and spawning, rearing, and maintaining native fish such as the razorback sucker and the bonytail chub. These native fish have become endangered by the construction of dams and irrigation canals and the introduction of such exotic species as bass, sunfish, catfish, and carp. The trout, which are not native, are produced for sport fishing. The hatchery's commitment to growing endangered fish to a survivable size before release satisfies the conditions of a 1994 Fish and Wildlife Service Biological Opinion that requires endangered fish production to allow for continued trout stocking in the Willow Beach area, a popular sport fishing spot.

The hatchery's main building houses small indoor raceways for very young fish, a few offices, and an air-conditioned sanctuary called the "break room," where the refrigerated air made the consumption of innumerable bologna sandwiches more tolerable. The facility, which has been in operation since 1962, also has 40 outdoor raceways, 10 in each of four banks about six feet wide, six feet deep, and 60 feet long, in which the more mature fish continue to develop.

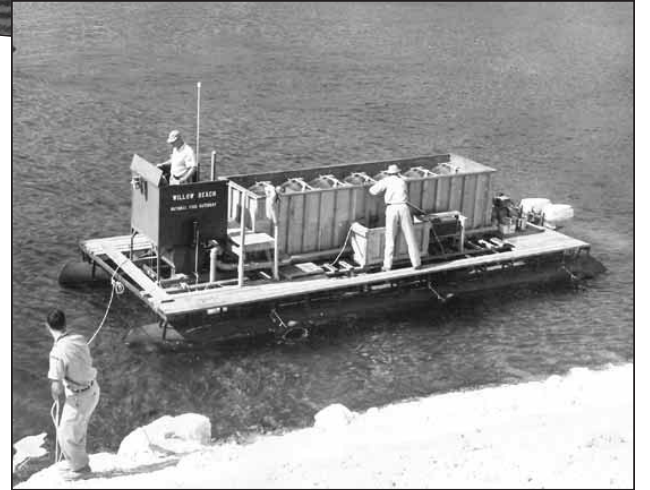
Though the fish hatchery is a relatively simple concept based on pumping fresh river water through the raceways and back into the river, it is a high-maintenance operation. The fish are fed about four times a day. The resulting waste must be thoroughly swept from the floors and walls of the raceways throughout the day. A day of neglect could mean death to hundreds of thousands of fish.

When fish show signs of illness, their gills may need to be salted. When trout appear to flash, for example, it indicates the existence of such parasites as *Chilodonella* and *Ichthyobodo costia*. Salting the fish takes about two hours for a single raceway and entails getting inside the raceway with a portable meshed "wall" and gently moving the fish toward one end by gradually decreasing the amount of space for fish while increasing empty space. The fish are then netted out and dipped into salted water for a minute before being returned to the main part of the raceway. The trick is to avoid smashing too many against the wall, or each other, causing stress mortalities.

Often, raceways that have been left vacant for a time will need to be prepared for use again. With the seemingly steroid-induced growth of algae, the insides of vacant raceways look like they are carpeted with green shag. Algae is a stubborn thing whose relationship with the cement raceways is very clingy. Consequently, the folks at Willow



Since the early 1970s, native fish spawning has been a mission at Willow Beach National Fish Hatchery. The hatching of razorback suckers on-station was made possible with the 1994 installation of large-capacity water heaters. Currently, Willow Beach's commitment is to receive and rear all wild-captured razorback sucker larvae collected from Lake Mohave; to produce razorback sucker eggs, larvae, and fingerlings for a variety of programs; and to produce several thousand 10-12" razorback suckers and bonytail chubs for return to the warm waters of Lake Mohave, where, at that size, they will safely grow to reproductive age, enabling recovery of the species.



Beach invested in a motorized pressure hose that shoots water out with incredible power. After leaning into the a hose for two hours to clean a raceway, one's shoulder is likely to be sore. I found it especially difficult to peel off the small bits of algae that became attached to my face in the explosive wake of the pressure hose.

Meanwhile, Luella tirelessly maintained a level of cleanliness and sanitation in the indoor raceways that would have appealed to Howard Hughes. Instead of brushes, a system of siphoning is employed to rid the small runs of waste. Because the younger fish are much more susceptible to bacterial illness, any equipment that comes into contact with the water is first sterilized in ammonia. Once a week, the tiny native fish are treated for parasites with a healthy concoction of formalin and malachite green.

Luella and I had the unique opportunity of releasing hatchery fish into the Colorado River. O'Brien prepared the barge and helped us net fish from an outdoor raceways. Some rainbow trout were on their way to freedom, or the hook. The fish, reluctant to leave the well-known comforts of their Raceway #4F, were placed in a large metal hopper. Water was pumped into the hopper through a two-inch opening and the fish followed the flow of water out through a four-inch exit hole, through piping, and into large tanks on the barge. Finally the raceway was empty except for the fecal remains of some 77,000 scared trout. Taking turns piloting the barge, Luella and I throttled down river, where the trout were released randomly.

On the final night of our adventure, after an evening at O'Brien's home socializing amid the televised country music awards ceremony and conversational fragments regarding the perils of navigating S-curves at supersonic speeds, Luella and I walked back to our humble sleeping accommodations. As the hot evening winds scorched our sunburned faces, the only thing left to do was to think cold thoughts, dream of being at the North Pole, asleep in igloos with frozen seal blubber for pillows.

The road back to Las Vegas International Airport traverses Hoover Dam, the enormous arch-gravity dam built in the 1930s and hailed as a civil engineering landmark. Silence prevailed as we crossed the giant concrete mass and drove through the elaborate field of electric towers teetering precariously over the river below. The amount of concrete used in construction of this dam was enough to build a 16-foot-wide highway from San Francisco to New York City. Built for water storage and power generation, this monster of hydroelectricity benefits most residents of California, Arizona, and Nevada. It is the power from Hoover that makes Las Vegas twinkle at night. And this is also part of what has altered habitat along the Lower Colorado River.



Wood Stork

New Exhibit of Wildlife Photographs

The rich wildlife found on Interior-managed land in the southeastern United States is depicted in a new exhibit of color photographs at the Interior Museum. The photographer, **Sol Levine**, traveled to parks and refuges in Maryland, Virginia, North and South Carolina, Georgia and Florida to capture the region's flora and fauna.

Nature's Images: View of Interior's Southern Lands offers unusual views of wildlife. Many are close ups or were taken at daybreak. More than half of the images are birds, each different in form, feature, and color. A statuesque egret, an austere wood stork, and vibrant roseate spoonbills are a few examples

"While shore and water birds predominate my photographs, I also like to observe things that people do not necessarily see on quick trips into the wild," Levine said. "These 'things' include insects, snakes, turtles, and alligators. The exhibit has images of a graceful monarch landing on a purple flower, a rattlesnake on alert, a large black and yellow female 'zip' spider, and a huge orange grasshopper. The photographs are on display through Aug. 31. The museum is on the first floor of the Main Interior Building and is open from 8 a.m. to 4:30 p.m. Call (202) 208-4743 for more information.



PEOPLE, LAND & WATER

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National Recreation Lakes Study Launches Outreach

Connie Young

Nearly 50 key recreation stakeholders from across the country gathered in Washington in mid-June to learn about the National Recreation Lakes Study Commission and offer ideas on ways to enhance recreation at the 1,800 federal lakes and reservoirs that dot the national landscape.

The commission is mandated to make recommendations on boosting opportunities for fishing, swimming, sailing, hiking, boating, and other types of recreation at the lakes, while also maintaining power generation, irrigation, water quality, fisheries, and ecosystems.

While largely supportive of increased recreation at these lakes, local government and recreation business representatives noted several major challenges facing the initiative. Citing the long-term nature of state agencies' responsibilities for protecting natural resources, several participants stressed the need for adequate involvement of these agencies in the commission's study and recommendations.

There also were concerns that elevating recreation at federal facilities may require more emphasis on resource management and staffing levels; the need to balance the demands of potentially competing forms of recreation was also discussed. Moreover, if the amount and types of recreation at federal lakes are to increase, public education will be essential, other stakeholders emphasized.

Helen Sevier, chairman and chief executive officer of the national recreational fishing organization B.A.S.S., Inc., noted that the commission must make recommendations on difficult issues like the funding of federal natural resource management and recreation programs, and how to resolve conflicts not only among recreation user groups but also among recreational, agricultural, power generation, conservation, and other water users.

"Managing use to deliver safe and enjoyable recreational experiences will become a critical natural resource agency challenge in the next century . . . B.A.S.S., Inc., may be the most enthusiastic supporter you have," Sevier said.

Congress authorized the lakes study commission in Public Law 104-333, the Omnibus Parks and Public Lands Management Act of 1996. The act charged the commission with evaluating existing and potential recreation opportunities at federal lakes and recommending whether new legislation is needed. Commissioners also are to evaluate the feasibility of establishing a National Recreation Lakes system, similar to National Scenic Byways designated by the U.S. Department of Transportation.

The President will appoint the nine commissioners who will represent the departments of Interior, Agriculture, and Army; the Tennessee Valley Authority; National Governors Association; and local, tribal, environmental and private interests.



Opportunities to water-ski and sail on federally-managed lakes and reservoirs could expand, thanks to the National Recreation Lakes Study.



Jana Prewitt, executive director of the National Recreation Lakes Study, sets the stage at last month's recreation stakeholders meeting in Washington, D.C. (Prewitt also is director of the Department of Interior's Office of External Affairs.)

Laying the groundwork for this challenging task, commission staffers have been scouring government documents and research studies for relevant information over the last 13 months. They found that almost all of the lakes and reservoirs that are managed by the Federal Government are easily accessible to many Americans—97 percent of the facilities are only an hour's drive from a city or town. The lakes are found in all states except Rhode Island, Delaware, and Hawaii.

Many of these lakes could accommodate more recreation, but the costs of building restrooms, swimming beaches, fishing piers, boat ramps, campgrounds, and other facilities often exceed current federal agency budgets. Improvements may be unlikely without greater private sector participation.

"That's where the lakes' study comes in," said **Bruce Brown**, the deputy director of the project. "Partnerships with state, local, and private recreation interests will be one key to the project's success. Public demands for

recreation keep increasing while federal funds are decreasing. We have to look to partnerships with non-federal government agencies and the private sector to help meet the demand for recreation facilities."

Noting the popularity of lake recreation, Brown pointed out that three-quarters of all recreation in the United States occurs near water. "Whether canoeing in the morning mist, relaxing shore side with the family, or careening down a lake with the wind blowing in your hair, recreation is about having fun," Brown said.

Funding for the commission's research and expenses comes primarily from the Department of the Interior. In fiscal year 1998, the Bureau of Reclamation contributed \$50,000; National Parks Service, \$40,000; Bureau of Land Management, \$25,000; and Fish and Wildlife Service, \$20,000. All commission staff are on temporary assignments or details from the departments of Interior, Agriculture, and Army.



The National Recreation Lakes Study staff includes, seated from left, Jim Gasser, National Park Service; Jana Prewitt, executive director and director of External Affairs for the Department; standing, Bruce Brown and Jeanne Whittington, Bureau of Reclamation; Connie Young, U.S. Fish and Wildlife Service; Stana Federighi, U.S. Forest Service; and Dave Wahus, U.S. Army Corps of Engineers. The staff also includes Mel Berg, Bureau of Land Management; Michelle Dawson, Bureau of Land Management; Chris Dlugokenski, U.S. Fish and Wildlife Service; Bob Gartner, Bureau of Indian Affairs; and Kate Marx, Tennessee Valley Authority. Photos by Tami Heilemann, ISC

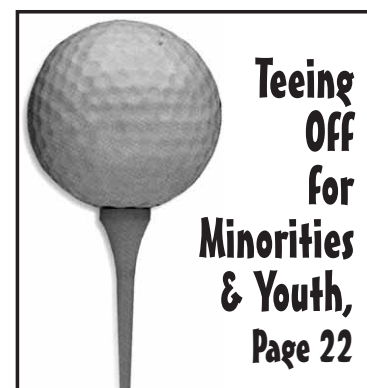
NUMBER OF FEDERAL LAKES IN EACH STATE

State	No. Lakes	State	No. Lakes	State	No. Lakes	State	No. Lakes
AK	16	IL	31	NC	37	SC	25
AL	25	IN	22	ND	45	SD	51
AR	38	KS	26	NE	31	TN	49
AZ	55	KY	59	NH	9	TX	54
CA	144	LA	18	NJ	18	UT	38
CO	108	MA	8	NM	67	VA	47
CT	7	MD	11	NV	21	VT	5
DE	0	ME	5	NY	21	WA	43
FL	12	MI	16	OH	32	WI	47
GA	40	MN	69	OK	71	WV	26
HI	0	MO	32	OR	70	WY	43
IA	17	MS	19	PA	55		
ID	25	MT	74	RI	0		

NUMBER OF LAKES MANAGED BY EACH GOVT. AGCY.

Agency/Bureau	No. Lakes/Reservoirs
Bureau of Indian Affairs	152
Bureau of Land Management	2
Bureau of Reclamation	288
Corps of Engineers	537
Fish and Wildlife Service	138
Forest Service	268
National Park Service	82
Tennessee Valley Authority	54
U.S. Air Force	31
U.S. Army	175
U.S. Navy (incl. Marine Corps)	35
Other	20

The commission's report to Congress and the President is to be completed by January 1999. More information on the study is at www.doi.gov/nrls/. Comments can be sent to Bruce Brown, National Recreation Lakes Study, 1951 Constitution Ave., NW, Room 320 SIB, Washington, D.C. 20240.





At left, Santiago Gonzales-Irizarry and Neysa Alexandra, minority interns with the Minerals Management Service, visit an offshore oil and gas platform in the Gulf of Mexico as part of their work experience. Below, Yomarie Garcia helps to write news releases and speeches as part of her internship with the MMS Office of Communications.

Diversity Internships

Victoria Squires

Interior's Diversity Intern Program provides the Minerals Management Service with talented, motivated students ready to tackle the working world. They bring with them a positive attitude and an infectious vitality for their work. The 15-week program is geared to provide ethnic-minority students with valuable work experience in their respective fields of study. This spring, seven interns had the opportunity to work in MMS offices in Denver, New Orleans, and Washington, D.C.

Neysa Alexandra Serra and **Santiago Gonzales-Irizarry**, both students from Puerto Rico, joined the agency's Gulf of Mexico Region in January. Alexandra, who is a chemical engineering student at the University of Puerto Rico in Mayaguez, worked in the region's production measurement section. She helped the staff in setting up a system that verifies the presence of gas, and also learned the liquid verification process.

Santiago, a student in the College of Science at the Pontifical Catholic University of Puerto Rico, spent his internship with the Regional Environmental Studies Program, working on a special project on the new deep water frontier. The interns participated in several new experiences during their stay, including helping out at an offshore oil and gas lease sale, flying in a helicopter, and visiting an offshore oil platform.

The MMS's Royalty Management Program in Denver hosted three interns from the Washington, D.C. and New York areas. Psychology major **Djakarta Jacobs** worked in the Solid Minerals Reporting Section, where she spent most of her time imaging and indexing about 100,000 documents. "It took me a while, but I'm beginning to really enjoy myself here," said the Washington, D.C. resident.

Intern Programs Help MMS and Students

The MMS has been an active participant in Interior's Diversity Intern Program for several years, providing more than 50 students with work experience. "I feel proud that MMS can offer such valuable opportunities to these students," said MMS's Intern Coordinator **Rosa Thomas**. "Everyone benefits through this initiative. Not only do the interns receive the experience they need, but the agency gets the benefit of smart, energetic students, ready to work."

The Extended Diversity Intern Program is held during two 15-week periods in the fall and spring, and a shorter 10-week Diversity Intern Program is held during the summer. The programs are partnership efforts between Interior and non-profit institutions such as the Hispanic Association of Colleges and Universities, the National Association for Equal Opportunity in Higher Education, Haskell Indian Nations University, and the Student Conservation Association. Qualified applicants are screened by the sponsoring organization prior to candidacy in the program. Decisions to hire interns are made by the managers who request intern assistance, and are based on the interns' qualifications and interviews.

Tara Lostetter, a communications and business major, worked in the Program Reengineering Office. The focus of her assignment was to learn how the reengineering process worked and to help the staff maintain their database. **Jerome Webster**, a computer science student from New York, worked in the Systems Management Division, where he gained valuable experience in maintaining computer networks and formatting Central Processing Units for use throughout the agency. "I've



learned a lot from my internship," Jerome said. "It's helped to prepare me for life outside of college by building my confidence in my skills." When not working, the students logged some time on the slopes, went hiking, and learned more about the Denver area.

Yomarie Garcia and **Quelina Jordan** interned at MMS headquarters in Washington, D.C. Yomarie, a political science and communications student at the University of Puerto Rico, worked in the Royalty Liaison Office, where she impressed her new co-workers with her varied skills. Yomarie assisted the staff in creating complex PowerPoint presentations, and writing speeches and press releases. "Yomarie helped us through many crunches with her computer and writing skills. She was truly a joy to work with," said **Joan Killgore**, one of Yomarie's co-workers.

While working on her M.B.A. at American University in D.C., Quelina worked in the Office of Communications of MMS's director. She maintained the office's web pages, created a new information site on the agency's web page, and offered several innovative ideas to improve communication between the agency and its constituents. "This opportunity has been extremely beneficial to my future career," she said. "It's given me the chance to practice all of the theoretical knowledge I've learned in school."

VISITING MIB'S NEIGHBORS

David North

If you are in working or visiting Main Interior or Interior South, we have a lunch-time suggestion for you. Assuming that you have already visited the splendid Interior Museum, and enjoy lunch breaks at the new Roof Terrace cafe, there are several other places, within minutes of MIB, where you can be soothed, quietly distracted, and maybe learn something pleasant and/or useful.

For example, if you walk out the C Street entrance of MIB, and make a 45 degree turn to the left, you will find on the opposite side of 18th Street the two-story Art Museum of the Americas (closed on Mondays.) It's a nice, bite-size collection; you can stroll through it in a few minutes and see everything or linger longer over items of special interest. Sometimes its paintings, sometimes sculpture, sometimes constructions with lights and moving parts. With its focus on Latin America and the Caribbean the colors are often striking, and while the setting is calm, some of the artwork is not. It is worth checking out every couple of months, as visiting exhibits come and go.

If you seriously into modern sculpture, you can wander in the park area between MIB and the Pan-American Union, the grand old structure facing 17th St. at Constitution.

There is a bust or two, and some representational work, but much of it is abstract. The inter-

play of the stationary pieces and the moving sprinklers in the summer time is well worth a little walk; where else can you see sculpture washed before your very eyes? The Pan American Union Building, opened by William Howard Taft, now houses the ceremonial headquarters of the Association of American States. Its cheerfully rococo decorations, some sculptures, and some paintings make it a mini-museum in and of itself.

Further up 17th Street is one of Washington's serious museums, the Corcoran; the only major art museum in town to escape the clutches of the Smithsonian. While pleasant and diverting, the Corcoran is the least quiet of the settings we are discussing. There is a lively luncheon trade in the elegant dining room to the left as you enter, and it, unlike the others, is frequently visited by groups of tourists. The Corcoran has multiple chambers, some material on permanent display, and some rotating exhibits. Count on it to have a mix of the sometimes jarring modern with the classic.

A favorite of mine, because it (like the Interior Museum) deals with history, and is usually very quiet, is the museum of the Daughters of the American Revolution, on the south side of C Street, between 17th and 18th. (It has, like MIB, a fitting, historical address; in this case 1776 C Street, N.W.) There are both rotating and permanent exhibits. When I visited there was one on schoolgirl arts and crafts of the 18th and the early 19th Centuries—embroidery, needlepoint and the like. It was a fascinating look at a narrow chunk of our past, attractive handwork and a reflection of the role of women at the time.

The permanent exhibit includes a striking display of early American silverware (including some by Paul Revere) and large quilts. There are the 33 period rooms, mostly parlors, showing furniture and decorative arts from specific periods of America's history. Before you leave the structure peak into the DAR library—this massive room, once the DAR's concert hall.

In addition to the museums noted above, there are the Octagon House, once home to James and Dolley Madison, at the corner of New York Avenue and 18th Street, and a little further on, at Pennsylvania Avenue and 17th, the Renwick, with its rotating display of crafts and its permanent collection of 19th Century paintings in its grand salon.



Above, the DAR Quilt Campers gather at the Founders Statue on C Street. At right, one of the museum's rooms that depict furniture and decorative arts from early American history.



Bouncing Back From El Niño

From the coast of Southern California to Virginia's Shenandoah mountains, dozens of national parks have been damaged over the past year by weather patterns and storms generated by the El Niño of 1997-98—aka, the weather event of the century.

At many of the parks spring was a time of digging out, cleaning up, and rebuilding from El Niño's wrath. Thanks to the resilience of parks, ingenuity of their staffs, and—ironically, some of the beneficial effects of El Niño, the damaged parks were ready for the summer-flood of visitors. Here's a sampling of how some of them bounced back:

While most people in the East were celebrating a remarkably mild winter, El Niño was delivering devastating storms to **Shenandoah National Park** from the last week in January through mid-February.

The park was hit especially hard during the first week in February, when for five days frozen precipitation coated the forest above 2,000 feet. Trees and power lines were layered with up to four inches of ice, and twelve to sixteen inches of solidly frozen and impenetrable ice and snow built up in some areas along the Skyline Drive higher than the adjacent stone safety walls.

As the ice continued to collect, trees, limbs, power and telephone poles snapped or were uprooted from the tremendous weight. The storm left roads, trails, and developed areas covered with a knee-high blanket of wood debris. It left thousands of tree branches dangling precariously over 81 miles of the Skyline Drive, 51 miles of administrative roads, 31 developed areas, and 293 miles of trails. Twenty-five buildings had roof, gutter, or drainage system damage; three park vehicles were damaged; and 28 power lines were downed.

The Skyline Drive had to be closed, and those park employees who are required to live in the park moved to temporary quarters in the valley. As Shenandoah crews tried to assess damage, ice-laden branches randomly crashed to the ground sounding like shattering glass. It was weeks before park crews could safely begin clean-up operations. The storm is estimated to have cost the park \$607,700.

Working along side park staff, volunteers, from the Potomac Appalachian Trail Club, Nordic Ski Patrol, and Northern Virginia Hiking Club eagerly began to clear the Appalachian Trail and side trails of the park in early March. The Appalachian Trail and high-use, non-wilderness trails were given first priority. Great progress has been made; however, it was mid-summer before all trails were cleared.

As visitors enjoy Shenandoah National Park this summer, they will see few signs of the Ice Storm of 98. Though not nearly as severe as this one, ice storms are a common part of winter in the Blue Ridge Mountains. They change the forest for a little while, creating more openings, giving other plants a chance at sunlight. They give deer a temporary bonanza of young twigs and buds to eat. They give ground-nesting animals and birds more cover. And the storms give us a chance to reflect on the awesome destructive and amazing recuperative powers of nature. *Lyn Rothgeb, Shenandoah NP*



El Niño storm damage forced the closing of many roads throughout Shenandoah National Park until crews could clear debris from park roads.

Channel Islands National Park:

Fifty-five miles off the coast from Ventura, California, San Miguel Island is the farthest west of the Channel Islands. During the pupping and breeding season from June to September 1997, northern fur seals and California sea lions at San Miguel Island began to show signs of nutritional stress. Pup mortality increased dramatically for both species because El Niño's ocean warming effects drove away much of their food supply. Thousands of seals and sea lions, including pups born in 1997, were killed during the El Niño weather.

Pinnacles National Monument,

in California, the premier rock-climbing destination in the San Francisco Bay Area, had to be temporarily closed in March because of a one-night storm that heavily damaged roads, trails, bridges, and parking lots. The park received \$3.2 million in damage, including the destruction of the 85-foot Chalone Creek span, which provides access to park headquarters, the Bear Gulch Visitors Center, and staff living quarters.

The 90-year old park, which is mostly wilderness, was hit by five inches of El Niño-induced rain in six hours, starting at midnight of Feb. 2. The damage to the 16,000-acre preserve in San Benito and Monterey counties was comparable to a 50-year flood. "As a natural event, the February storm wasn't a disaster, but it called attention to man's imposition on the land," said Chief Ranger **Mark Igo**. "We have to learn to walk lightly."

The Chalone Creek Bridge was replaced by a temporary one-lane span and a permanent replacement could be built by next summer. Because most of the park and its climbing attractions are accessible only by foot trails, the climbing season, which runs from October through April, was affected.

El Niño storms brought extraordinary levels of snow to Lassen Volcanic National Park

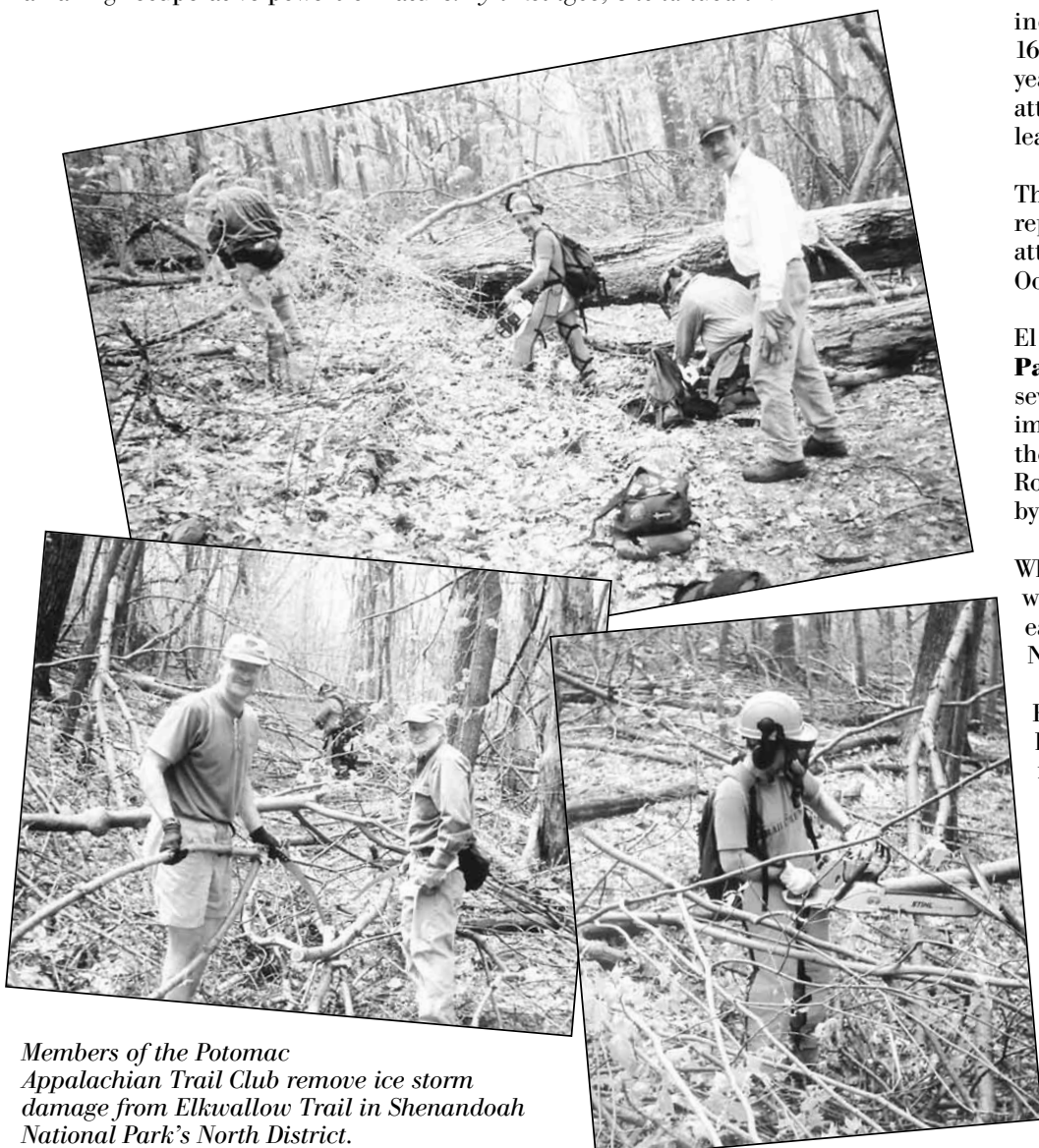
in northern California. More than 700 inches of snow fell within the park, causing several buildings to collapse from the weight of the snow. But the real story is the impact on the opening of the park this spring. A 30-mile park road which transects the park always snows shut during the winter. Traditionally, the park begins its Spring Road Opening the first of April with the goal of having the road plowed through by June.

When it became obvious this year that the park's available funding and snow crews would be no match for the El Niño snow levels and the road might not be open until early August at best, the park put out a call for assistance. The response from other NPS parks in the Pacific West Region was incredible.

Equipment from as far away as Death Valley and personnel from several other parks helped Lassen with the Spring Road Opening. The region also allocated emergency funding to supplement the park's budget for the snow removal. This redirection of personnel, equipment, and funds from the Pacific West Region helped to ensure a timely road opening at Lassen.

In an average year, **Death Valley National Park** gets fewer than two inches of rain. This year's El Niño has dropped a record five and one-half inches of rain on the park, leaving park rangers and visitors alike astonished by the abundance and variety of desert wildflowers blooming on the desert floor. Some of these wildflowers lay dormant, waiting to bloom, for at least 20 years.

Many National Park Service trails were closed in **Santa Monica Mountains National Recreation Area**, California, due to erosion resulting from El Niño rains. Several trails have been significantly damaged and may require 12-18 months to repair.



Members of the Potomac Appalachian Trail Club remove ice storm damage from Elkwallow Trail in Shenandoah National Park's North District.

EL NIÑO TESTS C & O CANAL EMERGENCY FLOOD PLAN

The Chesapeake and Ohio Canal National Historical Park, which parallels the Potomac River along its entire 184.5-mile length from Georgetown in Washington, D.C., upstream to Cumberland, Maryland, had continuous flooding during the winter of 1997/98.

El Niño storms dumped more than 21.47 inches of rain on the park from January through May 1, registering 348 hours of rainfall. These weather conditions resulted in five flood events in five months. But damage to the park was kept to a minimum by an innovative Flood Emergency Plan.

Floods often hit the canal because it is so close to the Potomac River—a proximity that was required to provide the water supply for this important man-made transportation route. Major floods have damaged the canal throughout its history as a commercial venture and as a park. Two floods in 1924 resulted in the canal ceasing operations. Two major floods in 1996 damaged many of the canal's cultural and natural resources, resulting in \$65 million in damage.

Flood recovery has been underway for two years with several major projects scheduled for completion in 1998. The 1997-98 winter floods hampered flood recovery efforts from the 1996 floods, and caused additional damage to park resources. Park funds and maintenance staff were stretched to the limit in dealing with these continuous flood events. The park spent an additional \$375,000 in clean up and repairs during the winter.

But the planning and preparedness of park staff minimized El Niño damage to park resources. Following the 1996 floods, the park and its consultants, Dewberry and Davis and Associates, prepared a series of hydrology and hydraulic studies to better understand the effects of flooding on the canal and towpath. With this data and observations from park staff during and following the floods, the park's Flood Emergency Plan was revised.

The plan outlines specific water levels along the Potomac River which require specific actions to be undertaken by park staff. The park's communication center maintains frequent contact with the National Weather Service during storms, checks flood levels at certain key gauging stations, and keeps park staff informed of predicted flood levels, crest times, and locations throughout the park. Armed with the new plan and real-time information, the park staff moved in advance of the rising waters.

The staff removed picnic tables, trash cans, and other recreational equipment, disassembled handrails from walkways and bridges, and closed certain areas to ensure visitor and staff safety. After the flooding, the staff and volunteers quickly removed debris and made repairs to keep the towpath, boat ramps, and campgrounds open for the 3-4 million annual park visitors to enjoy. The park staff was undaunted, and did a great job in responding to these unusual weather conditions.



Two C & O Canal National Historical Park employees have been honored for their work at the park. Ranger **Tom Nash**, right, was named the National Capital Region's Harry Yount Award winner for 1998 and a finalist in the national Harry Yount Award selection. The award recognizes excellence in the art and science of 'rangering' and is named for the first park ranger. Ranger Nash was recognized for his 14 years of dedicated service to the C & O Canal. He has been instrumental in developing and managing a highly professional ranger staff, demonstrates a high degree of professionalism and knowledge, and fosters a 'can do' attitude with his staff.

Chief of Cultural Resources **Douglas Stover**, left, was named International Curator of the Year for 1998 by the International Preservation Council of Natural History Collections. He was recognized for developing a method to preserve and exhibit wet specimens—such as waterlilies—for year-round display. Stover has written several articles on his preservation techniques, and has assisted museums in the United States and abroad. He received his award on March 20 in Paris, France. At center is **Doug Faris**, superintendent of the C & O National Historical Park.

The flood emergency plan, although costly to implement, has saved the park many thousands of dollars in lost property and other damage. Neither the monthly drills under the plan nor the frequent floods have dampened the spirit or desire by park staff, friends, and supporters to preserve the park's resources.

NOT AT A CINEMA NEAR YOU

Laser Beam Fusion Meets Pleistocene Mammoth

LIVERMORE, California—Call it *Star Wars* meets *Jurassic Park* with help from *Rocky*. A burly construction crew that was excavating a site for a super powerful laser discovered a cache of well-preserved fossils from a Pleistocene mammoth.

The discovery took place late last year at a construction site for a major Energy Department facility on the campus of the world famous Livermore National Laboratory. The laboratory is constructing the National Ignition Facility—the world's most powerful laser system, consisting of 192 laser beams that will demonstrate controlled fusion for the first time. During excavation, the Pleistocene mammoth bones were discovered more than 30 feet below the project's ground level.

Construction work was halted by project officials and the discovery cordoned off for study and recovery. University of California's Museum of Paleontology staff made a prompt field identification of the fossils and recommended hiring **C. Bruce Hanson**, a local professional paleontologist, to scientifically document and remove the find.

Because the National Ignition Facility is federally funded and on federal lands, officials from the Department of Energy and Livermore Laboratory requested an Interior Federal Antiquities Permit from the Park Service Pacific West Regional Director in San Francisco. (The permit is required by 43 CFR Part 3.) Within a few days, a federal permit was issued to **Scott Samuelson**, the local field manager for the National Ignition Facility. It listed paleontologist Hanson as principle investigator. Roger Kelly, an NPS archeologist and permit officer, provided further technical support for the recovery operation.

The fossil excavation scene was a study in contrasts as Hanson's team, made up of **Carol Kielusiak**, an environmental specialist, and other staff geologists, biologists, safety experts, and photographers, worked shoulder to shoulder with heavy-duty equipment operators and steel workers.



Left, **Scott Samuelson**, the Department of Energy's field manager for the National Ignition Facility, **Roger Kelly**, an NPS archeologist, and **C. Bruce Hanson**, a paleontologist, study one of the fossil finds at the Livermore construction site. Left, the Energy Department construction site on the Livermore National Laboratory campus where Pleistocene mammoth bones were discovered.

Using traditional hand tools, Hanson's crew exposed the partial skull, tusk, mandible and teeth, several neck vertebrae, and rib fragments of a single animal. Because the fossils were deposited in an ancient and sandy drainage system of the Livermore Valley, preservation of the bones was excellent. The cluster was jacketed with protective plaster casts for removal. Meanwhile, at three other project areas, additional fossilized fragments were also found and documented. Two fossil finds will be preserved in-place as resource sensitive spots.

The Smithsonian Institution was notified of the discovery but declined to take custody of the bones, favoring UC Berkeley's Museum of Paleontology as curator. The bones will be loaned to Livermore Laboratory for public exhibit in the lab's visitor center. Though the fossils are only part of a Pleistocene mammoth, they are one of the best preserved finds of this type in central California. Radiocarbon dating and soil analyses will add significant data to the find. Paleontologist Hanson's technical report will be completed in the near future.

Recovery of scientific information from these ancient mammoth remains through interagency support and cooperation did not delay construction schedules and ensured preservation of significant paleontological and ancient environmental data. Reaction to this discovery was very positive in local press reports and among Department of Energy and university officials. "This find is the first of many highly significant scientific discoveries at the National Ignition Facility" noted **Dr. David Crandell**, director of the facility's office at Energy's Washington headquarters. **Dr. Jeffrey Paisner**, UC Berkeley project manager, added that the discovery "has been a valuable and unique scientific experience for all of us."



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Page Valentine received his award at the USGS National Center during a May 5th USGS-NOAA workshop on relating the geology of benthic habitats to biological resources. Photo by Dave Usher, USGS

Valentine Honored as Environmental Hero

Mary Ellen Williams

RESTON, Va.—**Page Valentine**, a senior USGS research geologist in the Coastal and Marine Geology Program at the Woods Hole Field Center, has received the prestigious Environmental Hero Award from the National Oceanic and Atmospheric Administration.

Valentine was recognized for his “tireless efforts to preserve and protect the nation’s environment.” He received his Ph.D. from the University of California at Davis in 1973, and has actively pursued geologic research and assisted and supported the Stellwagen Bank National Marine Sanctuary headquartered in Plymouth, Massachusetts for more than eight years.

With cooperation and support from both USGS and NOAA, he has produced high-resolution sidescan-sonar images and other maps of the sanctuary’s sea floor, providing essential information for determining the distribution of biological habitats, assessing natural and human disturbance of habitats, and identifying areas where contaminants may accumulate. The image maps and interpretation of sea floor geology are used by scientists, policy makers, and resource managers to understand this complex ecosystem and to manage the region appropriately. The Stellwagen sanctuary supports active commercial and recreational fisheries, serves as a habitat for marine mammals, some of which are endangered, and draws 1.5 million visitors each year, primarily for whale-watching.

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DENVER EMPLOYEES RECOGNIZED

Heidi Koehler

DENVER, Colorado—Several USGS employees were honored at the May 9 Denver Federal Executive Board awards ceremony. **Debra Harrell-Wilfred**, the acting Equal Employment Opportunity Officer for the Central Region, received the Community Service Honor Award for outstanding community volunteer work. A team of USGS employees from the Rocky Mountain Mapping Center and one contractor received the Excellence in Government Outstanding Productivity of Process Improvement Award. The team included **Jeff Sano, Jeff Sloan, Chris Baumann, Eric Wong, Terry Leyshock, Mark Fahey, Laurie Temple, and JoAnn Bannura**.



Debra Harrell-Wilfred

Harrell-Wilfred participates in a variety of community-oriented projects, including the Commission on Cultural Diversity and Human Relations for the City of Lakewood, Citizen’s for Lakewood’s Future, the City of Lakewood Citizen’s Police Academy, and A STEP-UP (Arvada Supports Teen Efforts to Prevent Untimely Pregnancy). She also is a noted community speaker who frequently addresses racial reconciliation matters and working toward living as one people without regard to economics, race, gender, disability, education, or other barriers.

The mapping team developed an improved process for making a key USGS product, the digital orthophoto—a map-like image derived from an aerial or satellite photograph. The team cut the unit cost for producing each product from \$1,020 to \$322 and reduced production time from 14 months to less than two. The USGS mapping division provides base cartographic data to meet the nation’s needs, producing a variety of products such as topographic maps and digital orthophotos. A key use of orthophotos is as base map material onto which other map information may be overlaid. They are used in geographic information systems, for example, for deriving and delineating other data layers.



Among the science-research community leaders attending the workshop were, from left, Dr. Florabel Mullick, director, Center for Advanced Pathology, and associate director, Armed Forces Institute of Pathology; Dr. Donald King, executive director, American Registry of Pathology; Dr. Kenneth Olden, director, National Institute of Environmental Health Sciences, NIH; and Bonnie McGregor, associate director, U.S. Geological Survey.

Bringing Our Best Science to Bear on Environmental, Human Health Problems

Robert B. Finkelman

RESTON, Virginia—The plague in Arizona and New Mexico, fish kills in the Chesapeake Bay, and arsenic in Michigan drinking water were among the major issues discussed at a recent USGS conference. But the thrust of the meeting was much simpler—how to bring the best earth, biological, and medical science to bear on America’s environmental and human health problems.

The workshop aimed to strengthen the collaboration between major science research agencies that are concerned with national environmental and public health issues. Representatives from the National Cancer Institute, the Environmental Protection Agency, and the American Registry of Pathology also participated in the May 12-13 gathering at the USGS National Center.

Bolstering the research collaboration initiative is increased public awareness that mining, fossil fuel combustion, volcanic emissions, wind-blown mineral dust, and the leaching of potentially toxic substances can degrade water and air quality, affecting human health. Moreover, these natural and human-induced processes and other societal activities can stress the natural environment, causing diseases in animals that can be transmitted to humans.

With expertise in earth and biological sciences, USGS is uniquely qualified to help address these issues. USGS scientists are engaged in a wide range of research on human health issues, including the causes of fish and wildlife diseases such as Salmonella, botulism, plague, and Brucella, which is transmitted from bison to cattle. USGS ecosystem studies on amphibian deformities and endocrine disruptors may identify problems potentially affecting human health. Research also is conducted on the effects of crude oil spills and Methyl tert-butyl ether, a gasoline additive found in ground water.

The USGS is using geographic information systems, remote sensing information, and other technologies to track outbreaks of disease worldwide and to help identify the relationship of outbreaks, such as that of LaCrosse encephalitis in southern West Virginia, to environmental factors such as land use. USGS scientists also briefed workshop participants on recent research activities that have helped to identify the natural and human sources of potential toxic substances such as arsenic, mercury, lead, selenium, asbestos, radionuclides, and organic substances.



Mark Schaefer

The keynote speaker, **Dr. Kenneth Olden**, encouraged the audience to vigorously pursue this multidisciplinary scientific research effort. He urged those present to adopt the mantra “better science for better decisions.” Dr. Olden, director of the National Institute of Environmental Health Sciences, strongly believes that only with solid scientific information will decision makers be able to make intelligent choices that can protect the health and well being of our society and future generations.

Mark Schaefer, deputy assistant secretary for Water and Science, expressed Interior’s and his personal support for this interagency, multidisciplinary effort. He encouraged the development of better scientific information and decision-making tools to help managers who must address problems such as endocrine disruptors in water supplies, *piesteria* outbreaks, and invasive species.

The workshop was jointly organized by the USGS and the Armed Forces Institute of Pathology—a Defense Department agency that conducts research, public education, and consultation in medical sciences. At the conclusion of the conference, representatives from the two agencies agreed to explore the development of joint courses on environmental health issues. The courses would be offered to the public, including physicians, for accreditation to satisfy continuing education requirements.

The workshop also favorably received the concept of “linked sample repositories” as another way to improve interagency research. For a joint project, the Armed Forces Institute of Pathology proposed archiving tissue samples from people suffering from cancer due to exposure to arsenic, while the USGS characterizes and archives the ore, soil, coal, plant, and water samples that caused the exposure. Finally, the USGS is considering taking the workshop “on the road” to inform Interior and other government agencies of the scope of USGS activities on ecosystem and human health issues.

From left, Randy Olsen, chief of the Rocky Mountain Mapping Center; Barb Ryan, associate director of Operations; JoAnn Bannura, Laurie Temple, Mark Fahey, Terry Leyshock, Eric Wong, Jeff Sloan (current team leader), Chris Baumann, and Jeff Sano (former team leader).

Dogons of Mali Help Bring Earthquake Data to the World

Diane Noserale and Dianna Springman

MALI, West Africa—Extremes in climate, rebellions to the North, poverty, and years of isolation under socialist and military governments have kept the people of Mali, a country in western Africa, from entering the world stage in nearly all aspects of modern life. Mali is a land of encroaching desert, where temperatures can reach 129 degrees F and a local saying is “Forests precede man, deserts follow.” It is not an area of frequent earthquake activity, and the country lacks a seismological establishment.

Yet, for earthquake scientists, this under-represented part of the world is key for gathering data fundamental to research in seismology: worldwide location of earthquakes, their magnitudes, earth structure, and earthquake risk studies.

“When we started the project, Bamako, Mali’s capital, appeared to be one of the least-developed capitals of Africa, said **Dr. John S. Derr**, chief of Global Seismograph Network (GSN) from the USGS Albuquerque Seismological Laboratory. Electric power was intermittent, and phone service was and still is limited. A recent fire in the central market forced all vendors out into the open, making the crowded and dirty conditions worse.” Derr is a veteran of nine trips to Mali between June of 1994 and November of 1997.

Because of the efforts of Derr, the local villagers, and US Embassy staff, Mali recently came on-line with a state-of-the-art GSN station at the ancient Dogon village of Kowa, pronounced Ko-way, near Mopti. With funding from the National Science Foundation through the Incorporated Research Institutions for Seismology – a consortium of 90 universities – the USGS has upgraded or installed 80 GSN stations worldwide like the one in Mali. The GSN obtains high quality data that can be accessed by users worldwide. Some stations report data to orbiting satellites and then to the Internet.

“A seismograph such as the one we installed at Kowa can measure an earthquake of at least magnitude 5.0, anywhere in the world,” said Derr. “Kowa should improve the quality, coverage, and quantity of data for earthquake reporting and research.”

At the outset, the engineering community in Mali kept asking, “Do we have earthquakes?” Our answer was always, “We’ll see,” said Derr. One week after the installation was complete, the station recorded the M 7.9 earthquake in the Balleny Islands region near Antarctica, which may be the largest earthquake of the year.

SITING THE STATION

For optimum spacing of stations, a site near Timbuktu in Mali was first chosen. But because Tuareg rebellions made the north side of the Niger River’s inland delta unsafe, the site at Kowa was selected. This turned out to be a good choice because the local Dogon people are known as hard workers in this harsh land, and their honesty is legendary. The Dogons are sought after in cities as guards.

Communication was another potential problem. Many people speak French, but very few speak English. Often, the French is very difficult for a visitor to understand. Tribal accents are unique because of the isolation. **Oumar Konipo** is a foreign service national and embassy employee who proved to be crucial to the project’s completion. He is an administrative assistant and happens to be from Mopti. His family owns the position of Muezzin, the man who calls the faithful to prayer at the Mopti mosque, and as the eldest son he is guaranteed that job if he ever wants it.

Everyone was pleased to be working with the U.S. Embassy, in large measure because of Oumar. In the sometimes difficult negotiations between the Malian officials and the contractor, the first commercial contract after years of socialism, Oumar seemed completely at home in either Mopti or the outside world. For all practical purposes, the project was in his very capable hands.

“The U.S. embassy staff at Bamako was incredibly helpful, efficient, and 100 percent supportive of this project,” said Derr. **Ambassador William H. Dameron III** took a personal interest in the project, taking charge of the embassy’s computers. “At the



At Seismograph Station KOWA in Mali, Dr. John S. Derr, (kneeling), the chief of the Global Seismograph Network, Albuquerque Seismological Laboratory, joins, from left, Hassana Degoga, his son Aly, and Hassana’s twin brother Hussein. The Degoga twins share the hereditary village chief position. Photo courtesy of John S. Derr

site, several local villagers wanted to know what we were doing,” said Derr. “They had instructions to report any strangers to the village chief and were concerned because the Dogon bury their dead in the softer, eroded layers in the cliffs not far from the proposed site. They did not speak French, so Oumar explained the project to them in their own dialect, giving us an enormous measure of credibility. They could tell from both his name and his accent that he came from Mopti.”

The project included two separate construction sites. Oumar explained that placing the solar-powered seismometers required digging a 40-meter tunnel into the hard silica-cemented sandstone, at the face of a low cliff. The tunnel would go under the burial sites. The second site at the Mopti/Sévaré airport, eight miles away, is where data would be recorded because that location would provide reliable power, a dependable telephone, and an electronic technician. Because of the heat, air conditioning was added to keep computer equipment running. Oumar also explained that nothing would be done before approval was granted from the provincial governor, and his representative met the village chiefs.

THE DEGOGA BROTHERS

Hassana Malicki Degoga and his twin brother, **Hussein**, both share the hereditary position of chief for the northern part of the village. They also were vital to the project’s completion. They agreed to allow the tunnel to be dug under the Dogon burial site. Hassana became the project’s caretaker, watching the slow progress daily. At Kowa, final inspection showed the tunnel, portal, solar pad, and fence were quality work, very professionally done. The villagers agreed to guard the site after construction was completed. The Degogas even moved to the area outside the tunnel, so they could all take turns as guards. They see it as an advantage, because they can now be nearer their herds. This is a society that functions outside: houses are too small and cramped to be used socially.

When asked if they had been adequately compensated by the contractor, the chiefs noted that they were pleased to receive the money, but they really needed a deeper well. At that time, the entire village was served by two hand-dug wells, which tended to run dry for the three hottest months of the year. The U.S. ambassador had a self-help fund which could pay for drilling, if the local people would contribute the labor.

Progress in telecommunications was required before reliable data could be retrieved and e-mailed to customers, but progress is now well underway. The government of Mali wanted to develop Timbuktu and Gao to show the Tuaregs that it’s trying to help them, and has pushed for nodes in the north. The national telephone company has installed a satellite telephone dish at Sévaré for direct international access. In addition, commercial e-mail service was brought to Mali, thanks to a grant of equipment including a VSAT link, from the U.S. Agency for International Development through the Leyland Initiative. The station at Kowa has brought Mali other benefits including the capability to monitor a future comprehensive nuclear test ban treaty. Older Malians remember atmospheric nuclear tests in the Sahara, and are very sensitive to the test ban issue.

Valentine Honored as Environmental Hero

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Other 1998 honorees include: **Jean-Michel Cousteau**, head of the Jean-Michel Cousteau Institute, who served as host at NOAA’s kickoff of the International Year of the Ocean and has spent his life exploring the world’s oceans aboard the research vessels *Calypso* and *Alcyone*; **Dr. Sylvia Earle**, explorer-in-residence at the National Geographic Society, who has spent more than 6,000 hours doing underwater diving and research; **American Oceans Campaign**, which is dedicated to preserving the vitality of coastal waters, estuaries, bays, wetlands, and deep oceans; **Ted Danson**, actor and president of the American Oceans Campaign, narrated the public service announcement that kicked off the International Year of the Ocean. This year, 25 Environmental Heroes were recognized. **Vice President Al Gore** congratulated all for their “passionate commitment to the protection of our nation’s environment.”

A WINNING BALANCE

Dick Andrews

RESTON, Virginia—Understanding and appreciating cultural diversity; recognizing the connection between bias and behavior, and their effect on others; learning specific skills for addressing inappropriate behavior. Those are the focus of *A Winning Balance*— the video-based, highly participatory, four-hour training program that volunteer diversity facilitators have been presenting to their colleagues in the USGS.

The initiative began in January and as of June 30, nearly 70 sessions have been conducted and more than 1,700 employees, supervisors, and managers have been trained. The bureau goal is for the entire USGS workforce—more than 10,000 employees—to participate in *A Winning Balance* by the end of fiscal year 1999. A cadre of about 50 volunteers was selected last fall to be trained as internal diversity facilitators, as called for in the USGS Strategic Plan for Improving Workforce Diversity. The plan mandates a minimum of four hours of diversity training for all employees. The Department approved and released the plan to all employees in January.

Not Just for PhDs

Redesigned NBII Website Now Open for Business

Ron Sepic

RESTON, Virginia—Are you interested in the plants and animals around us? Do you think that most of the critters and greenery on this earth help make it a more enjoyable, even a more wondrous, place? If so, you should find the new website of the National Biological Information Infrastructure (or NBII) at <http://www.nbio.gov> of interest. The NBII National Program Office is located at the U.S. Geological Survey.

In recent months, the website has been given a facelift to make it easier than ever for customers to find the biological data and information they need. The redesign also gives the site better unity and consistency in its appearance. Highlights include:

Simplified searching. Click on two horizontal buttons to search all the NBII web pages (*Search the NBII Web*) or a catalog of biological information from different sources around the nation (*Search the NBII Metadata Clearinghouse*). Either way, you can find information on topics of your choice directly from the home page.

New topic areas. One of the biggest redesign challenges was how to package the NBII's wide diversity of data and information. A similar challenge was how best to provide pointers to other websites with biological information. Now, new categories offer web surfers timely topic areas that accomplish both goals: *Hot Topics*, *Invasive Alien Species*, *United States*, *Programs and Organizations*, *Education*, *Biodiversity*, *Systematics*, *Collections*, and *International*.

The new NBII website is **not aimed just at the Ph.D. in biology** (neither was the former site). Click on *Education* and you'll see a grid tailored to grade levels and cross-referenced to types of information. For instance, if you click on the box where *Grades 4-6* and *Fun Links* converge, you'll arrive at a list of such varied and kid-friendly biological education sites as the Albatross Project, the Adventures of Echo the Bat, and Frogland.

WHAT'S IN A NAME?

The terms may sound a bit baffling but they need not be. Simply stated, the National Biological Information Infrastructure (or NBII) is a cooperative effort led by the USGS that uses the Internet to link biological data and information from many sources. Users include scientists, educators, planners, land managers, and the public.

National refers to our many partners in federal, state, and local government agencies; nongovernment institutions; and private sector organizations in the United States. More recent partnerships have extended the range of NBII information beyond U.S. borders. Web surfers can use the NBII to gain access to plant and animal data (**Biological**) such as reports, publications, or lists of experts or organizations (**Information**).

Finally, just as a building has an **Infrastructure** (a framework with systems) that allows it to function, so does the NBII. The NBII's framework and systems is the Internet and the databases, computers, and communication lines that enable it to transmit information. The NBII is based on a growing list of partners around the nation and the world who share biological information.

DRGs Available Nationwide

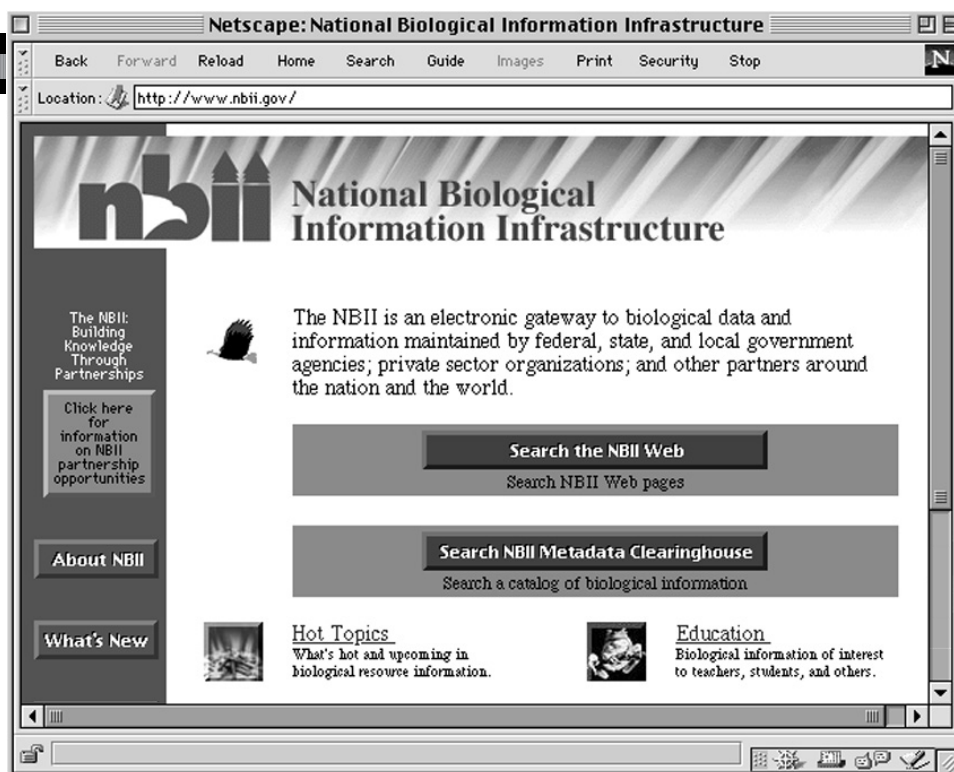
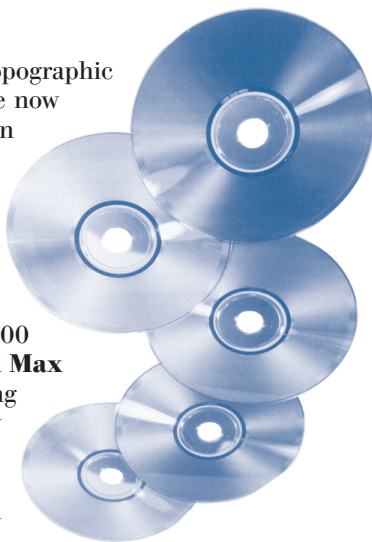
Georgia Munro

ROLLA, Missouri—Computerized images of USGS topographic maps, known as Digital Raster Graphics (or DRGs) are now available for all of the states, Puerto Rico, the U.S. Virgin Islands, and the Pacific islands. Development of these products began early in 1994, and production began in October 1995. The DRGs of the Pacific islands, finished in 1998, marked the completion of nationwide coverage.

"The program involved producing DRG's for about 59,000 topographic maps in two and a half years," explained **Max Ethridge**, chief of the USGS Mid-Continent Mapping Center. "Making computerized images of this many maps was a large undertaking, and required pooling experience from almost every part of our Mapping Center, and working with partners in the federal and private sector."

DRGs have become an extremely valuable tool for use in emergency and hazards relief efforts. Large amounts of map data are available on one Compact Disk and in some cases can also be down loaded over the Internet. Government employees made the majority of the original USGS topographic maps and developed the DRG process and standards, but the actual computerized versions of the paper maps were produced through an Innovative Partnership agreement with Land Information Technologies, Ltd., of Aurora, Colorado. The company made the digital images by scanning USGS paper maps. Employees at the Mid-Continent Mapping Center then checked the images, added additional information and user instructions, and packaged the data on Compact Disc (CD) for sale.

DRGs for California and Tennessee were produced by other agencies and are available directly from them (Teale Data Center in California and Tennessee Valley Authority). All other DRG's may be purchased from the EROS Data Center in Sioux Falls, South Dakota, for \$32 per CD plus a \$3.50 handling charge. They also can be ordered at USGS Earth Science Information Center. Information about ordering DRGs from USGS, Teale, or TVA is on the Internet at <http://mcmweb.er.usgs.gov/drg> or call 1-800-USA-MAPS.



Partnership Information is available via the icon at the top of the left hand side of the home page. **Organizational and Administrative Issues.** See the buttons below partnership opportunities to learn more about the NBII in general and what the USGS and its partners are doing to help build it (particularly infrastructure issues related to tools and standards).

Streamlined Contact Information. Just point and click on *Contact Us* (icon at the bottom left) to send your questions to NBII National Program Office senior staff. To learn more about the new NBII web site, we invite you to visit it at <http://www.nbio.gov>

Land and People: Finding a Balance

Cheryl O'Brien

RESTON, Virginia—Billions of gallons of underground water have been contaminated, a major wetlands region faces a severe water shortage, and a community is confronted by the potential hazards of earthquakes and landslides. Students are challenged to examine these current environmental issues when using the lessons in the new USGS teaching packet *Land and People: Finding a Balance*.

"This high school teaching packet provides exercises in citizenship," said **Sarah Gerould**, USGS program coordinator, Integrated Natural Resources Science Program. "It invites high school students to tackle some of the most vexing environmental problems of our time. Understanding the complexity of environmental issues that confront our society will help to prepare students to find a balance between man and the environment in the future."

In the *Cape Cod Project*, students are asked to present a plan for providing safe water for the Upper Cape after serious ground-water contamination is discovered surrounding a military reservation. Through three activities they will learn about Cape Cod's unique geology and how hydrogeologists gather data on the contaminated ground-water plumes. This project will help them understand the human responsibility for maintaining water quality.

The *Everglades Project* asks students to respond to a predicted 30 percent decrease in rainfall by creating an action plan to minimize the damage that the long dry spell will cause to the environment, local residents, and agribusiness. Students will learn about the concept of a water budget and the hydrologic cycle as they predict the characteristics of the Everglades ecosystem in the future.

In the *Los Angeles Project*, students become members of a civic group and are asked to evaluate the safety of the local community's school children in the event of earthquakes, and mud and debris flows. Three activities help students to learn how to use geologic and topographic maps. They also learn about the unique geology of Southern California and explore how the actions of people increase the effects of natural hazards on the environment.

Land and People: Finding the Balance contains a teaching guide, a colorful poster, and separate activities for the students. The student materials include a reading about the region, a focus question that leads to role-playing activities, and scientific data about the region. Copies of this guide and other USGS teaching packets can be obtained free of charge from the USGS Information Services, Box 25286, Denver, CO, 80225. Fax orders to (303) 202-4693, or e-mail to infoservices@usgs.gov. Other teaching packets available are *Exploring Caves* and *Map Adventures for K-3*, *What Do Maps Show?* for grades 4-7, *Volcanoes* for grades 4-8, *Global Change* for 4-6.





Kathy Karpan, Director
Jerry Childress, Bureau Editor
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Rule Aims to Expand Reclamation of Abandoned Mine Lands

An OSM initiative could leverage the limited resources of the Abandoned Mine Land Fund to help reclaim more sites. The proposal would revise OSM rules dealing with the financing of Abandoned Mine Land reclamation projects that involve the incidental removal of coal. The revisions were published in the Federal Register of June 25 for public review and comment.

"The primary objective of this rulemaking is to accomplish reclamation at sites that otherwise would not be reclaimed," **Director Kathy Karpan** said in announcing the decision. "There's not enough money in the AML fund to reclaim all known abandoned sites eligible for funding. This rule would allow AML agencies to use the limited dollars more effectively to bring about more reclamation."

The proposed rule would amend the definition of government-financed construction activities to allow less than 50 percent government funding when the construction is an approved AML reclamation project under Title IV of the Surface Mining Control and Reclamation Act.

Removing the requirement for 50 percent government finding would allow private companies to underwrite most of the cost of reclamation at many sites that would otherwise not be reclaimed. The reclamation would be funded largely through the sale of coal recovered from the project site. The government's or tribe's share of the cost and the ultimate cost to the AML program would be greatly reduced in many cases. Savings to the AML program would be used for reclamation at other sites.



Kathy Karpan

The rule also would require the AML agency to consult with the appropriate regulatory authority to determine on a case-by-case basis whether particular sites might be more appropriately mined and reclaimed under a Title V regulatory permit. If the AML agency decides to proceed with a reclamation project, it would carry out the project in accordance with existing AML requirements.

Because the reclamation projects involving the incidental removal of coal would be approved AML reclamation projects, they would be subject to time-tested administrative, financial, contractual, and

WHAT WE DO



We review state regulatory and Abandoned Mine Land programs
Rick Buckley conducts oversight on the West Virginia programs and is the West Virginia Clean Streams Coordinator. While stationed in Clarksburg, West Virginia, in 1978, he conducted Interim Regulatory Program mine inspections in two West Virginia counties. In 1982, he transferred to Casper, Wyoming, with responsibilities in regulatory program oversight and grant administration for the states of Alaska and North Dakota. In 1985, he transferred to the Columbus, Ohio, Field Office to help with oversight of the Ohio program.

Rick is married and has twin boys, and in his free time he is a soccer coach, oversees operation of the county recycle center, and likes to hunt, fish, and camp with his family.

Rick is an ardent supporter of the Clean Streams Initiative and is quick to identify the Abandoned Mine Lands Fund as an important source of reclamation funding for the expensive acid mine drainage problems caused by pre-1977 mining.



We support the Clean Streams Initiative

Jennifer Peterson is a member of the Washington, D.C., Headquarters Acid Mine Drainage Team. She began working for the Office of Surface Mining in August, 1997 as a Presidential Management Intern and is one of the newest staff members. She holds a B. Sci. Degree in Geology-Chemistry and a M. Sci. in Earth Science.

Jennifer is currently investigating options for acid mine drainage abatement projects including both chemical and biological methods. She has already identified many potential sources of funding and has posted them on the Office of Surface Mining web site to help local groups in their search for watershed project funding. Jennifer is also working on the American Heritage Rivers Initiative and will be playing a major role in the development of Abandoned Mine Land Geographic Information Systems during the upcoming year.

Jennifer is personally committed to environmental education and she volunteers as a chemistry and geology guest speaker at grade schools.

We provide Abandoned Mine Land grants to states

environmental safeguards the same as any other approved AML project, Karpan explained.

OSM conducted outreach on this proposal in November 1997, including eight public meetings to discuss the proposal at several locations nationwide. This proposed rule includes revisions that reflect comments OSM received during the outreach.

Comments on the rulemaking proposals should be sent to the OSM Administrative Record, 1951 Constitution Avenue, N.W., Washington D.C. 20240. E-mail comments to osmrules@osmre.gov

PRIME FARMLAND WORKSHOP SHARES RESEARCH, TECHNOLOGY

The importance of prime farmland soils to U.S. agriculture has made that aspect of reclamation one of the most heavily researched topics associated with surface coal mining. Volumes of new information have been written on interrelationships among crop production, soil compaction, fertility, texture, and management.

OSM is sharing some of the latest findings of that research at an August 11-12 *Prime Farmland Workshop* at Southern Illinois University to help those involved in agricultural production on surface coal mined lands and reclaimed prime farmland soils to learn about new farming technologies, practices, management strategies, equipment, and information services.

The two-day workshop, co-sponsored by OSM and the university's Research Center, is intended to provide hands-on instruction and interaction for land owners, managers, contractors, and consultants. In addition, a field tour of actual farming operations and research plots will make the workshop a profitable program for anyone involved in farming prime farmland.

Participants at the workshop on the Carbondale campus will be given copies of the latest technical publications related to the information presented. Speakers will focus on new or emerging technologies, areas that contain information gaps, or issues that are commonly misunderstood or controversial.

"August of 1997 marked 20 years of reclaiming prime farmland under the Surface Coal Mining and Reclamation Act of 1977," Director Karpan said. "With its promise of post-mining agricultural productivity, prime farmland restoration has been a topic of intense interest, both before and after passage of the act." Karpan pointed out that the potential impacts of coal mining on prime farmland today are very different.

"Many coal mine operators are successfully attaining their revegetation goals and obtaining reclamation bond release," Karpan said. In some parts of the country, mine operators may be creating prime farmland soils where none existed before. Meanwhile, the total acreage of prime farmland being disturbed by surface coal mining is rapidly diminishing because of the reduction of surface coal mining in the Midwest.

Although surface coal mining in the Midwest is on the decrease, Karpan noted, underground coal mining in the region has increased, with potential impacts on prime farmland, due to subsidence, that are unknown and that were largely unanticipated by the act.

Meanwhile, soils and reclamation experts are continuing to research the complexities associated with projecting actual crop yields based on measurement of existing soil qualities. Considerable difference of opinion still exists on the long-term success of surface mining reclamation on the potential agricultural productivity of prime farmland soils.

The U.S. Department of Agriculture's National Resources Conservation Service is in the process of developing detailed national guidance on the reconstruction of prime farmlands. The service also is beginning to remap and reevaluate the man-made prime farmland soils now being returned to agricultural production so that essential information related to land values, crop production capabilities, and tax assessments can be accurately established.

Registration for the workshop, accepted up to the date of the forum, should be sent to the university. Contact **Diane Throgmorton** at

(618) 536-5521. OSM's point of contact is **Kimery Vories** at (618) 463-6463, extension 103, FAX (618) 463-6470, or E-Mail kvories@osmre.gov Registration forms are available at the OSM homepage <http://www.osmre.gov>



A reclaimed mine site's effective uses include commercial tree farms.

Endangered Legacy

Reclaiming the Significance of Rachel Carson's Life and Work

Linda Lear

Time Magazine recently included *Silent Spring*, **Rachel Carson's** controversial attack on the misuse of pesticides, as one of the 100 most significant books of the century. Yet Carson's achievements and contributions, which changed the course of environmental history, are generally not understood or recognized by most Americans born after the Vietnam War.

I was saddened but not surprised when reviewers commented that until the publication of my biography, *Rachel Carson: Witness for Nature*, she was at the top of the list of "endangered American nature writers."

As a professor of environmental history, I know all too well that student appreciation of Carson's life and work is ephemeral at best. Those majoring in environmental studies usually recognize the title *Silent Spring* but they are often uncertain who wrote it. An honors student in literature at the University of Toronto recalled only that one of her professors ranted about Carson's lack of feminism. Female high school graduates may recognize Carson as a pioneering scientist because of the many books written for teenagers that cast her as a role model for women.

I was gratified recently when an undergraduate at the Wharton Business School at the University of Pennsylvania told me that he wrote a cost/benefit analysis of *Silent Spring* when he was in high school. He then asked my son, a fellow student at Penn, if he could get an autographed copy of my biography. But that same smart student could not name any of Carson's other books.

Many adult audiences I have spoken to are equally vague about Carson's legacy. I recently gave a seminar at a Washington think-tank where I was dismayed to discover that only a few scholars knew much about Carson's larger impact on environmental policy from ocean dumping to animal rights, and almost none of them had any idea about the significance of her nature writing on the contemporary environmental movement.

When Carson is remembered, it is almost always as the author of *Silent Spring*. Yet, in some science circles, she is still denigrated as the overly emotional woman whose exposé of the environmental dangers of pesticides caused a lot of unnecessary alarm during the Cold War and whose polemic earned the unmitigated hostility of the agriculture, food, and health industries. As a biologist she is suspect—a woman without a PhD or any refereed research papers.

In the contemporary environmental community, ironically, Carson has been almost forgotten as a naturalist, as a 20th century biographer of the sea, or as the author of three best-selling environmental books that garnered every major literary prize except the Pulitzer. Though her name was a household word in the 1960s, synonymous with environmental activism, many environmentalists regard Carson as a bloodless, iconic, and hopelessly romantic figure whose concern for the natural world shaped today's environmental movement, but whose life was irrelevant to its outcome.

Reclaiming A Legacy

Only in the community of naturalists and nature writers, it seems, is Carson remembered, correctly I believe, as not only a nature writer and scientists but also as a seminal ecological thinker whose work indelibly influenced our post modern construction of the natural world.

Clearly, Carson's legacy needed reclaiming. And so, at the risk of preaching to the choir, I want to discuss her work as a naturalist, her integrity as a writer, and her completeness in living. By integrity I mean living as if we are about to die—keeping the better and deeper principles of life close at hand, aligned with our behavior. Completeness is simply making sure that time is not wasted.

Carson's literary legacy is only four books—the trilogy on the sea and *Silent Spring*. But those volumes are enough to change how humankind regards the living world and the future of life on this earth. Her literary reputation rests primarily on two of those works: *The Sea Around Us* and *Silent Spring*.

Scholars have treated *Silent Spring* as an aberrant work, different in tone and style from Carson's other works. That is a mistake. The writer who synthesized the scientific literature on the sea to help the public understand and respect the eternal cycles and rhythms of ocean life is the same writer who synthesized the literature on pesticides to warn the public that nature was interconnected and that to damage one part was ultimately to damage the whole.



The ecological unity that so intimately pervades Carson's sea books also binds her analysis of the changes in water, soil, air, and the molecular structure of life in *Silent Spring*, though admittedly her tone in this last work is often angry and her language more biting than lyrical.

Linda Lear is Research Professor of Environmental History at George Washington University and Research Collaborator in the Office of Smithsonian Institution Archives. This article was adapted from lectures that Dr. Lear presented at the Interior Museum on June 23 and at the U.S. Fish and Wildlife Service, Arlington Square Building, on June 25.



Photo courtesy of Brooks Studio, Rachel Carson History Project

The magnitude of Carson's impact on the public's understanding—from the 1950s through the early 1970s—of such issues as ecology and environmental change still astonishes. Two volumes of her trilogy, *The Sea Around Us* and *The Edge of the Sea*, published in 1955, were serialized in the *New Yorker Magazine*. All three volumes, including *Under the Sea Wind*, which originally appeared in 1941 and was republished in 1952, appeared on The *New York Times Best-seller List* for many months. *The Sea Around Us* maintained its place on the list for a record 86 weeks and was translated into 33 languages.

Silent Spring was also serialized in the *New Yorker Magazine*, making Carson the first woman writer ever to have her work introduced in that prestigious publication on three occasions. After its publication in September 1962, almost one million copies of *Silent Spring* were sold within 18 months. It was translated into 22 languages and still sells more than 27,000 copies every year.

A Writing Life

At the time of her death in April 1964, Carson had garnered an international reputation as a scientist, nature writer, and public voice for the care of the earth. She was the most celebrated science writer of her generation, acclaimed a literary giant of the 20th century, and showered with honors.

Yet the pace and pressure of Carson's life always militated against there ever being a large body of writing. By nature she was a painstaking craftsman. She worked slowly and methodically, unwilling to move from one sentence to another until the first met her syntactical and lyrical satisfaction. She revised endlessly, read everything out-loud, and had it read back to her, until satisfied with its tone, alliteration, and clarity.

A perfectionist in form and structure, Carson was also a meticulous researcher whose demand for scientific accuracy was legendary among her government colleagues, assistants, and editors. Even those descriptions of tides and shore activities that she shared in letters to her Maine neighbors, **Dorothy** and **Stan Freeman**, were not mailed until she was certain that her explanations were correct.

Carson wrote with accuracy, with love, and with integrity about the living world, but she always considered her contributions to scientific fact less important than her attempts to awaken the emotions. When she wrote, she captivated readers by her lyric prose and her ability to draw them into her world, be it underwater, strolling along a beach, or describing the web of life.

Because it took me almost a decade to write Carson's life, it was gratifying to learn that she never finished a manuscript or an article on time, with the possible exception of the newspaper feature stories she wrote in the 1930s under deadline pressure from the *Baltimore Sun*. But it was heart-breaking to piece together the nearly overwhelming

burden of family responsibility and emotional demand that prevented her from achieving the corpus of work that she had dreamed of producing and had the talent and vision to create.

Carson had plans for at least four other major works when she succumbed to misdiagnosed and aggressively metastasizing breast cancer. She had been collecting material for a scientific study of evolution, and had a book contract from Harper Brothers for a more philosophical examination of ecology.

She had started to revise and expand her earlier magazine article on exploring the natural world with children, and she was intrigued by new discoveries in atmospheric science and climate and hoped to write something in this emerging field. Carson was a passionate supporter of the humane treatment of animals and hoped to contribute her thoughts to this emotionally charged area as well.

Her literary papers display a full range of natural history topics that she had, in one way or another, committed herself to write about and many more that she hoped one day to have the time to pursue. But time ran out.

The Politics of the Environment

Most commentators skip the fact that Carson spent 15 years of her brief life as a federal scientist and editor: first, in the Bureau of Fisheries at the Department of Agriculture; and after 1939, when the bureau was absorbed into the Department of the Interior, in the U.S. Fish and Wildlife Service.

Most male scholars have dismissed her career in federal service as mere time serving—a period when Carson wrote at night and bided her time until she had the means to quit the drudge work of being a bureaucrat and devote herself to her literary craft.

Such a view misses the crucial ways in which her work in the Federal Government deepened her emotional connections to the natural world. As a federal scientist she was exposed to a breadth and diversity of research that was available no where else. The view also overlooks Carson's crucial education in the politics of the environment as well as the vital personal connections she made during these years.

In the 1930s Carson visited fisheries and wildlife refuges around the Chesapeake Bay watershed to verify data on fish populations and habitat. She pursued her interest in the migratory habits of the North American eel, that mysterious creature which first appears in her most successful natural history, *Under the Sea-Wind*. Research on dwindling oyster beds, the industrial pollution of fishing grounds, and the human disturbance of coastal habitat impressed her with the need for more effective conservation measures and deepened her interest in the ecology of tidal estuaries.

As editor in chief of Fish and Wildlife Service publications, Carson created a new series of government brochures to highlight the national wildlife refuges that had come into the system during the war. The assignment gave her the only opportunity she ever had to travel extensively in the western United States, without her mother, and to see these remote places for herself. Deeply interested in the habitat and migratory patterns of shore birds and waterfowl, Carson designed and wrote four of the five numbers of *Conservation in Action* around the refuges of the eastern flyway.

At one of these—Mattamuskeet, a refuge off Albemarle Sound in North Carolina—she spent the morning listening to the sounds of the rare whistling swan. She wrote in her field notes: "Throughout much of the day, their wings pattern the sky above you. Underlying all the other sounds of the refuge is their wild music, rising at times to a great, tumultuous crescendo, and dying away again to a throbbing undercurrent. We heard . . . the high thin note, almost a woodwind quality, that presumably gives them their name. I still think the sound of a large flock of geese is one of the most thrilling in the world. It is the sound of Mattamuskeet that impressed me more than anything else—the geese, the frogs at night, the sound of bird wings, and the splashing of unseen deer in the swamps."

Carson served at Interior when it was headed by **Harold L. Ickes**, an ardent and activist preservationist secretary. In the 1940s, she was frequently asked to write speeches for the secretary's office or to prepare congressional testimony. Carson lent her skills to such conservation activists as **Howard Zahniser**, wrote anonymous speeches, and penned powerful editorials published in *The Washington Post*. Because of her government experience, she became not only a different kind of naturalist and nature writer but also an accomplished political infighter, acutely aware of the compromises that were necessary to protect the natural world.

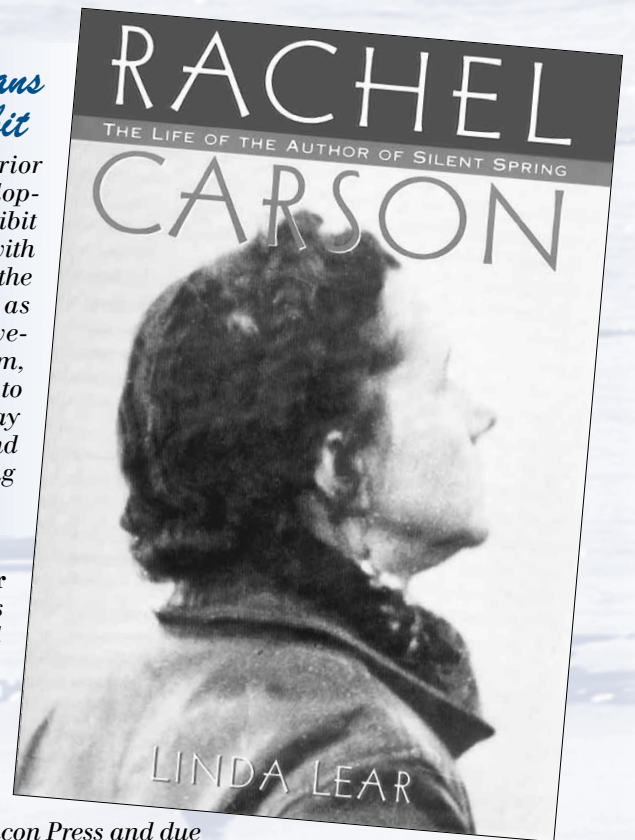
Carson's years in Washington provided her with unequalled opportunity to expand her understanding of other areas of science. She joined the District of Columbia Audubon Society, where she went birding with the artist **Roger Tory Peterson**, and participated in field excursions with a unique group of federal scientists, all of who enthusiastically shared their disciplines. Carson's editorial position with the Fish and Wildlife Service connected her to archivists, librarians, and scientists throughout the Federal Government who provided her information and access to material for her trilogy on



Photo courtesy of Brooks Studio, Rachel Carson History Project

Interior Museum Plans Rachel Carson Exhibit

In the coming year, the Interior museum will begin the development of a Rachel Carson exhibit that will chronicle her career with the Fish and Wildlife Service, the importance of her writings as milestones of literary achievement and conservation activism, and the Service's contributions to her writings. Look for the display in the recently updated Fish and Wildlife Service gallery during fiscal year 1999.



Rachel Carson: Witness for Nature by Linda Lear is published by Holt (1997) and available on-line at Amazon.com and most major book stores. A paperback edition is due out in September. Lear also is editor of an anthology, *Lost Woods: The Discovered Writing of Rachel Carson*, published by Beacon Press and due out in October. Lear can be reached on-line at <www.rachelcarson.org/html>

the sea. (Sadly, that could not happen today, because federal scientists are now prohibited from using data developed on the job in their private writing.)

Carson also sat on interagency military committees during and immediately after the war where she was privy to the latest discoveries in oceanography, the effects of atomic testing on the flora and fauna of Pacific atolls, and the disappearance of species. And because *The Sea Around Us* earned her a reputation for accuracy as well as lyric prose, some of these same scientists years later secretly provided her research data on pesticide abuse when she was unable to obtain that information through open inquiry.

Science and a Sense of the Beautiful

Carson's work with the Fish and Wildlife Service gave her the opportunity to synthesize science and deepened her love of the natural world that she knew first hand was increasingly at risk. She retired from federal service in 1952, after the sale of *The Sea Around Us* gave her a measure of financial independence. That January she was honored by the National Book Award in nonfiction, the New York Zoological Medal, and the Burroughs Medal. Her public remarks on these occasions reveal that her years in government had also given her a vital, even radical perspective from which to warn against the isolation of both science and literature in post-war America.

Carson attacked the notion that science belongs in a separate compartment, apart from everyday life, as the prerogative of a small number of human beings, mostly male, isolated, and priest-like in their laboratories. "The materials of science," she said, "are the materials of life itself. Science is part of the reality of living; it is the what, the how, and the why of everything in our experience. It is impossible to understand man without understanding his environment and the forces that have molded him physically and mentally."

Seven years before **C.P. Snow** warned against the separation of "two cultures," Carson wrote, "the aim of science is to discover and illuminate truth. And that, I take it, is the aim of literature. It seems to me, then, that there can be no separate literature of science." After writing *The Sea Around Us*, Carson explained, "my own guiding purpose was to portray the subject of the sea with fidelity and understanding. I did not stop to consider whether I was doing it scientifically or poetically; I was writing as the subject demanded. The winds, the sea, and the moving tides are what they are. If there is wonder and beauty and majesty in them, science will discover these qualities. If they are not there, science cannot create them. If there is poetry in my book about the sea, it is not because I deliberately put it there, but because no one could write truthfully about the sea and leave out the poetry."

In her 1956 article *Help Your Child to Wonder*, published posthumously in 1965 as *The Sense of Wonder* and recently republished by Harpercollins, Carson warned against teaching children to know facts in favor of letting them use their senses to experience and feel. "If facts are the seeds that later produce knowledge and wisdom," she wrote, "then the emotions and the impressions of the senses are the fertile soil in which the seeds must grow. The years of early childhood are the time to prepare the soil."

Her creed as a nature writer can be summed up in one telling sentence: "Once the emotions have been aroused—a sense of the beautiful, the excitement of the new and the unknown, a feeling of sympathy, pity, admiration or love—then we wish for knowledge about the object of our emotional response. Once found, it has lasting meaning." Carson wanted us to love nature as she did. It was her integrity—as a scientist searching for accuracy and as a nature writer intent upon telling the truth of the experience—that makes her work so memorable and gives it such power and completeness. She lived briefly and intensely. And she wrote as she lived.

Just before *Silent Spring* was published in the *New Yorker Magazine*, Carson revealed something of the passion and integrity with which she endowed her crusade against pesticides. "I never thought the ugly facts would dominate, and I hope they don't," she told her friend and fellow nature lover **Lois Crisler**. "The beauty of the living world I was trying to save has always been uppermost in my mind—that, and anger at the senseless brutish things that were being done. I was bound by a solemn obligation to do what I could—if I didn't at least try I could never again be happy in nature."

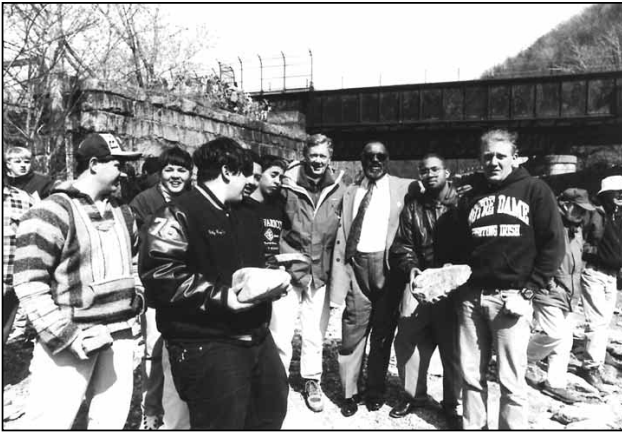
National Park Service



Robert G. Stanton, Bureau Director
Ricardo Lewis, Bureau Editor

CC:Mail to Rick Lewis at NP-WASO

Youth Corps to Build Trails, Cleanup Campgrounds in the National Parks



Secretary Babbitt commends volunteer workers who responded to the C&O Canal cleanup following the 1996 floods.

officials to mark the June 8 launching of the initiative at the C & O Canal. NPS has identified 165 projects on 99 units across the nation to be completed by the youth program, which was authorized under the 1993 National Community Service Act. The work ranges from rebuilding trails and preserving historic structures on the C & O Canal, to rehabilitating campgrounds in Rocky Mountain National Park, and restoring cabins at Yosemite National Park.

"This initiative helps the National Park Service to clear up some of the critical maintenance projects while building character and encouraging a sense of responsibility among young people participating in the program," Secretary Babbitt said at the event.

"The Public Land Corps will enable us to chip away at the long list of maintenance projects that we have at many of our national parks," said Director Stanton. "It also gives today's youth an opportunity to be involved with our rich heritage, working to help preserve these wondrous sites—the very pages that make up our diverse history."

Under the program, NPS units proposed 350 projects. More than one application could be submitted per park for different projects. Each grant is limited to \$15,000. The grant application process was enhanced when parks proposed to match the Public Land Corps grant with funds from their Recreation Fee Demonstration Program revenue as well as from public-private partnerships. About 288 proposals met the required criteria and 165 were approved for about \$2 million in grant funds with matching funds of \$1.6 million.

The NPS initially obligated \$1 million for the youth program from the 1997 Recreational Fee Demonstration Program. Due to the overwhelming response and critical need to work on maintenance projects, the NPS has obligated an additional \$1 million from the 1998 pilot fee program, for a total of \$2 million. The program, which will be administered by the NPS Washington Office of Youth Programs, requires parks to have a cooperative agreement or contract with a nonprofit youth organization in place before funds are disbursed. The program does not replace current volunteer and student conservation programs in the National Park System.

NPS PLEA: PLEASE DON'T FEED THE BEARS



Feeding bears in the national parks is not an act of kindness. It is part of larger problem that is literally killing bears. Bears habituated to human contact cause thousands of dollars in property damage each year, and are ultimately destroyed because they are in search of human food. This year the NPS is issuing a plea for the public to educate themselves about bears in an attempt to save bear's lives.

Bears have only about six months to eat as much as possible to build up fat reserves for their winter hibernation. People's camping carelessness is becoming the source of this food. Bears destroy cars and campsites in search of food that has not been properly stored or disposed of. Once the bears associate humans with easily obtainable food, they lose their inherent fear of humans and come around them more often. This leads to damaged property and occasionally bear attacks. Eventually, if the bear becomes a threat to human safety, it will be killed.

There are simple things that can be done to keep this from happening. When a person plans to visit a national park they need to realize that they are sharing a place which is home to bears. They need to make themselves aware of the necessary precautions that need to be taken for the protection of both the bears and people. For more information, please stop at the visitor's center at the entrance of the park or search the NPS web site at <www.nps.gov> and use the search key with the key word *bears*.

National parks hit hard by backlogs of maintenance and rehabilitation work, as well as those suffering El Niño damage, are getting help from a new youth employment program. More than 1,025 young people will perform badly needed work in national park units in 41 states and the District of Columbia under the Public Land Corps youth program.

Secretary Babbitt and NPS Director Robert Stanton joined local



Mike Anderson receives his award from President Clinton at a White House ceremony. Joining the ceremony were, from right, Secretary Babbitt, Director Stanton, Anderson's wife and sons. White House photo

EXCELLENCE IN RANGERING

Mike Anderson, district ranger on Bodie Island at Cape Hatteras National Seashore (North Carolina), is this year's recipient of the Harry Yount National Park Ranger Award for excellence in "rangering." The award was presented by President Clinton during National Park Week at a special White House ceremony.

Ranger Anderson has managed district programs for fire, safety, off-road vehicles, and commercial fishing. In 1986, he was engaged in a shootout as he attempted to arrest a suspect who had stolen an airplane. He oversees the entire Hatteras Group's Visitor Services Division budget of \$1.7 million and serves as the park's liaison with surrounding communities and cooperating agencies. Ranger Anderson received the Department's Valor Award in 1990 for the rescue of five swimmers who were caught in a rip current.

"There is no greater accolade than to be honored by my fellow rangers as being worthy of the Harry Yount Award," said Anderson. "If I have been able to accomplish anything, it has been in large part due to the rangers who have served as my role models in the art of rangering. I owe them a lot."

C & O Canal NHP's Tom Nash and Douglas Stover honored. Page 11.

Cultural Resource Management



NPS Director Robert Stanton, right, Kate Stevenson, associate director of Cultural Resources Stewardship and Partnerships, left, and Jeanne M. Schaaf at the award presentation. Photo by Rosa Wilson, NPS

Jeanne M. Schaaf, an archeologist in the Alaska Support Office, is the recipient of the 1997 Director's Roy E. Appleman-Henry A. Judd Award for cultural resource management. The award recognizes outstanding service by a NPS employee in the field of cultural resource management, including related activities such as research, education, interpretation, curation, and preservation.

Schaaf developed and carried out a complex program for four parks which cover more than nine million acres of isolated wilderness and annually receive more than 50,000 visitors who arrive by commercial aircraft. In 1997, she successfully advocated, planned, and put in place

a top-quality, multi-disciplinary, multi-park cultural resource program for Alagnak Wild River, Aniakchak National Monument and Preserve, Katmai National Park and Preserve, and Lake Clark National Park and Preserve. She also served as principal investigator for three major archeological research projects in the four units and provided general guidance for several more. Her efforts significantly enhanced relationships with three local Native Alaskan groups.

Schaaf also designed and helped produce two outstanding public outreach tools for the Shared Beringia Heritage Program: a colorful book for Alaskan Native audiences summarizing research on Beringian cultural and natural resources and a popular interpretive videotape on the landscape history of Bering Land Bridge National Preserve. For information, call (907) 257-2696.

TONORS

Four NPS employees and a U.S. Geological Survey scientists have received the NPS director's awards for their achievements in natural resource stewardship and research. The winners of the Natural Resource Stewardship and Research Awards for 1997 are: **Mark Woods**, the superintendent of Cumberland Gap National Historical Park, Kentucky, who received the Superintendent of the Year Award for Natural Resource Stewardship; **F. Kent Turner**, the chief of Resource Management at Lake Mead National Recreation Area, Nevada, who won the Award for Natural Resource Management; **Katherine Kendall**, a U.S. Geological Survey research ecologist with the Glacier National Park, Montana, was presented the Award for Research in Natural Resources; **Robert Cook**, the resource manager at the National Park of American Samoa, received the Trish Patterson-Student

A Draft in the Canyon: The draft Wilderness Management Plan and Environmental Assessment for **Grand Canyon National Park** recommends that 1.1 million acres be set aside for formal wilderness area. The plan also proposes that another 29,000 acres along the Colorado River be designated as a potential wilderness. Wilderness designation, granted by Congress, prohibits all development or use of motorized equipment in the area. The proposed wilderness consists primarily of inner canyon and rim areas, and does not include the developed areas or the Cross-Canyon Corridor. The plan sets out management guidelines for resources and visitor use in the proposed wilderness. Colorado River management issues will be addressed in the Colorado River Management Plan, currently under revision. Visitor use issues that specifically pertain to the Cross-Canyon Corridor and Colorado River are not within the scope of the Wilderness Plan. The 45-day public review and comment period began June 1. Electronic copies of the draft Wilderness Management Plan and Environmental Assessment are at <http://www.nps.gov/grca/wilderness>. For printed copies, write GCNP Science Center—Draft Wilderness Management Plan, P.O. Box 129, Grand Canyon, AZ 86023. Send e-mail comments to GRCA_Public_Comments@nps.gov. Please include 'WMP Comments' on the subject line. Call **Kim Crumbo**, wilderness coordinator, at (520) 638-7757 or **Linda Jalbert**, outdoor recreation planner, at (520) 638-7909.

Remembering Grant: More than 2,000 school children from throughout New York City, accompanied by their parents, teachers, and members of the general public, gathered at Riverside Park in upper Manhattan, site of the **General Grant National Memorial**, to honor Civil War Hero and President Ulysses S. Grant on the 176th anniversary of his birthday, April 27. Music was provided by the United States Merchant Marine Academy Band and the Hempstead, New York High School Choir and, the traditional taps and 21-gun salute were rendered by the United States Military Academy Corps of Cadets. Guest speakers included Park Service Assistant **Regional Director Warren D. Beach** from the Northeast Regional Office in Philadelphia, **Brigadier General John Abizaid**, commandant of cadets at West Point, Manhattan Sites **Superintendent Joseph T. Avery**, and New York City **Parks Commissioner Henry Stern**. The students and teachers were invited by Superintendent Avery who initiated a new program entitled *Learning at Landmarks* to introduce them to historic sites in New York City. It is hoped, he said, that this will become an annual event. Following the ceremony, in fact, some of the students were transported by school bus to the Hamilton Grange, another site managed by the National Park Service-Manhattan Sites Unit.



The Corps of Cadets from the United States Military Academy at West Point leaves the site of the General Grant National Memorial in Manhattan following ceremonies marking the Civil War hero's 176 birthday anniversary. Photo by Manny Strumpf, GNRA

Conservation Award for Natural Resource Management in a Small Park; and **Gregory McGuire**, the facility manager and chief of Area Services at Ft. McHenry National Monument and Historic Shrine, Maryland, won the Award for Excellence in Natural Resource Stewardship through Maintenance.

The awards recognize achievements and highlight efforts of employees in understanding and managing the diverse natural resources within the National Park System. "As America's landscape changes, management of the natural resources of our National Parks becomes more complicated," said NPS **Director Robert Stanton** in announcing the awards. "That is why it is so important each year for the National Park Service to recognize the most outstanding contributions by park superintendents, resource managers, maintenance employees, and federal researchers in the U. S. Geological Survey and elsewhere."



ACCESS FOR ALL

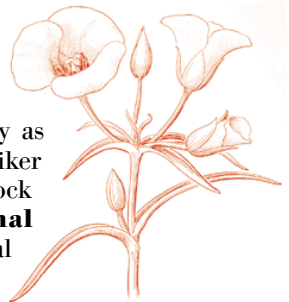
Yosemite National Park in California has a sign language interpreter available for the hearing impaired during July and August to answer questions, assist with planning visits, and provide information on ranger-led activities. The types of ranger-led activities vary from daily interpretive walks, evening campfire talks, Yosemite Theater, and concessionaire interpretive programs. Most interpretive programs reflect the colorful and fascinating history, both natural and cultural, of Yosemite National Park. Advance notification and reservations are strongly advised. Without advance notification for camping, hotel rooms, or interpretive programs, Yosemite's staff may not be able to provide visitors with quality assistance because of previously scheduled interpretive activities. And sleeping accommodations may be unavailable. For more information on accessibility assistance, trip planning, a schedule of events, camping activities, and hotel accommodations, please call the following: Program Information: TTY—(209) 372-4726, V/TTY—(209) 372-0599, Voice only—(209) 372-0467; Program Contact: **Sarina Lambert**—e-mail: sarina_lambert@nps.gov

Glacier National Park (Montana) is converting a popular hiking trail so that it can be used by visitors in wheelchairs. Thanks to a \$40,000 grant from the *Miles for Trails* program of American Airlines and the National Park Foundation, the Running Eagle Falls trail will become the first foot path in Glacier National Park east of the Continental Divide to be made wheelchair accessible. (The Trail of the Cedars, located in the Upper McDonald Valley on the Going-to-the-Sun Road, is also wheelchair accessible; it was built in the mid-1980s.) The park also will construct a wheelchair accessible restroom with revenue from the Fee Demonstration Program. *Miles for Trails* allows American Airlines passengers to donate their frequent flyer miles which the airline converts into cash donations for trail projects. Work on the trail conversion is set to begin this summer, following the public involvement process on a recently completed environmental assessment for the project. The assessment is at <http://www.nps.gov/glac/press13a.htm>. Contact **Amy Vanderbilt** at (406) 888-7906 for more information.

Million-Dollar Expedition: Marking the fourth year in their partnership, the National Park Service, the National Park Foundation, and Canon U.S.A., Inc., announced that Canon U.S.A. has once again donated \$1 million to support inventorying, monitoring, and conservation projects in 18 national parks through the Expedition Into the Parks program. The initiative brings Park Service staff, researchers, and volunteers together to collect critical data—through activities, such as, wildlife monitoring, habitat mapping, flora and fauna sampling, photographic surveys—and to perform hands-on conservation and restoration work to protect park natural resources. It is the first and most comprehensive program of its kind to benefit the national parks. This year's projects include: monitoring the effects of humans

on bears in **Katmai National Park**, Alaska; examining mercury levels and their impact throughout the foodweb within **Isle Royale National Park**, Michigan; preserving fossils at **Badlands National Park**, South Dakota; and restoring the world's most endangered sea turtle, the Kemp's ridley, at **Padre Island National Seashore**, Texas, and bighorn sheep at seven western national parks. Expedition Into the Parks, which is funded by Canon U.S.A. through the National Park Foundation, has benefited 49 national parks since it began in 1995. The program is part of Canon U.S.A.'s Clean Earth Campaign, which guides the company's environmental support initiatives.

Wildflowers paint vivid colors across the **San Juan Mountains** of Colorado. Vibrant violets line the pathway as pale pink azaleas beckon the hiker in the distance along Mary's Rock trail in **Shenandoah National Park**. The magnificent national parks and other public lands offer some of the most



spectacular opportunities to view wildflowers. April launched a year-long program promoting the importance of conservation and management of native plants and habitats. Celebrating Wildflowers emphasizes the aesthetic, recreational, biological, medicinal and economic values of our native flora, with more than 15,000 different species recognized from the United States and Canada. Several areas of the country are particularly rich in plant species, including California, Florida, the Pacific Northwest and the Southwest. The first step to appreciating wildflowers is to explore our nation's public lands. Wildflowers are easy to spot and nearly all natural areas have guidebooks for beginners. Numerous guided walks, displays, and presentations are available to aid you in your appreciation and interpretation of the value and wonders of wildflowers right under your nose! Ball the Wild Hot Line at 1-800-354-4595 or check out the website at www.aqd.nps.gov/npci



Diane H. Dayson, right, superintendent of the Statue of Liberty and Ellis Island, presents one of several gifts to Mr. and Mrs. Dale Merski and their children, Jeff and Samantha, after the North Andover, Massachusetts family was determined to be the 12 millionth visitors to Ellis Island's Immigration Museum since it opened in September of 1990. NPS Photo by Kevin Daly

Ellis Island Greets 12 Millionth Visitor: When Dale and Lisa Merski of North Andover, Massachusetts took their two children, Jeff and Samantha to Ellis Island on April 24 to trace their grandparents' and great-grandparents' roots, little did they expect that they would get a whole lot more. As they disembarked from a Circle Line Statue of Liberty ferry onto historic Ellis Island shortly before 10 a.m., they were greeted by **Superintendent Diane H. Dayson** and other park officials. The Merski family was projected as being the 12 millionth visitor since Ellis Island's Immigration Museum opened in 1990. In honor of the milestone, ARAMARK, the museum's concession operator presented the Merskis with a free lunch as well as a large ceramic model of Ellis Island; Circle Line Statue of Liberty Ferry Inc. presented them with a check and complimentary tickets for future visits; and Facts on File, Inc., a Manhattan-based publishing company, presented them with a copy of *Ellis Island Interviews*, a book by **Peter Caan**. The family also was accompanied on a personal tour of the museum by Park Ranger **Carole Kelly** who coordinated the event. Superintendent Dayson noted the significance of the event by telling the family and the crowd that gathered for the ceremony that Ellis Island opened opportunities for 12 million immigrants to America. Mr. Merski's grandparents emigrated to America from Poland and Italy. Mrs. Merski traces her roots to Italy and Sweden.

**EL NIÑO
HIT
PARKS
HARD,
10-11**



Jamie Rappaport Clark, Director
Janet L. Miller, Bureau Editor

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Fish & Wildlife People

Southwest Region Liaison Honored



John Antonio

ALBUQUERQUE, New Mexico—**John Antonio**, a Native American liaison who helped to coordinate wildlife management on 23 reservations in New Mexico and Colorado, has received the 1998 Chief Sealth Award. The honor was bestowed by the Native American Fish and Wildlife Society, a national organization of tribal wildlife biologists and conservation officers, at its 16th annual conference here.

“The position of Native American liaison is new and extremely important,” said Southwest Regional Director **Nancy Kaufman**. “In a very

short time, Antonio has been very helpful in working with the 92 Tribes in the Southwest Region to conserve tribal trust resources. We have done a great deal of coordination with the Tribes. As we do more, more opportunities present themselves.”

“It is an honor for me to be a Service employee,” said Antonio, “and to continue working to help conserve the fish and wildlife resources that make this Nation great.” A member and tribal councilor of the Laguna Pueblo of New Mexico, Antonio has spent his entire career working with Tribes to promote sound stewardship of fish and wildlife resources. One of the founders of the Native American Fish and Wildlife Society, Antonio has served as a range conservationist for the Bureau of Indian Affairs, a supervisory wildlife biologist for the Navajo Tribal Fish and Wildlife Department, and a wildlife biologist for the Council of Energy Resource Tribes. Antonio received the Outstanding Alumnus Award from New Mexico State University in 1988. As director of the Navajo Tribal Fish and Wildlife Department, he helped establish the first tribally financed and operated fish hatchery in the United States. Antonio joined the Service as a Native American liaison in October 1977.

The San Carlos Apache Tribe hosts the Aug. 5-7 Native American Fish and Wildlife Society's Southwest Regional conference. Page 25

What is man without the beasts? If all the beasts were gone, man would die from great loneliness of spirit. For whatever happens to the beasts, also happens to man. All things are connected.

Chief Sealth, Duwamish Tribe (1855)

These words are engraved on the Chief Sealth Award, which the Native American Fish and Wildlife Society presents annually to honor outstanding contributions toward the preservation, protection, and conservation of fish and wildlife. Chief Sealth, often called “Chief Seattle,” was known for his regard of the spiritual importance of ecological balance.

ACCESS FOR ALL



Supporters of the Service's Patuxent Research Refuge in Laurel, Maryland gather for the official dedication of the Cash Lake Wildlife Viewing Blind, which is universally accessible for visitors with disabilities. Funds and labor for building the blind were donated by The Wal-Mart Foundation, Sam's Club of Laurel, Maryland, and the Telephone Pioneers of America, Alexander Graham Bell Chapter 15. The ribbon-cutting took place on Earth Day, during which the refuge's two cooperating associations—The Friends of Patuxent Wildlife Research Center Inc. and the Meade Natural Heritage Association—were recognized for their support of the refuge.



PATUXENT

Above, a bronze sculpture entitled Timber Wolf Family was recently donated to the Patuxent Research Refuge by Mrs. Dorothy Blair, at right. Accepting the gift is Susan McMahon, center, the refuge manager, who is joined by William Turner, left, the sculptor. The work welcomes visitors to the National Wildlife Visitor Center at the refuge's Laurel, Maryland, site. The refuge also recognized its Partners for Wildlife, volunteers, and private-sector supporters during Earth Day activities. At right, Scott Johnston, Endangered Species Office, and Jim Fowler, NBC wildlife correspondent, gave presentations on the biology of timber and arctic wolves.



Photos by Linda Garrett



Dr. Mamie Parker

Parker Named Special Assistant

Dr. Mamie Parker, a career employee who has worked for the Service in Regions 1, 3, and 4 for 20 years, was recently selected as special assistant to the deputy director. In her new position, Parker will work closely with the deputy director, director, members of the Directorate, and others, providing support, advice, and recommendations on natural resource and administrative issues.

Prior to coming to Washington this past April, Parker worked in the Atlanta Regional Office with the Fisheries, Refuges, and Ecological Services field stations as the deputy assistant regional director and supervisor for Ecological Services offices in Arkansas, Louisiana, and Mississippi since June 1996. She had dual responsibilities in this position, serving also as the deputy assistant regional director for Fisheries in the Service's Southeast Region.

Parker holds a B.S. in biology, M.S. in aquatic biology, and a Ph.D in limnology. In addition to her academic training, she acquired a wealth of experience in fish and wildlife management while working in many of the Service's field offices. She started her career at field stations in the Fisheries program. Parker also has extensive experience in the Ecological Services program where she spent a number of years.

Smith is Deputy Assistant Director

In a move that surprised everyone and no one, **Anne Badgley**, the acting assistant director for External Affairs, announced June 24 that **Michael L. Smith** has accepted the position of deputy assistant director for External Affairs. A career communicator in the Service, Smith served as both acting assistant director and acting deputy assistant director for External Affairs in recent months.



Michael L. Smith

Smith came to the Service in 1975 as a public affairs specialist and rose to become deputy chief of public affairs. In 1990, he went to the Mountain-Prairie Regional Office in Denver as the regional public affairs officer. That title was changed to assistant regional director-External Affairs. In 1996, Smith returned to the East Coast as chief of the Division of Education and Outreach at the National Conservation Training Center in Shepherdstown, West Virginia.

BOWIE BAYSOX HONOR PATUXENT VOLUNTEERS

Patuxent Research Refuge volunteers are hosted by the Bowie Baysox, a AAA team affiliated with the Baltimore Orioles, at Prince George's Stadium during Volunteer Recognition Night. The volunteers were honored on Earth Day for donating more than



35,000 hours of service, welcoming visitors, maintaining refuge facilities, and converting more than 8,000 acres of former military property into wildlife habitat. The top two volunteers were Steve Noyes and Jean Whitney.

BIRDS OF A FEATHER

Threatened Eiders Hit by Spring Storms in Bering Sea

Bruce Batten

ST. LAWRENCE ISLAND, Alaska—Despite the release of six spectacled eiders that had been nursed back to health, Service biologists remain puzzled and concerned by the rare duck's continued decline in the Bering Sea ecosystem and fear that El Niño storms have worsened the status of the threatened species.

"These eiders should be coming off their wintering grounds with the fat content of gourmet ice cream," said **Gred Balogh**, a Service biologist who brought the recovered birds here to the small Eskimo coastal village of Savoonga for release. "But for some reason, they are showing up with less fat than a small frozen yogurt."

Balogh noted that spring storms in the Bering Sea were especially relentless this year and may have grounded birds away from their ocean-borne food. During winter, spectacled eiders travel to open spaces of water on the frozen sea, where they dive as deep as 150 feet for their diet of small clams, fish, and other marine animals. By June, they usually move to mainland nesting grounds in coastal Alaska and Russia.

According to other Service biologists, El Niño-related sea conditions could be causing the recent deaths of many species of sea birds off the coast of Alaska. These same oceanic changes may have contributed to the eiders' condition. Eskimo walrus and seal hunters from Savoonga reported seeing groups of dead eiders on the sea ice miles away from the village soon after the storms lifted.

But the precipitous decline in the population of the spectacled eider pre-dates current El Niño conditions, Balogh explained. The Alaska nesting population of spectacled eiders has plummeted more than 90 percent in the last 20 years, prompting the Service in 1993 to list the rare duck as threatened under the Endangered Species Act.

"I'm elated we were able to save six of these birds. It felt great. But something else is driving their numbers down, something on their nesting grounds or in the Bering Sea," said Balogh. "Unfortunately, shipping half-dead birds to Anchorage for an all-you-can-eat vacation can't solve the bigger problem. The whole story of what's going on with these ducks and the entire Bering Sea ecosystem is still a big mystery with no end in sight," he added.

The six eiders had been found in and near Savoonga several weeks earlier. They were weak, starving, and unable to fly. Local villagers contacted Balogh, who arranged for



Above, Stacey Toolie, center, watches the eider she released stretch its wings as the rare duck prepares for flight. At left, Service biologist Greg Balogh watches as five of the recovered ducks take their first steps toward freedom after several weeks of intensive care to restore their fat reserves. Photo by Bruce Batten

their immediate transfer to the Bird Treatment and Learning Center in Anchorage. Center staff and volunteers fed as many as 50 small fish per day to each duck until they regained enough strength to return to the wild. Alaska Airlines donated transportation for the sea ducks, which were carried in specially modified kennels.

Balogh, who transported the sea ducks from Anchorage to Savoonga, gave the students of Savoonga School a brief biology lesson on the birds before they were released on May 19. In a happy finale to their last day of school, six students who had perfect attendance during the school year helped release the six eiders on the snow-covered, ice-bound beach next to their school.

Several dozen parents, teachers, students, and other villagers watched as the eiders casually ambled on the snow, stretched their wings, and preened their feathers, composing themselves for flight after weeks of captivity. All cheered when the eiders finally took to the air for their home on the Bering Sea, which was still largely covered with ice. "I was so relieved when they finally jumped up from the snow and flew off on their own. They looked very strong and headed right for the open water," said Balogh.



Catching Crows, and Other Tales from India

Mary Maruca

Once upon a time, the old stories tell us, humans and animals lived as one. Even when we became separate, the animals continued to visit our dreams. Now we tell our children stories of those distant days as entertainment for a dark winter's night.

But there are those to whom the animals still come. **Ali Hussain** is one. This lithe Indian man, a bird-trapper from the Muslim tribe of the Mirshikars, was young when he first learned how to catch birds with traps made of light-weight sticks and twine. In those days, Hussain caught birds for sale. But when he went to work for the Bombay Natural History Society in India, he refocused his traditional skills to help ornithologists capture and tag such birds as the endangered Siberian crane. It was through grant projects with the Bombay Natural History Society that the Service became aware of Hussain.

The Office of International Affairs' India program had worked with the Bombay Natural History Society since the late 1970s. Hussain's phenomenal ability to capture birds without harming them caused Service employees to dream their own dreams: what if Hussain's simple traps could snare birds more successfully than the less mobile high-tech equipment of the experts? And what if the Service could record Hussain's indigenous techniques,

which, otherwise, would die out after his sons' generation? And what if Hussain actually came to the United States? Would wildlife personnel here be interested in having him share his knowledge?



Four years ago, **Scott Hereford** of Mississippi Sandhill Crane National Wildlife Refuge, first notified the Office of International Affairs that he was interested in Hussain's work. And in January of this year, the bird catcher and his son, **Mehboob**, began their month-long instructional tour of the United States, visiting Hawaii, California, Texas, Mississippi, Wisconsin, and Washington, D.C.

They demonstrated their techniques at Hawaiian Islands National Wildlife Refuge and Volcano National Park in Hawaii, at the San Diego National Wildlife Refuge Complex in California, Laguna Atascosa National Wildlife Refuge in Texas, Mississippi Sandhill

Crane National Wildlife Refuge in Mississippi, and the International Crane Foundation in Wisconsin. They completed their U.S. visit with a final stop in Washington at the headquarters office.

They brought a variety of devices to demonstrate, including their snake trap, clap traps (large and small), banana leaf crow trap, large tripod trap for herons, small tripod trap for waders/shore birds, forked trap for eagles and harriers, leg nooses for wetland or grassland birds, and even the gong, grass torch, and throw net used for night capture. They also brought the knowledge and skills that allow them to use about 100 different capture techniques.

At Mississippi Sandhill Crane National Wildlife Refuge, Hussain demonstrated the effectiveness of the leg nooses and the large clap trap. About 25 to 100 nooses were connected in lines, disguised by the grass the birds moved through to feed. The nooses work like slip knots. When the bird's foot enters, the noose tightens as the bird moves forward, but then it relaxes if the bird steps back. The nooses are inserted into the ground on small sticks. The clap trap and nooses succeeded so well that the refuge bought them from Hussain after he had used them to capture several wild cranes that had eluded staff biologists.

In Washington, the father-son team gave its final demonstration in the United States to an avid audience of biologists. "What is the most difficult bird you have ever captured?" Mehboob was asked. Wind blowing his dark hair, he revealed a smile that harked back to past competitions: "The black-necked stork," he answered. "Trappers have been killed by these storks because their beaks are so dangerous. Yes, the black-necked stork, so handsome and so smart. It doesn't fly when it attacks. It stands and fights. It goes straight for the belly." Mehboob said he preferred the black-necked stork, but explained that his father enjoys them all. Together they have captured some 650 different species of birds—about half the total number of bird species in India.

"Is there a different trap for every bird?" someone asked. "For some," Mehboob answered again. "Especially for the crow. The crow is a very intelligent bird. You have to be clever to catch a crow." In India, Mehboob explained, he and his father use a special trap made of a banana leaf for crow catching. The spine of the bamboo leaf is hollowed enough to insert a stick coated with resin. Then food for the crow is attached. When the crow comes to eat, the bird springs the resin-coated stick, which catches its feathers.



Ali Hussain demonstrates a large clap trap at San Diego National Wildlife Refuge Complex. Photos by Meenakshi Nagendran

Bureau of Land Management



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The Horse Gentler

Maxine F. Shane, External Affairs, Nevada State Office.

LAS VEGAS, Nevada—**Bryan Neubert** is not a fictional character like Tom Booker, who is played by Robert Redford in *The Horse Whisperer*. But part of film critic Roger Ebert's description of Booker fits Neubert perfectly—"The *Horse Whisperer* is about a man of great patience."

"I don't consider myself a horseman, but a student of horsemanship," said Neubert, who grew upon a ranch in Alturas, California. "I've always liked fooling with horses, and I'm blessed to be able to make a living gentling and training horses."

Neubert began working with horses as a child. He rode horses, started colts, and listened to neighbors and horse trainers who were finding success with gentle training methods, rather than breaking the horse and its spirit. By 1992, Neubert's talent with training horses was local, common knowledge. His vacation time and weekends were booked as he began to run clinics for those wanting advice on how to understand their own horses.



Bryan Neubert is an accomplished horse gentler who travels the West helping people understand and train their horses without breaking the animal's spirit.

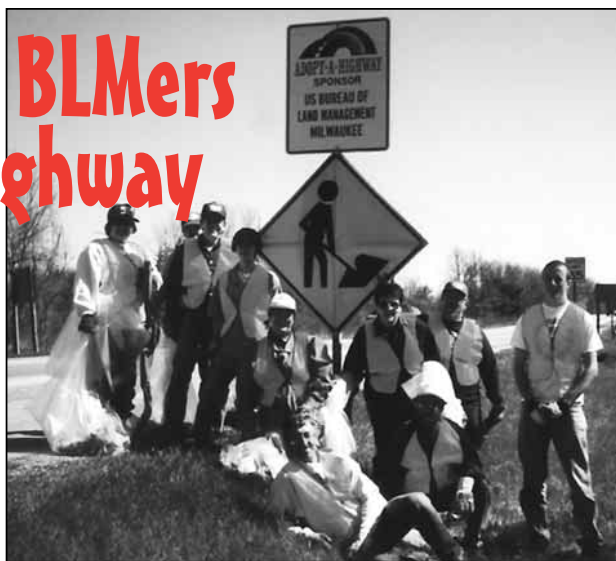
with the release of books and movies on gentling horses, he doesn't want to be branded as the disciple of any one trainer. "Training is a personal thing," he explained. "It's timing. It's complex. It's fun and gets easier all the time. It's kind of like teaching someone to rope. You can show someone how to rope, but they can't just go rope like you do. It's an accumulated thing. You have to develop it. The feel has to be there."

BLM's sponsorship of Neubert at the National Wild Horse and Burro Show in Reno, Nevada was the fifth time that he's appeared there. He has also shared his gentling techniques at the BLM's Mid-Continent facility in Nebraska, plus several adoptions in California. Soon he'll travel to Texas to share his knowledge with wild horse adopters.

With his spring-through-fall traveling schedule, Neubert finds less time to work with his own colts and horses at the Alturas ranch. The family works with 20 horses a day during the winter months. There may be a legacy: Neubert's 17-year-old son has struck out on his own, gentling and training horses.

Milwaukee BLMers Adopt-A-Highway

The Milwaukee Field Office's Road Gang included, from left, Sherry Dryden, Jeff Nolder, Jim Dryden, Boone Dryden, Carol Van Ryzin, "Cool Hand Luke" Chris Hanson (reclining), JoAnn Marean, Singh Ahuja (kneeling), Vince Marean, and Nick Hanson.



Jim Boylan, Milwaukee Field Office, BLM, Eastern States

MILWAUKEE, Wisconsin—"Cool Hand Luke" **Chris Hanson**, the assistant manager for BLM's Milwaukee Field Office, led a BLM "Road Gang," in cleaning up a 2.2 mile Adopt-A-Highway section of Loomis Road in Franklin, Wisconsin. The May 21 cleanup day was originally scheduled for a month earlier, but due to the heavy spring rains, the crew was not able to complete the job. The rescheduled clean-up was also washed out. Finally, the staff caught a break in the weather and with the aid of a few more hardy BLMers, finished the task. It took seven hours to clean the section of designated highway that the office adopted, but it was well worth the effort. Wisconsin's Department of Transportation expressed its gratitude to the "Road Gang" for a job well done!



Tim Finchem, right, commissioner of the PGA TOUR and chairman of the World Golf Foundation, and BLM Director Pat Shea sign an agreement that will provide more opportunities for minorities and youth interested in careers with the U.S. golf industry.

Teeing Off for Youth & Minorities

Minorities and young people interested in the golf industry, especially those concerned with the sport's environmental issues, will have more career opportunities as a result of a Bureau of Land Management agreement with U.S. golfing associations.

BLM Director **Pat Shea** signed the Memorandum of Agreement with **Tim Finchem**, commissioner of the PGA TOUR and chairman of the World Golf Foundation, in the nation's capital on June 3. The signing came as the world's leading golfers prepared for the PGA TOUR Kemper Open at nearby Avenel in Potomac, Maryland.

"This agreement will help bring one of the most wholesome, character building, outdoor recreation activities to a more diverse America in a fashion that is environmentally friendly," said Shea. Finchem, noting that the BLM has a world class outdoor recreation program, said the partnership is "extremely important to our efforts to identify locations for the development of First Tee facilities. The BLM has been a strong supporter of golf and shares The First Tee's vision of creating golf facilities that provide affordable access for everyone, with a special emphasis on youth and minorities." The First Tee program is designed to help make the game of golf more accessible to youth, particularly those from inner cities.

BLM can lease or provide title to federal lands to governmental entities at no cost when those lands are used for recreational or public purposes, such as golfing. Historically, the BLM has been one of the most golf-friendly agencies in the Federal Government. Over the last 43 years, BLM has helped with the development of 40 golf facilities around the nation, including courses in Phoenix, Arizona; Las Vegas, Nevada; Albuquerque, New Mexico; Portland, Oregon; St. George, Utah; Santa Fe, New Mexico, and Bismarck, North Dakota. These BLM initiatives are authorized under the Recreation and Public Purposes Act of 1954.

BLM's agreement with First Tee bolsters a national public golf initiative supported by a host of organizations, including the PGA TOUR, LPGA, PGA of America, Augusta National Golf Club and The Tiger Woods Foundation.

By George, It's Simply Revolutionary! Land Patents Researched on the Internet

Cathy Rodine, Office of External Affairs, Eastern States

SPRINGFIELD, Virginia—Family historians, professional and amateur genealogist, as well as commercial land title researchers will want to bookmark a new BLM website that contains a wealth of historic federal land patents issued by the BLM's predecessor, the General Land Office.

The database lists U.S. land patents issued prior to 1908 in the states of Alabama, Arkansas, Florida, Louisiana, Indiana, Michigan, Minnesota, Mississippi, Missouri, Ohio, and Wisconsin. It can be accessed at <http://www.glorerecords.blm.gov> Visitors can search the database by state, select a record, and view the corresponding land patent. A certified copy of the land patent can be ordered for \$1.50 from BLM, Eastern States. The website has enjoyed tremendous success since it made its cyberspace debut on May 1. Visitors span the globe, from New Jersey to California, from Australia to the United Kingdom. More than 3.5 million pages were accessed during its first month of operation.

Federal land patents are important to land title researchers as verification that a parcel of land left federal ownership. Land patents are the official documents that transfer land from the Federal Government to private citizens for the first time. Family historians and genealogists also use the information on land patents to find dates and places where ancestors may have settled. BLM Eastern States, as the successor agency to the original General Land Office, inherited more than nine million land records—survey plats and field notes, homestead certificates, military warrants, and cash patents. These historic documents were among the first land records to develop from the Land Ordinance of 1785, which authorized the U.S. Treasury Board to sell public lands for revenue. The databases for most of these land records are also available on compact discs (CD ROM) from the Government Printing Office for \$15 each. Complete information may be obtained from the BLM, Eastern States GLO Access Section at (703) 440-1600.

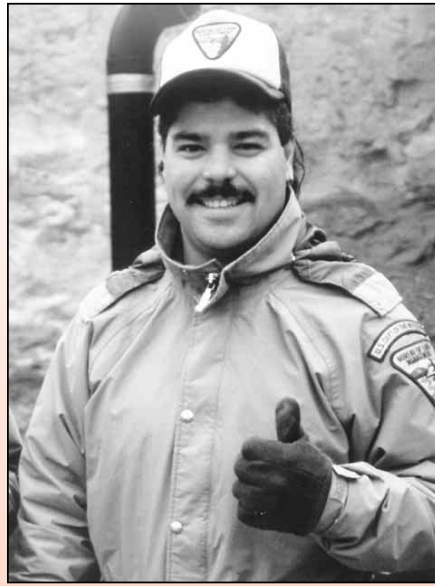
UTAH BLMER HELPS CHILD INJURED IN FALL

Michelle C. Goodwin

SALT LAKE CITY, Utah—**John Larsen** is not a stranger to work under pressure. His job as coordinator for mapping sciences for BLM's Utah State Office requires him to develop legal surveys, collect natural resource data, map fire perimeters, and travel to remote field sites with his equipment. He is especially adept at using the satellite-based Global Positioning System for precision mapping.

But Larsen used his mapping gear for higher purpose and went well beyond the requirements of his job when he was called on to help **Tami Reid**. The four-year old girl had fallen off an arch in the Devil's Garden picnic area of the Grand Staircase Escalante National Monument.

Larsen was setting targets for an aerial photography contract when Tami's two brothers told him about the accident. Without hesitation, Larsen went to the location and found Tami lying on the ground with what appeared to be a broken leg. He immediately made a stretcher out of his survey lath and tape.



John Larsen found a higher good for mapping equipment.

While Tami's grandparents helped her onto the stretcher, Larsen supported her legs. Larsen then eased her injured legs onto the stretcher, tied his sweatshirt around her legs and his shirt around her torso, securing Tami to the stretcher, stabilizing the frightened girl, and making her more comfortable while she was transported to the hospital.

"My main concern was not to do anything but provide safety for her," said Larsen. "As I began to help her, I tried my hardest to stay calm. After she was carried to the hospital, I started to show emotion." Larsen kept in contact with Tami's family to get updates on her condition. He learned she had a fracture and would have to wear a half-body cast with two pins in her injured leg.

However, she is doing fine and is enjoying the coloring books Larsen gave her when he visited. "When I first saw her cute face, I couldn't help getting involved," said Larsen. "I am glad she is doing all right." Larsen doesn't consider himself a hero. "No, I'm just happy I could help."

Oregon Trail Tenders Honored

Shirley Baxter and Jeanette Davis

BAKER CITY, Oregon—There are more than 150 of them, ranging from teens to seniors, students to retirees, and they have donated more than 138,000 hours of time and \$1 million in goods and services over the past six years. From the day the Oregon Trail interpretive center opened to the public in 1992, the Trail Tenders have helped to bring the story of the trail era to life for more than a million visitors from across the nation and around the world.

"In the true spirit of a partnership, the Trail Tender volunteers have supported the center every step of the way," said **David Hunsaker**, director of BLM's National Historic Oregon Trail Interpretive Center. "And they continue to work with us on a daily basis to welcome the public, operate the Oregon Trail shop to fund projects and programs, and provide interpretive presentations and special exhibits." The group also hosts the center's annual special events, such as the highly successful Pioneer Heritage Festival, Holiday Open House, and National Trails Day, Hunsaker noted.

The key role that Trail Tenders play in support of visitor services and educational programming has captured the attention of national and state organizations. The National Society of the Daughters of the American

Revolution presented its annual Excellence in Community Service award to **Bob Williams**, president of the non-profit Trail Tenders, Inc. The ceremony took place at the State DAR convention in Wilsonville, Oregon, in March.

The group also received the prestigious Oregon State Tourism Commission award for consistently demonstrating the highest caliber of hospitality and customer service to visitors. Williams and Hunsaker accepted the award on behalf of the volunteers and staff of the center. The presentation was held at the Governor's Conference on Tourism in Portland, Oregon, in April.

"The credit surely goes to all the volunteers who make a visitor's experience at the Interpretive Center one to remember and cherish for a lifetime," Williams said. Williams' leadership and personal commitment were noted by Hunsaker in applauding the group's achievements and recognition. "Bob routinely gives generously of his time and talents in keeping the administrative wheels of the Trail Tender association rolling smoothly," Hunsaker said.

The center is located five miles east of Baker City on Oregon Highway 86. For more information, call (541) 523-1843. Information is also on the center's website at <http://www.or.blm.gov/NHOTIC>



At right is Dave Hunsaker, the director of the National Historic Oregon Trail Interpretive Center. At left is Bob Williams, president of Trail Tenders, Inc. Among his other duties, Williams pitches in on special projects such as attending heavy-equipment auctions in search of historic mining equipment for restoration projects, gathering pine greenery in the snow-covered Elkhorn Mountains for pioneer Christmas celebrations, and supporting the Oregon Trails Education Project during field day training sessions.

A GOOD TURN FOR THE BETTER

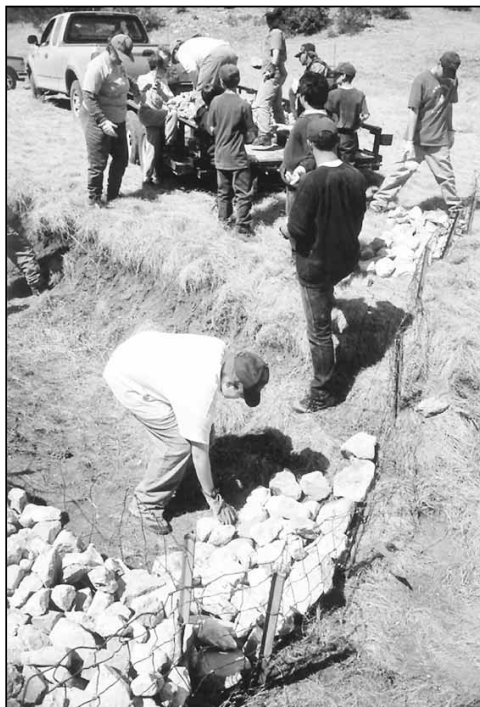
Gailanne Dill

FORT STANTON, New Mexico—In the distance, the snow-capped Sierra Blancas and the foothills of Captain Mountain range presented a stunning backdrop. The night before, the temperature had dropped to 22 degrees. But early on a Saturday morning, before most people to get out of bed, the volunteers gathered with caps on and gloves in hand, ready for a day of hard, physical labor.

"Remember the first rule of Scouting?" the coordinator asked the assembled work force. "Be prepared!" came the resounding response from more than 300 Scouts and leaders who had come to the BLM's 26,000-acre Ft. Stanton Special Management Area for Conservation Good Turn.

The Scouts of the Conquistador Council spent the day cutting loose and rolling up a mile of unneeded wire fence along the Rio Bonito, clearing 15 acres of invading juniper, pruning and caring for 10 acres of apple orchards, and building two seriously needed erosion control structures to protect the land for years to come.

"The value of the work done by these Scouts was \$15,500 in donated labor," said **Howard Parman**, a public affairs specialist for the BLM Roswell District who



Boy Scouts and leaders of Roswell, NM Troop 72 pile rocks in an erosion control structure. Photo by Jim Pettengill.

coordinated the project. "What a great accomplishment and benefit for our public lands! That is what happens when you have Scouts involved."

The volunteers included Boy Scouts, Cub Scouts, Webelos, and Explorer Posts from Roswell, Clovis, Protalos, Carlsbad, Hobbs, Mescalero, and Dexter. "This gives the Scouts an opportunity to meet BLM specialists and learn important lessons in a classroom of rangeland, rolling foothills, and the magnificent blue sky of New Mexico," said Parman, who earned Boy Scouting's highest rank—Eagle Scout—when he was 15. "And it can kindle an interest in future careers. We want them to know that there are tangible things you can do to make a difference."

Joe Torrez, a BLM hazardous materials specialist, was one of the teachers. "See this branch here? It's in the way. It's not serving a purpose so you can take it off. Cut it as close to the trunk as possible," Torrez instructed a group of Scouts. "What you are trying to do is open up the tree to allow the sunlight to come in so the apples will grow. You've seen

trees that are cut off at the top—that's the wrong way to do it."

The Scouts busied themselves with their loppers and saws, pulling the cut down limbs to collection area. A few miles away, Scouts worked with BLM wildlife biologists to cut down and remove invading juniper which was becoming a fire hazard. Meanwhile, rock brigades in two separate locations built structures stone by stone to catch sediment and build the soil back up along gullies that had been cut into the earth by runoff and flooding.

"The day's projects will have a lifetime effect on the land and perhaps on the Scouts themselves," said **J.P. Cheney**, the scoutmaster of Troop 17. "They are learning something about conservation. They are also learning that you don't do everything just for yourself, sometimes you go out and do things for others."

"These are the kinds of things I remember growing up as a Scout," recalled **Mark Maciha**, the assistant scoutmaster for Carlsbad Troop 288. "It gets everybody together, working as a team and taking care of some needed work the BLM can't do." "It's cool," said 12-year-old **Kyle Lindsey**, a Boy Scout with Troop 19 from Dexter. "I've learned how to bale wire and cut down fences and how to keep on working and not get hot."

This is the third year that the scouts from Conquistador Council have volunteered for *Conservation Good Turn*.

The hours from this year's project are part of a commitment of 200 million community service hours by the year 2000 that the Boy Scouts of America made at the President's Summit for America's Future last year.



Kevin Gover, Assistant Secretary
Gloria T. Mora, Bureau Editor

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BIA Whiz Honored



Sarah Hicks, a new BIA employee who has a Master of Social Work in Social and Economic Development, is the first Indian student to receive the Dr. Clara Louise Myers Outstanding Practicum Student Award. Photo by Gloria Mora, BIA

Louise Myers Outstanding Practicum Student Award in the field of Social and Economic Development. The award lauded her exceptional skills in professional social work, including leadership, sensitivity to diverse clients, and ethical behavior that characterized an exemplary professional social worker. Sarah was nominated for the award by **Deborah Maddox**, the director of the BIA's Office of Tribal Services.

The award also reflects the successful collaboration between the Brown School and the BIA. **Dr. Eddie F. Brown**, the director of the school's Kathryn M. Buder Center for American Indian Studies and the associate dean for Community Affairs, provided guidance and directed Sarah's practicum, acting as her field instructor during her summer placement with the BIA. Under the tutelage of Brown, who is a former assistant secretary of Indian Affairs, Sarah was the first student from the school to work with the BIA. Social Services Chief **Larry Blair** and colleague **Edie Adams** also helped Sarah to learn BIA policies and procedures.

After graduating from the Brown School, Sarah accepted a permanent position with the BIA as a child welfare specialist. Thanks to the support of the Office of Tribal Services and Ms. Maddox's willingness to take other interns from the Brown School, more students will follow in Sarah's footsteps. The Office of Tribal Services has already accepted **Robert McGee**, a Brown School student and enrolled member of the Poarch Creek Indians of Alabama, for a three-month internship as a social services assistant.

Sarah Hicks, who spent last summer with the BIA as a social services intern, is a model of effective federal-university collaboration. She also is a dynamic and productive employee.

While taking a break from her Master of Social Work studies at George Warren Brown School of Social Work (an affiliate of Washington University in St. Louis), Sarah gained valuable experience with the BIA last year, writing Congressional reports, attending hearings, providing comments on proposed federal legislation, revising federal regulations, drafting federal budget justifications, and identifying program performance goals. She also represented the BIA in working with the Department of Health and Human Services and the Small Business Association on the impact of welfare reform in Indian communities.

Sarah accomplished a great deal in three months and those achievements were recognized at the Brown School's May 15 graduation, when Sarah became the first Indian student to be awarded the Dr. Clara



The Muskogee Area Emergency Response Team includes, from left, in front row: Johnny Durant, BIA; Tracy Brown, BIA; Wyatt Williams, Choctaw; Randy Wesley, BIA; in back row, Gary Cunningham, BIA; Keith Phillips, Wyandotte; Ron Teel, Osage; Robert Morrison, Choctaw; Shawn Green, Cherokee; Richard Fixico, Creek; Bill Neely, Wyandotte.

Muskogee Area Tribes Form Emergency Response Team

MUSKOGEE, Oklahoma—Tribal and Bureau of Indian Affairs police officers in the area are forming an Emergency Response Team that can provide enhanced security during public emergencies, natural disasters, and special tribal events. The grass-roots effort has been unanimously approved by all of the tribes that operate their own law enforcement programs in the Muskogee area, according to **James E. Fields**, the acting director of the BIA's Muskogee Area.

Tribal and BIA agencies participating are the: Choctaw Nation, Creek Nation, Cherokee Nation, Osage Nation, Wyandotte Nation, Chickasaw Agency, Wewoka Agency, Muskogee Area, and the Miami Agency. The initiative builds on an idea proposed by Chickasaw Agency Superintendent **Bob Impson**, who cited the Oklahoma City bombing, the potential danger and property damage associated with living in tornado alley, and the need for increased security at tribal events and meetings as the major reasons for forming the team.

"This cooperative effort is an example of the outstanding relationship that exists between the Muskogee Area/Agencies staff and the tribal governments," said Fields. "All eligible tribes have elected to participate in this effort." Each tribe and BIA agency has designated a primary and alternate member to make up the team, which will operate under the supervision of the area director. The team will work in cooperation and coordination with the local tribe/agency to provide a visible law enforcement presence with full arrest authority.

"Almost all the area's tribes have annual meetings and festivals that stretch their law enforcement resources to the limit," Fields explained. "Tribes and agency superintendents are always agreeable to helping each other; this effort formalizes this cooperation and provides the authority for the officers to do their job." Working directly with the Tulsa Regional Solicitor's Office, each tribe is being asked to pass a resolution and sign a mutual-aid agreement that allows officers from other jurisdictions to enforce tribal law when operating as a member of the Emergency Response Team in that tribe's jurisdictional area. Under this agreement, ten police officers will be available to be called out by the area director should the need arise.

"Each of the team members is a certified, full-time tribal or BIA police officer," said **Randy Wesley**, a criminal investigator who serves as field supervisor for the team. "We are meeting monthly for training and weapons qualifications that prepare the team for the type of situations it will face." Team members use their own equipment and must be available to travel within a two hour call-out request.

GAINS INTERNS DEVELOP REAL LIFE SKILLS

Students from the University of New Mexico's Native American Studies Department are making GAINS in the nation's capital this summer. They are part of the Government Academic Internships for Native Students program that helps them to achieve academic excellence, gain first hand knowledge about government to government relationships, and test their skills in real life situations.

Known as GAINS, the new ten-week program places the students as interns at various Federal Government worksites in Washington, DC. until Aug. 7. While they gain valuable work experience, the interns earn six hours of credit from the university. Working together, they are required to write papers on sovereignty, Indian education, economic development, media and national organizations, and social and health care issues. The students will also write a grant proposal and make a formal presentation about their individual contributions to faculty members at the university.

The students are: **Kathleen Clark**, Cochiti Pueblo, is a sophomore, majoring in Graphic Design, and hopes to pursue a career in the field of graphic arts. Kathleen is working for the BIA's Office of Congressional and Legislative Affairs. **Christopher Day**, Taos Pueblo, is an intern with the BIA's Office of Indian Education Programs. He is a junior, working on a degree in Business Management. Christopher uses his skills to enhance projects and goals for the office.

David Gaussion, Picuris Pueblo and Navajo, is an intern for the Office of American Indian Trust in the Department of the Interior. David is a junior, pursuing a degree in marketing. **Tawa Mildren**, Western Cherokee Nation, is a junior, studying Media Arts. Tawa plans to produce documentary films that will focus on issues relevant to Native American communities. She is interning with the National Crime Prevention Council, producing media materials that focus on teaching youth about crime prevention.

Mavis Smith, Navajo Nation, is working for the Office of Educational Research and Improvement in the Department of Education. With a degree in Psychology and a minor in Human Services, Mavis plans to attend graduate school and continue her academic pursuits in psychology.

The Native American Studies Department aims to provide the future leaders of sovereign native Nations the skills and experiences they need to be effective in their communities. **Dr. Lee Francis**, the interim director of the department, created the GAINS program in response to an agreement between the Tribes/Nations in New Mexico and the university. For more information, contact Native American Studies Department, UNM, Mesa Vista Hall #3080, Albuquerque, NM 87131, Call: (505) 277-3917; Fax: (505) 277-1818.



GAINS interns visit the Capitol during a Congressional tour. From left, Mavis Smith, David Gaussion, Tawa Mildren, Kathleen Clark, and Christopher Day.

INDIAN MURALS RESTORED AT INTERIOR

The world's largest collection of American Indian murals by noted 20th century Indian artists was rededicated at the Main Interior Building in a ceremony led by **Assistant Secretary Kevin Gover**, a member of the Pawnee Tribe.

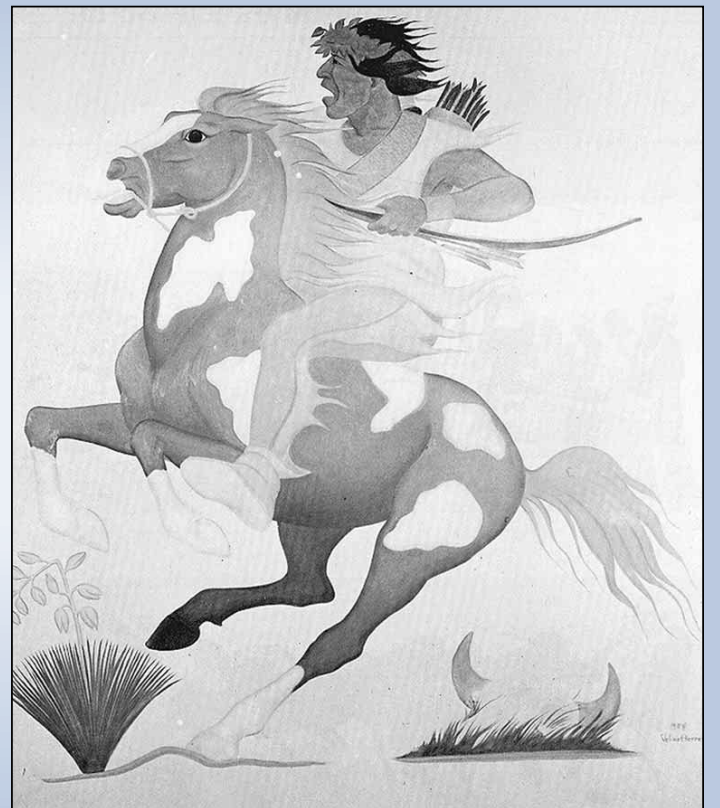
The event celebrated the completion of a million-dollar face lift that uncovered and restored artwork that had been lost for more than a decade. On cream colored walls, the pastel and brightly colored murals depict American Indians hunting deer and buffalo on horseback, women preparing yarn for blanket weaving, braves capturing wild horses, and other scenes from traditional Indian life.

The conservation project, which began in 1995, removed several layers of paint that had covered the murals since the 1970s, and restored original colors that had faded from heat and light. The work in the South Penthouse on the 8th Floor also installed a climate-control system to ensure the preservation of the murals. Historic elements of the room, including the ceiling, lighting, and the floor, also were restored.

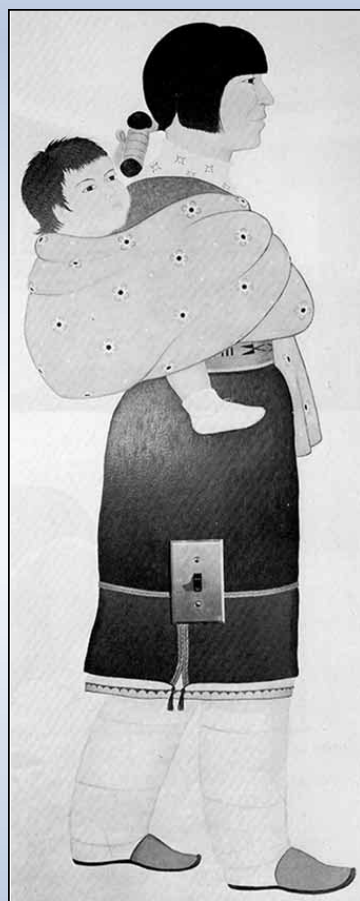
The murals are available for employee and public viewing, weekdays from 11 a.m. to 2 p.m. Tours can be arranged through the Interior Museum. Call (202) 208-4743.

Soon after the building was completed in 1936, then **Secretary Harold L. Ickes** commissioned the murals from a group of renown Indian artists, including **Woody Crumbo**, Citizen Potawatomi and Creek; **Velino Shije Herrera**, Zia Pueblo; **Allan Houser**, Apache; and **Gerald Lloyd Nailor**, Navajo. The murals in the penthouse and elsewhere in the building were part of the New Deal art revitalization project. Three dozen murals, including those in the penthouse, covered 2,200 square feet. Interior's Indian artwork was the largest and most prestigious government commission awarded to Indian artists.

Following Secretary Gover's remarks, **Jerry Cordova**, of the Office of Self Governance, bestowed an Indian blessing that reflected the feelings of many at the May 21 event: "We ask that you bless the spirits of the artists so that future generations can experience the beauty of Indian life. We ask that you grant that there will be a place in the hearts of the people of this great country for the first inhabitants of this country."



Assistant Secretary Kevin Gover, above, led the rededication ceremony for the American Indian murals. Above right and right, murals of horseman and mother bearing child by Velino Shije Herrera.



INTEGRATING TRADITION

LACEY, Washington—The design and construction of **Wahelut Indian School**, a BIA pilot project for the **Franks Landing Indian Community** of the Portland area, demonstrates the ability to create a contemporary educational environment while respecting the traditional values. The school's learning spaces feature generous southern exposure allowing light, sky, and views of the **Nisqually River** to penetrate the interior and enhance the environment. The design also features the eagle and the turtle, two important Native American spiritual figures, emerging from both the structure and the landscape. Every classroom has adaptable and flexible 21st century electrical and mechanical systems to enhance global interactivity. **Bassetti Architects**, teaming with **Mortenson Construction** in a design-build partnership, worked closely with the community and the BIA on challenges and solutions. The project was completed in 11 months for a budget of \$3.1 million.



SAN CARLOS APACHES HOST FISH & WILDLIFE CONFERENCE

SAN CARLOS, Arizona—A wide array of federal and state agencies joined tribal wildlife biologists and conservation officers at the **Native American Fish & Wildlife Society's Southwest Regional conference** from Aug. 5-7.

The conference was hosted this year by the 10,500 member **San Carlos Apache Tribe** in southeastern Arizona. **Paul Nosie Jr.**, the tribe's director of the **Recreation & Wildlife Department**, said the theme for this gathering was strengthening the government-to-government relationships between Indian wildlife management programs and the federal and state agencies that interact with them.

The conference attracted more than 100 biologists and game rangers from Arizona, New Mexico, Utah, Nevada, Colorado, and California to the **Apache Gold Casino Resort**. They met with federal and state agency delegates to network and join in events such as the annual conservation officers' shooting competition.



The agenda included three days of discussions on topics of wildlife and fisheries management, law enforcement, natural resources, and education. The agenda also included discussions about reintroducing the Mexican gray wolf near the Arizona-New Mexico border and efforts to restore Apache Trout to mountain streams across the **White Mountain Apache reservation**. Of interest to conservation officers will be an in-depth analysis of the cooperative effort between tribal, state, and federal law enforcement officers that brought prosecutions of three men who poached elk from the **Jicarilla Apache reservation**.

Events at the annual **Native American Fish & Wildlife Society** conferences included a formal dinner followed by a popular fundraising auction of items ranging from Native and wildlife-theme art to trophy hunting permits and sporting equipment. Another night featured a traditional feast prepared by the host tribe. Other events may include field trips and reservation tours, an archery shoot, and a fishing derby.

The society is a tax exempt public charitable organization. For more information, call society president **Arthur 'Butch' Blazer** at (505) 671-4271 or the society's business office at (303) 466-1725. Inquiries by mail may be sent to the **Native American Fish & Wildlife Society**, 750 Burbank Street, Broomfield, CO, 80020. Information also is online at the www.nafws.org

John Antonio, a member of the Laguna Pueblo of New Mexico, and a founder of the Native American Fish and Wildlife Society received the 1998 Chief Seal Award for his work in promoting the sound stewardship of tribal fish and wildlife resources. Story, page 20.

THE NATIVE AMERICAN FISH & WILDLIFE SOCIETY

The society was incorporated in 1983 and has its national office in Colorado. Southwest regional members include the **San Carlos, White Mountain, Mescalero, Jicarilla, and Fort McDowell Mohave Apache Tribes; Hopi Tribe; Southern Ute, Ute Mountain Ute, and the Ute Indian Tribes; the Summit Lake, Pyramid Lake, Fort Independence, and Walker River Paiute Tribes; Chemehuevi Indian Tribe, Colorado River Indian Tribes, Confederated Tribes of the Goshute Reservation, Ely Tribe, Fort Mohave Tribe, Nambe Pueblo, and the pueblos of Acoma, Isleta, Jemez, Laguna, Pojoaque, San Ildefonso, Taos, Tesque, and Zia; Salt River Pima-Maricopa Indian Community; Santa Ana Pueblo, Santa Clara Pueblo, and the Shoshone Paiute Tribe of Duck Valley.**



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In-Kind Mineral Royalties

The Federal Perspective

Bonn J. Macy

The concept of taking natural resource royalties in-kind is not a new idea. In spite of its current cachet with industry and Congress, it is centuries old. It is the most primitive form of the royalty concept.

More than a thousand years ago when royal land-owners found indentured servitude was not meeting their needs to provide raw materials, they contracted with independent miners. The miners, who were probably the leading entrepreneurs of their day, found the arrangements attractive.

The ancient Greeks, medieval Germans, Saxons, and Normans all took their royal share of mineral production from their lands. The contractual arrangement between royals and the miners was that the miners would be allowed to exploit the royal resources as long as they provided a share of the production to the Crown.

The concept of paying the royal owners with cash for mining their lands is a much more modern construction. As economies grew and progressed, minerals like gold, silver, and copper became more valuable to the crown for what they could buy rather than for their practical uses. Over time, shifting relative costs for labor, transportation, information, market access, and financial transactions probably played a role in the move from in-kind to in-value royalty collection. That is to say, it became easier, more convenient, and cheaper for the King to take cash over production.

Today, both systems can be found in all corners of the world. The United States has long recognized the royalty in-kind (RIK) option. All federal leases contain a provision that allows the Secretary of the Interior to take federal royalties in-kind, though it is rarely done. Over the years, it usually made good financial sense for the government to take cash royalty payments.

Until now. Even the most casual observer will note the dramatic transformations in our economy over the last 25 years: computers, information, automation, telecommunications, financial services, deregulation, as well as the increasing complexity and sophistication of markets, and the commercial enterprises that operate in them. These transformations have also changed the way the oil and gas industry does business today. Transaction costs have declined, and assets can change hands several times a day. Real-time market information is readily available to everyone.

There is no doubt that changes to the economy have shifted the relative costs of activities associated with mineral production, sale, and royalty collection. These economic changes suggest that it is worth taking another look at the way the Federal Government collects its royalties. Indeed, other countries are rediscovering the possibility of in-kind royalties. The RIK programs of the Canadian Province of Alberta, with their crude oil royalty in-kind program, and the Texas General Land office program are two examples.

Has the royalty issue in the United States finally come full circle? Have all the economic factors re-aligned in such a way as to make taking royalties in-kind the efficient choice once again? Maybe. Current conditions suggest that the agency thoroughly examine this issue through analytical study and practical tests.

The Year of the OCEAN
IN THE NEXT ISSUE OF PEOPLE, LAND AND WATER



Taking royalties in-kind is the oldest form of the royalty concept. Pictured here, medieval royals accept their payment in the form of livestock.

Pilot & Feasibility Studies

Since its inception in 1982, MMS has consistently sought to be an active and progressive steward of the federal royalty interest. In keeping with the Administration's goal of re-inventing government, MMS thought that the RIK concept might be an effective way of changing and improving the way the Federal Government does business and should be studied. Given the changes in the economy and our commercial structures, RIK might allow us to do our job more effectively and at lower cost to the taxpayer.

The 1995 Royalty Gas Marketing Pilot was the first attempt to look at the potential benefits of a RIK system. The project tested RIK's ability to streamline royalty collections, improve royalty management efficiencies, and provide greater certainty in royalty collections while achieving revenue neutrality. The pilot was essentially a voluntary collaboration with 14 participating producers that lasted one year. At the end of the pilot's year, MMS estimated the revenue loss at \$4.7 million, or 6.5 percent of revenues.

However, the pilot succeeded in other ways. By taking the in-kind payment concept from academic discourse to practical experiment, MMS learned a great deal about what it takes to operate a successful RIK program. Even though the pilot lost money, the agency still felt RIK had potential to improve royalty management.

MMS continued its analysis by looking at the feasibility of implementing RIK across all federal oil and gas leases. The 1997 RIK Feasibility Study looked at the issue from a macro perspective and focused on isolating the geographical, infrastructural, and commercial conditions that would control a RIK program's success or failure. After extensive research, analysis, and discussion with industry participants, the most significant finding of the study was that RIK could be workable, increase royalty revenue, and be potentially more efficient under the right conditions.

The study found that some of the benefits of a RIK program could come from a reduction in the audit and administrative burden. Reducing the costly appeals

process and the litigation of royalty disputes is an important source of savings. The study also determined that producers would have to continue to place oil and gas production in 'marketable condition' before the federal royalty share was collected. MMS would also need the ability to market aggregated production volumes to customers downstream of the royalty delivery point. However, given the adverse conditions associated with many federal leases—such as tight pipeline capacity, lease geography, small volume leases, and transportation rates—the study indicated that a mandatory RIK program for all federal oil and gas leases was not in the best interest of the taxpayer.

MMS has entered the next phase of its examination of the RIK concept by developing three new pilot programs: a small oil RIK pilot in the State of Wyoming; a RIK pilot covering 8(g) production offshore Texas; and a larger, more complex pilot which would take natural gas from offshore leases in the Gulf of Mexico. ("8g" production occurs three to six miles beyond a state's coastal boundary; the Federal Government shares revenues from these leases with the coastal state under section 8g of the 1978 Outer Continental Shelf Lands Act.) Both Texas and Wyoming have actively expressed interest in pursuing a RIK program in their areas.

A RIK task force consisting of several senior MMS experts was formed to implement the pilots. Representatives from Texas and Wyoming are currently involved with the pilots that concern their states. Specialists from the Bureau of Land Management will also participate and add their expertise and effort. Some of the challenges for all involved include: analyzing lease characteristics and transportation structure in each pilot area; defining the scope of each pilot; analyzing markets and operational issues; and designing the terms and conditions of any contracts.

MMS's objectives in the pilot program are clear: Is RIK an effective and efficient method for collecting the nation's royalty revenue? If so, what is the best way to implement it? As a way to reinvent government, RIK holds great potential. If it can live up to that potential, MMS will have lived up to its reputation as a progressive and innovative agency seeking what's best for the taxpayer.

More Than Meets the Eye

Tina Cox Has Tulsa Office in Good Hands

Michael Baugher

MUSKOGEE, Oklahoma—An office secretary can be easily taken for granted. Good ones work through a variety of daily emergencies and near misses that are usually unseen by others. The best keep the administrative ship on course and running smoothly despite what goes on, invisibly, under the waterline.



Tina Cox

Tina Cox, a native of Muskogee, Oklahoma, is a secretary in the Royalty Management Program's Tulsa Compliance Office. The mother of a five-year old son, she and her husband are avid gardeners. She also collects Barbie Dolls and has more than 40.

"When she came on board, a year ago, it was more than the usual new job, new people event—the office was in the midst of a troubled transition," said her boss, area supervisor, **John Kirkpatrick**. It was a time of sudden and total

change. Everything and everyone was confused. The entire, 17-person office had just moved because the previous one was next to a medical clinic that had been firebombed.

Files were in boxes, the previous secretary and office manager had taken early retirement, and there was no one available to explain the administrative procedures of her position. "But Tina had the background and training to weather the storm," said Kirkpatrick.

She is a U.S. Army combat veteran of operation Desert Storm. As a 55 Bravo Ammunition Specialist, she had been assigned to the 663rd Ordnance Company, which supplied frontline, combat units engaging the Iraqi Republican Guard. She distinguished herself and was awarded three bronze stars for efforts in Desert Shield, Desert Storm, and the Ceasefire.

Life preparation and heroism did not end with her five-year military career. Cox was also an honor graduate of the Federal Law Enforcement Center, in Glynco, Georgia. The training was required for her secretary job with the Federal Bureau of Prisons, maximum security penitentiary in Florence, Colorado.

One day in the office, behind transparent, but bullet-proof walls, Cox noticed commotion in an office a few doors down. A 6-foot, 2-inch, 250-pound body builder inmate had knocked the dentist to the floor and was savagely kicking him. Without hesitation for her own safety, the 5-foot, 6-inch Cox attacked the inmate, effectively distracting the attacker until help arrived. Her quick action saved the dentist's life.

In Tulsa, where she juggles job, family, and caring for an ailing grandfather, she is also the PTA School Board representative. Cox recently obtained a bachelor of science degree in Psychology from Liberty University in Lynchburg, Virginia. She is currently about halfway through her post-graduate work for a Masters in Psychology. And, ever looking to improve life around her, she and her husband are in the process of adopting a special needs child. They hope for the new addition by mid-summer.

"Tina is more than meets the eye, and those of us who work with her are both very impressed and pleased," said Kirkpatrick. "She is prepared for any problems that may arise at MMS. We are in capable hands in Tulsa!"



Steve Waddell, an adjudication supervisor for MMS's Gulf of Mexico Region, has music in his soul and a love of pipe organs that fills his New Orleans church with heavenly sounds. Page 3.

REGIONAL NEWS

ANCHORAGE

CELEBRATING OUTDOOR WEEK

Alaska Region Staff Article

ANCHORAGE, Alaska. How do trees breathe? How do you pan for gold? How does water travel to the ocean? How do you figure out which way is north? These questions and others were asked by curious kids during the 1998 Outdoor Week in Anchorage.

For 20 years, MMS volunteers have braved the quirky Alaska weather to take part in this hands-on environmental education program designed for sixth grade students representing Anchorage's 63 elementary schools. The annual event is held the week before school ends. Hosted by the Bureau of Land Management on their 4,000-acre Campbell Tract on the outskirts of Anchorage, the outing gives the kids a chance to stretch their legs, enjoy the outdoors, and receive hands-on experience in such diverse topics as gold panning, biology, and firefighting.

Outdoor Week is an office-wide project drawing participants from all disciplines of the Alaska Region office. As in previous years, Outdoor Week veterans **Paul Lowry** and **Dick Newman** from the region's Leasing and Environment Office, guided students through the mysteries of geology. This year's hardy volunteers also included **Maria Mahl** and **Peter Johnson** from Resource Evaluation, and **Doug Choromanski** from Field Operations.

Using rock samples from around the world, peach halves, and a baking soda volcano, students learned about different types of rocks and their origins, plate tectonics and volcanoes, geologic time, water aquifers, and the geology of the Anchorage Bowl. Mining specialists from the BLM demonstrated gold panning. Students were given pans 'salted' with gold flakes and then moved to barrels filled with water where they were shown how to handle the pans.

"Wet up to their elbows, the students became jubilant as they discovered gold," said **Robin Cacy**, public affairs officer of the agency's Alaska Region. "The kids had a lot of fun because all of them found at least one gold flake."

Next up, volunteers from the Corps of Engineers gave the class a practical lesson in hypothermia. With a time limit of one minute, the object was to retrieve as many pennies as possible from the bottom of a 5-pound bucket filled with glacier water. The kids plunged their arms into the icy water, and though they retrieved several pennies, their arms remained cold for nearly 30 minutes. "It's not good to get too wet or cold," said student **Austin Godby**, while the rest of the class agreed in unison.



Students **Austin Godby**, left, and **Richard Ebert** learn how to pan for gold—one of the many activities they enjoyed during Outdoor Week. Alaska Region Staff photo

DENVER

STEWARDSHIP AWARDS TO FOUR FIRMS

Royalty Management Office Staff

DALLAS, Texas—MMS recently honored four mineral resource companies for their superior records in electronic royalty and production reporting during 1997.

The Secretary of the Interior's Mineral Revenues Stewardship Awards were presented to **O&G Professionals** of El Paso Texas; **Chieftain International, U.S.**, of Edmonton, Canada; **Devon Energy Corporation** of Oklahoma City, Oklahoma; and **Caulkins Oil Company** of Bloomfield, New Mexico. The awards ceremony was held at the 1998 North American Petroleum Accounting Conference in Dallas, Texas.

"With sincere appreciation, we applaud these companies for their achievements," said **Bob Armstrong**, assistant secretary for Land and Minerals Management. "Their professionalism has not only contributed to a continuing, successful partnership between the federal government and industry, but has enhanced our nation's energy program."

"While many companies maintain especially good records to meet their responsibilities for payment and recording, these four were the best in the business last year," Armstrong said in presenting

the awards. "In fact, both O&G Professionals and Caulkins Oil Company are receiving the award for a second time. Their continued dedication to perfection saves taxpayers' money and assists us in meeting our obligation to responsibly manage the revenues from mineral resources of our nation's public lands," he added.

Since 1987, the Interior Department has been commending exceptional performances by companies that report production and pay royalties for federal and Indian minerals leases to MMS. More than 1,600 companies submit reports of mineral sales and production and pay royalties for minerals that are sold or removed from these leases. The awards are given to one large (25,000 or more lines of data reported) and one small (between 2,500 and 24,999 lines) company in each of two categories: royalty reporting and production reporting.

MMS's Y2K Challenge, 31

Bureau of Reclamation



Eluid Martinez, Commissioner
Jayne Kelleher, Acting Reclamation Editor

PEOPLE



Reclamation Commissioner Eluid Martinez presents personalized prints of two of his drawings to Marlene Charley, at left, and Beth Briley, at right, who were recently honored as outstanding Reclamation staffers for 1997. Photos by Dave Walsh

Secretaries & Support Staffers Recognized at Honors Council

BOISE, Idaho—**Beth Briley**, who works at the Mid-Pacific Regional Office in Sacramento, California, is Reclamation's Secretary of the Year for 1997, and **Marlene Charley**, from the Phoenix Area Office of the Lower Colorado Region, is Reclamation's Clerical Support Staff of the Year for 1997.

The overall winners were selected from nominees who represented Reclamation's seven regional offices. The 1997 regional secretaries and clerks of the year are, respectively: Washington: **Aretha Young** and **Myrline Jean**; Denver: **Marlene Jibson** and **Roger Villalobos**; Upper Colorado Region: **Eleanor Montano** and **Linda Ashby**; Lower Colorado Region: **Amy Spiekerman** and **Marlene Charley**; Mid-Pacific Region: **Beth Briley** and **Jane McCabe**; Great Plains Region: **Connie Woosley** and **Barbara Merrill**; and Pacific-Northwest Region: **Betty Slavick** and **Walter Justus**.

Commissioner Eluid Martinez honored Reclamation's 1997 Secretary and Clerical Support Staff of the Year on May 13, during the 6th Annual Reclamation Secretarial Advisory Council here. The Commissioner presented Briley, who serves as secretary to the regional resources manager in Sacramento, with a personalized print of one of his drawings, entitled *Slim Pickings*.

"Through teamwork, open communication, and our Local Secretarial Advisory Council, Reclamation has given me the tools to gain a deeper understanding of our organization and its mission," Briley said in receiving her award. "Since joining Reclamation in 1993, I have always felt an important part of a team that exemplifies a high level of integrity and professionalism in all career paths."

Marlene Charley, who is an administrative support assistant for the Geotechnical Division in the Lower Colorado Region's Phoenix Area Office, received her award for streamlining functions in the Native American Affairs Office. She initiated a new process that enabled her to complete cost reports in a few days (as opposed to the old method that took three weeks). Marlene also received a personalized drawing from Commissioner Martinez, entitled *El Gallo*.

Marlene, who has worked for Reclamation since 1989, was very proud to be the first person from the Lower Colorado Region to be selected for this honor. "If it wasn't for all of the employees in the Phoenix Area Office, I would not have been able to accomplish what I did," Marlene said after receiving her award.

Nominees for both award categories are selected annually from the seven Local Secretarial Advisory Councils throughout Reclamation (Washington, Denver, Salt Lake City, Boulder City, Sacramento, Billings, and Boise). The overall winners are then honored at an annual awards luncheon sponsored by the advisory council host location. The Local Secretarial Advisory Councils and the Awards Program was adopted by Reclamation in 1992.



Secretary Babbitt and U.S. Fish and Wildlife Service biologist Janet Mizzi explore wetlands below Jordanelle Dam during the Secretary's recent visit to the Salt Lake City area. As part of the mitigation process for the construction of the dam, Reclamation built wetlands that provide spotted frog habitat. During the Secretary's foray into the wetlands, no endangered frogs were spotted. Photo by Barry Wirth

Reducing Threats to the Endangered Spotted Frog

Jayne Kelleher

SALT LAKE CITY, Utah—Secretary Babbitt recently joined state, tribal, and federal officials here to sign of a wide-ranging conservation agreement that will remove or alleviate threats to spotted frog populations in part of Utah, making federal protection of the species unnecessary.

As a result, the parties to the agreement will be able to carry out conservation actions faster and more effectively with less paperwork and a lighter regulatory burden than if the frog had been added to the federal endangered species list.

"I congratulate all the leaders for making this happen," Babbitt said after the pact was signed. The agreement was signed by officials from the Utah Department of Natural Resources, the Utah Reclamation Mitigation and Conservation Commission, the Central Utah Water Conservancy District, the Bureau of Reclamation, the Goshute Indian Tribe, and the U.S. Fish and Wildlife Service.

The Secretary then declared that the frog was no longer a candidate for an endangered listing. The agreement calls for continued monitoring and research, improved management of livestock, and acquiring and restoring an additional 990 acres of riparian habitat along the Provo River and around Utah Lake.



Pacific Northwest Regional Director John Keys, left, who has retired from Reclamation, chats with former Commissioner Dennis Underwood. Photo by Dave Walsh

John Keys Retires

John Redding

BOISE, Idaho—**John Keys**, a 34-year Reclamation veteran and nationally recognized leader in Columbia River Basin water management, retired from the bureau on June 3. As director of the Pacific Northwest Region since 1986, Keys headed the management of Reclamation water resources in Idaho, Washington, Oregon, and parts of Montana and Wyoming.

"Reclamation has given me a chance to work with so many wonderful people, but without a doubt one of the best opportunities for me has been the chance to work in God's country—the West," Keys said. "I will always remember the people that I worked with—in the states, irrigation districts, tribes, environmental groups, and federal agencies. Each one left a lasting impression."

"John's contributions to Reclamation and his service to water users will be missed," said **Commissioner Eluid Martinez**, who praised Keys for providing solid leadership for employees and others who carry out policies and programs that affect the natural resources of the Pacific Northwest. "It has been an honor for me to serve with John during my tenure and on behalf of the Bureau of Reclamation, I wish him the best."

Keys is known throughout the region for his forthright manner and integrity which enabled him to develop coalitions and consensus that resolved contentious water use disputes in the Columbia River Basin. In receiving Interior's highest honor—The Distinguished Service Award—in 1995, Keys was commended for maintaining open lines of communication to traditional constituents and new customers and for keeping interest groups focused on solutions during a difficult period. He also led his organization through a major reorganization in response to the National Performance Review.

Keys played a vital role in the enactment of the Yakima River Basin water enhancement legislation, which reflected a solution that he helped to work out among water interest groups. The legislation provided benefits to the fisheries, tribes, farmers, and other interests who were affected by the management of the Yakima River system. The coalitions Keys developed have improved the management of the Columbia River Basin.

Keys, whose entire career was with Reclamation, received Interior's Meritorious Service Award in 1984 and was promoted to the Senior Executive Service in 1991, with the Presidential Rank of Meritorious Executive. He has a Bachelor's Degree in Civil Engineering from Georgia Tech University, a Master of Science Degree from Brigham Young University, and completed post-graduate work at Colorado State University. He is a registered professional engineer in Colorado, Wyoming, Montana, and North Dakota. Keys and his wife, Dell, live in Boise, Idaho.

CLARK NAMED ACTING

Until a permanent replacement is named, **Steven Clark**, the manager of the Power Office at the Grand Coulee Project in Washington, will serve as acting regional director for the Pacific Northwest. Clark has held progressively responsible positions over the last 15 years at various offices and levels in Reclamation.

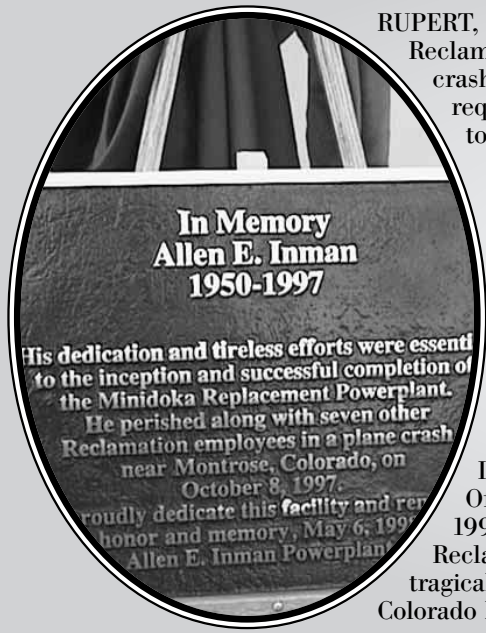
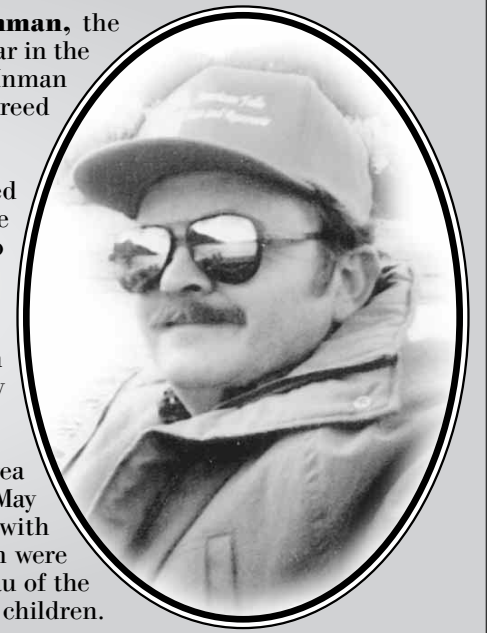
ALLEN INMAN HONORED

RUPERT, Idaho—The new powerplant at Minidoka Dam has been named for **Allen E. Inman**, the Reclamation manager who was the driving force behind the project. Inman was killed last year in the crash of a commercial aircraft. After the accident, employees who had worked with Inman requested that the plant be renamed in his honor and petitioned Secretary Babbitt, who agreed to the change.

The Bureau of Reclamation's Pacific Northwest Region hosted a May 6 ceremony, attended by 150 guests, at which a bronze plaque honoring Inman was unveiled. Although the general demeanor of the event was somber, it was considered upbeat by most who recalled Al's efforts at making the replacement powerplant a reality.

"Reclamation is proud to honor Allen in this way and remember his contributions, dedication, and hard work," said former Pacific Northwest Regional Director **John Keys**. "Al is remembered as a friend and co-worker who set an example of integrity and diligence. He was the driving force behind the powerplant at Minidoka Dam."

Inman was the manager of Operations and Technical Services for the Snake River Area Office during construction of the new plant. He transferred to Montrose, Colorado, in May 1997 to become the manager of the Curecanti Field Division. Inman, who started with Reclamation in 1980, and seven other employees of Reclamation's Upper Colorado Region were tragically killed when their chartered aircraft went down in the rugged Uncompahgre Plateau of the Colorado Rockies on Oct. 8, 1997. Inman was 47 and is survived by his wife Marlene and three children.



Birding in the Black Hills

ANGOSTURA, South Dakota—A survey of birding opportunities at the Angostura Reservoir here on the arid southeastern edge of the Black Hills has launched a Reclamation initiative to open 21 high-quality birding sites on bureau-administered lands in the West.

Under an agreement with the American Birding Association, Reclamation will select bureau lands that provide good birding habitat and identify regional or area biologists to help the association map, locate public access, and describe the best birding routes on these lands. Reclamation also will fund the publication of a birding guide to these habitats. When completed, the project will offer the public Reclamation birding sites in all 17 western states.

The birdfinding guide, which Reclamation hopes to complete by the spring of 1999, will be marketed in the United States and abroad, and sold through the American Birding Association's sales catalog. Proceeds will go to the association, a registered non-profit organization, and be used to advance birding and help preserve important and unique habitats that support bird life.

Ed Beddow, a wildlife biologist at the Denver Technical Service Center, launched the initiative by contacting the association. He was familiar with a birders' guide to U.S. Fish and Wildlife lands, *Birdfinding in Forty National Forests and Grasslands*, that the association developed with the U.S. Forest Service. Beddow felt the public could benefit from a similar guide to Reclamation lands.

The Angostura Reservoir was the first site surveyed under the agreement. Located in an arid southwestern part of the state, the reservoir serves as a trap for migrating water birds that follow the eastern edge of the Black Hills. It also provides habitat for migrant passerine species that follow the Cheyenne River in their twice-yearly flights to and from the north and west.



To document the numerous bird species at Angostura, **Alan Versaw**, an association editor, and **Kenneth Parr**, a natural resource specialist with the Newell Field Office, went birding. Their unusual observations included roosting barn owls in the cutbanks on the edge of the reservoir and common loons. They also saw brown pelican, ruddy turnstone, buff-breasted sandpiper, California gull, and caspian tern.

Angostura's isolated location makes it attractive to several other kinds of birds. From the observation deck, one can spot roosting ducks and eagles on the ice in winter as well as ospreys, diving ducks, and other waterfowl during migration. From September to April, the pines around the observation area and the Cheyenne campground host townsend solitaires. Other pine forest birds here include red crossbill, the white-winged form of the dark-eyed junco, the audubon form of the yellow-rumped warbler, chickadees, kinglets, and nuthatches. Blue grosbeaks are sometimes found. Sheps Canyon on the western shore hosts lewis woodpeckers and rock wrens in summer and canyon in the winter.

From left, Don Gannon, superintendent of Angostura State Park, and Kenneth Parr, a natural resource specialist with Reclamation's Newell Field Office, receive the American Birding Association's birding plaque for Angostura Reservoir, officially designating the site as A Great Place to Birdwatch.

CRIME WITNESS HOTLINE TO OFFER REWARDS, ANONYMITY

Angie Martinez

BOISE, Idaho—The Bureau of Reclamation's Pacific Northwest Region has joined the Bonneville Power Administration (BPA) in an effort to deter crime against power generating and transmitting facilities in the Columbia River Basin. Called the Pacific Northwest Federal Power System Crime Witness Program, the neighborhood watch offers cash awards for information, anonymity for informants, and extends beyond state boundaries. The region encompasses the states of Idaho, Oregon, Washington, Montana, and Wyoming.

"We are joining the BPA in this effort to combat crime and help deter possible instances of vandalism at our facilities in the Pacific Northwest," said **Mark Albl**, Reclamation's regional security coordinator. The need for such programs became evident in recent years, especially after the bombing of the Alfred P. Murrah Federal Building. Following that tragedy, President Clinton issued an Executive Order to increase security at federal facilities and Commissioner Martinez responded with a bureau-wide initiative.

The crime witness program was created by the BPA in 1994 as a cost-effective way to involve the public in combating crimes that could potentially cause power outages. For Reclamation, it involves keeping an eye on dams and powerplants throughout the region. The program offers monetary awards for information leading to the arrest and conviction of persons committing crimes to BPA or Reclamation property. People who have information or suspect that a criminal act has been committed can call **1-800-437-2744** to report the activity. The identity of all callers will be kept confidential, even for those callers who collect an award.

The facilities owned and operated by BPA and Reclamation are major components of the Federal Columbia River Power System. It makes sense to have an alliance between agencies that affect one another in day-to-day operations. Acts of vandalism or theft on Reclamation facilities affect everyone in the region, costing the bureau and the BPA hundreds of thousands of dollars each year. As taxpayers and customers, we are also affected with the increase in fees. For more information, call Mark Albl at (208) 378-5331.

CRIME WATCH HOTLINE
1-800-437-2744

Earth Day Festival for Denver Office

Emily Shaw

DENVER, Colorado—The Bureau of Reclamation joined in sponsoring the first Denver Federal Center Environmental Education Earth Day Festival.

The effort was spearheaded by Reclamation's Environmental Education Coordinator **Kathie Marsh**. The April 21 event hosted 300 fifth-grade students from the Denver metropolitan area, who participated in hands-on activities designed to teach them about the importance of water to the environment.

Exhibits included *Wetlands in a Pan*—where students built their own miniature swamp, a groundwater model demonstrating how water moves through underground aquifers, and three enviroscape models that teach kids about pollution and its effect on the environment. Other activities included tours of the Denver Office lab which houses large models including *Reclamation in the 21st Century*, and an earthquake tank that demonstrates what happens to water sources during an earthquake.

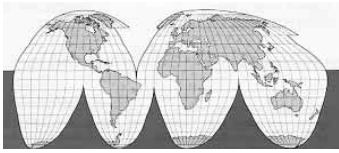
The event was so well received by participating students and teachers that it will now be an annual Reclamation project. One teacher from the Cherry Creek School District who attended the festival said, "I have been teaching for over 20 years, and this was the best educational field trip I have ever experienced."

Thanks to the volunteers who helped Kathie and co-coordinator **Bob Talbot** with the event: **Alice Comer, Heidi Donat, Bob Einhelling, Marlene Johnson, Walt Johnson, Frank Leitz, Brent Mefford, Monica Norval, Jayme Nielson, Rick Pepin, Del Smith, Mickey Starr, Theresa Taylor, Tony Wahl, Christi Young, and Carla Zarate**. Participating federal agencies included the Department of Agriculture, United States Geological Survey, National Renewable Energy Laboratory, and Western Area Power Administration.



Students at the Environmental Education Earth Day Festival in Denver design wetland in a pan while learning the important role water plays in creating a healthy ecosystem.

Office of Insular Affairs



Allen P. Stayman, Director
David S. North, Bureau Editor

NUMBERS COUNT

*Helping Island Governments Count
Their Blessings . . . and Challenges*

To make rational decisions, governments need numbers. They must have a sense of the size and shape of a problem before deciding how to tackle it. Because the populations of archipelagoes are often scattered over several major islands, it is unusually difficult for insular governments to obtain good numbers.

With this in mind, the Office of Insular Affairs is funding a continuing initiative to help six U.S. affiliated jurisdictions in the Pacific and the U.S. Virgin Islands in the Caribbean to improve their existing statistical programs.

Accurate statistical information can help to address a variety of problems. It is widely known, for example, that the flow of tourists coming to the Northern Mariana Islands and Guam has declined, but to cope with that problem governments need to know what motivates the tourists and how those who do come spend their money. Similarly, some of the islands employ large numbers of alien workers; but how much do they earn, how much do they spend locally, and how much do they send home? In both of these island situations, good sets of numbers would help decision-makers.

“Sophisticated, smoothly-running statistical systems can help government decision-makers make the right decisions, just as an accurate set of instruments in the cockpit can help the pilot land safely in the middle of a storm,” said **Allen P. Stayman**, director of the Office of Insular Affairs. His office provides the statistical assistance to American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the U.S. Virgin Islands, as well as to the three freely associated states (the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau.)

The effort is spearheaded by experienced statisticians in the U.S. Census Bureau (located in suburban Washington) and increasingly makes use of island residents, using techniques learned from the Census Bureau to train and assist other island statisticians.

There are two principal objectives of the program: to bring data collection in the islands up to the level that the 50 states have reached over the last century; and to provide OIA with statistics for the annual *State of the Islands* report to Congress. This report contains up-to-date standard statistical measures of the island communities, such as population, workforce, income, infrastructure, and local government revenues and expenditures. Many federal and local programs rely on such statistics to determine a community's eligibility for assistance or the level of assistance.



OIA Director Allen P. Stayman meets with Governor Pedro P. Tenorio of the Commonwealth of the Northern Mariana Islands. Their discussions included OIA's assistance with surveys on alien labor spending patterns and the impact of residents of the Freely Associated States.

OIA also supports another project that is collecting data on the presence of citizens of the Freely Associated States in Guam, the Northern Marianas, and Hawaii. Some island leaders have expressed concern that the presence of numerous FAS residents in these U.S. jurisdictions has increased the cost to local governments of providing health, education, and social services.

To determine the extent of these additional costs, OIA has funded special censuses of FAS residents in the Northern Marianas, Guam, and Hawaii (where OIA is normally not active). These are called Compact Impact Studies, because the free movement of FAS residents to U.S. jurisdictions was authorized in the Compacts of Free Association—a U.S. public law. OIA issued a preliminary report on this subject and will issue a revised and detailed report in January, 1999.

“We believe that the OIA's continuing support of the islands' statistical systems will to provide federal and island governments with better tools to meet the very real challenges of island decision-making,” Stayman said.

Household Income and Expenditure Surveys in the U.S.-Affiliated Islands

American Samoa: A consumer price index has been issued every three months for a number of years; the current one is based on the survey that was conducted in 1995.

Northern Mariana Islands: The 1997 data collection was disrupted by severe storms; the 1998 data collection is under review.

Guam: A detailed report on the 1995 survey is available, and Guam issues a monthly report on the consumer price index.

U.S. Virgin Islands: Data collected in 1997 are being tabulated.

Federated States of Micronesia: The household survey data are currently being collected.

Republic of Palau: While a survey was conducted some years ago (1991), island statisticians have recently been working on a study of the economic impact of the collapse of the bridge that linked the capital island, Koror, with the largest island, Babeldaob. The loss of the bridge significantly affected most of the families on both islands; among other things, it prevented families on Koror from reaching their garden and farming plots on the big island.

Republic of the Marshall Islands: Some survey data collected earlier are now being processed, but there are concerns about the utility of some of the information gathered.

“What OIA is trying to do is to provide technical assistance so that each of the seven jurisdictions can develop its own statistical prowess, which then can support local and federal policymakers in decision-making” Stayman said

In addition to its basic grants to meet annual statistical needs, an OIA project helps the island governments to calculate the consumer price index, a common measure of the cost of living. A key indication of how the economy affects families, the measure must be tailor-made for each island jurisdiction. For this reason, OIA has helped to fund a series of Household Income and Expenditure Surveys; in each jurisdiction, a sample of the households are asked to report their income from all sources, and their expenditures, usually during a two-week period.

Once the mix of goods and services purchased by the average household is assembled, it serves as a statistical market basket and there is no need to go back to the households to check on changing costs. The consumer price index can be measured monthly by noting price increases or decreases in the things that consumers buy.

OIA HELPS FUND ISLANDS' DATA GATHERING (FY '97 and FY'98 Allocations)

AREA	FISCAL YEAR 1998	FISCAL YEAR 1997
American Samoa	\$35,000 Basic grant	\$20,000 Basic grant
Commonwealth of the Northern Mariana Islands	\$30,000 Basic grant \$46,000 Program Enhancement	\$25,000 Basic grant \$17,000 HIES \$30,000 Mic. Census
Guam	\$30,000 Basic grant	\$20,000 Basic grant \$60,000 Tourism survey \$60,000 Mic. Census
Hawaii	Project completed	\$120,000 Mic. census
U.S. Virgin Islands	\$25,000 Basic grant \$62,800 Labor force survey	\$25,000 Basic grant \$100,000 HIES \$40,000 Census monograph
Federated States of Micronesia	\$20,000 Basic grant \$65,000 HIES	\$20,000 Basic grant
Palau	\$20,000 Basic grant \$10,000 Finish '97 survey	\$25,000 Basic grant \$5,000 Bridge survey
Republic of the Marshall Islands	\$20,000 Basic grant \$10,000 Process '88 census \$50,000 Census pretest	\$20,000 Basic grant
Technical assistance from the U.S. Census Bureau	\$330,520	\$311,000
Totals	\$754,320	\$898,000

Key: Mic. Census means Micronesian Census, a survey of Freely Associated States residents living in the listed jurisdiction. HIES means Household Income and Expenditures Survey.

Source: Office of Insular Affairs, U.S. Department of the Interior, Washington, DC, 1998

SURVEYING PARADISE

Data gathering in the U.S.-affiliated islands presents a number of challenges to everyone involved. There is, of course, the question of geography and its related costs. For example, what might be viewed as an esoteric academic exercise—fixing the size of the sample to be surveyed—often becomes a matter of balancing potential accuracy with cost considerations.

A recent project in the Central Pacific is an example. For a Household Income and Expenditure Survey, the statisticians needed a sample of families on a set of outer islands—smaller islands, often remote from the main archipelago. But how many “outer islanders” should they interview? Because this required travel to a number of lightly-populated locations, chartering ships, and hiring and training enumerators, the costs could be considerable. Further, there were certain pressures from outer island economic interests to increase the size of the sample, as more money would then be invested in both ships and enumerators. The survey team finally decided on a minimal number of interviews, on the dual grounds of cost-containment and the understanding that most of the families of interest were engaged in the subsistence economy and thus had similar earning and expenditure patterns.

There is also the continuing tension—in the islands as in the rest of the world—between the data gatherers, who are accustomed to precise concepts and the importance of measuring things, and some of the data suppliers, who are often less concerned about such matters. For instance, getting households to complete the two-week diaries of what they earn and what they spend is a challenge, especially in the second week of the data collection. Another continuing problem is privacy and the reporting of government data. While it is important to count what is important, it is appropriate not to handle statistics in such a way as to violate someone's privacy. This is not a problem in a big city, but it can be on a little island in Micronesia. The statisticians use “disclosure avoidance systems” to prevent generalized statistical reports from divulging data on individuals. Often this means merging numbers from several small areas into a larger total.



Legacy and Opportunity: The Year 2000 Problem

Over the past thirty-some years have become the computer revolution has infiltrated our homes and offices, from Nintendo and push-button phones to channel surfing the late night news, or learning another word processor. Throughout our workplace, embedded in our cars, silently tracking our investments, or providing power to our homes and business, computers quietly (perhaps insidiously) part of every day life.

The Year 2000 (or Y2K) problem is both legacy and opportunity as we approach the new millennium. For years, professionals from top management to computer programmers have created software programs based on two-digit date routines—'98' instead of 1998—to conserve precious data storage space. The Y2K challenge is making sure that computer systems correctly interpret '00' when 2000 arrives. Otherwise, the failure of these systems to properly operate could cause major problems and possibly calamities.

U.S. Senators and the news media are increasingly taking note of the Federal Government's progress on this issue, with the stakes going higher. (See "The Y2K Problem at Interior" in *People, Land and Water*, June 98 issue.) The Office of Management and Budget, which monitors the progress of federal agencies to ensure that they will be Y2K compliant, requires quarterly reports that address a number of strategic measures, reflecting the Department's actions in addressing the conversion.

The measures include systems under repair, independent verification and validation, continuity of business plans, numbers of mission critical systems repaired or replaced, and systems scheduled for implementation after March 1999. And its not just OMB that wants a look. The Government Accounting Office in 1997 asked for a single accredited Departmental response to a government-wide review of Year 2000 problems.

In working to solve the Year 2000 challenge, we are reminded of the pervasive effect computers have on our lives, and see their effect on how we deliver our agency's mission. The Y2K conversion also creates a window of opportunity, both professionally and personally.

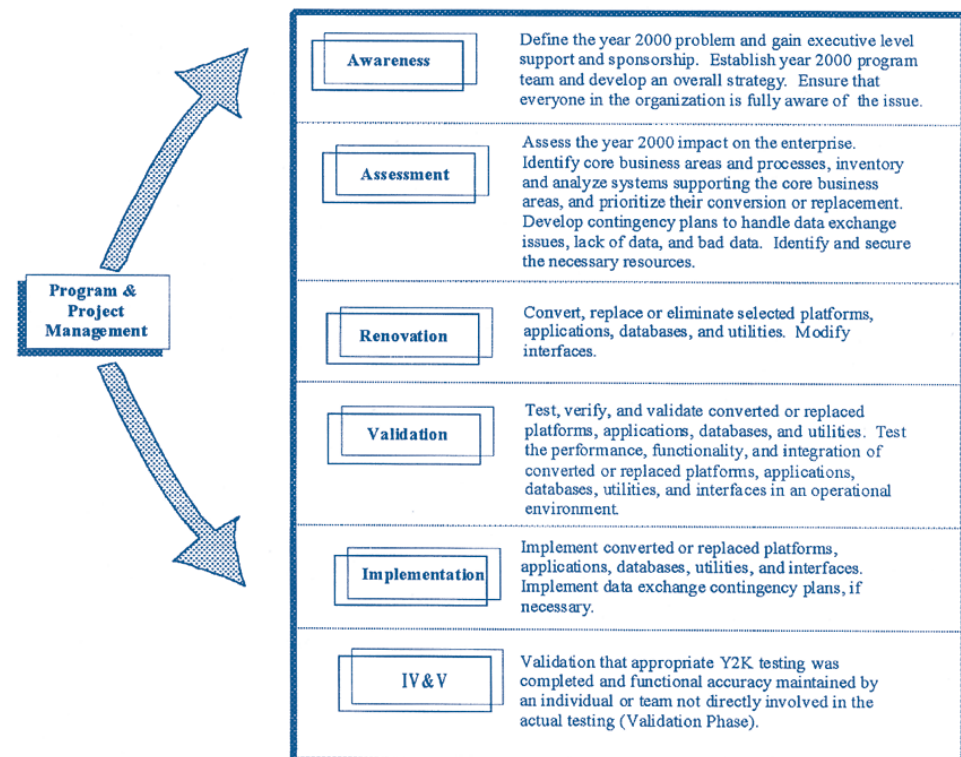
How We're Working the Solution

The Y2K date problem is not restricted to any one functional area in Interior. It includes business functions such as financial management, personnel management, contract management, health and safety, and many others. Computers support our land and mineral leasing operations, which are major contributors to U.S. revenues, as well as American Indian trust financial transactions.

The problem is not restricted to computer rooms. Of equal concern is the prospect of major portions of our infrastructure—such as dams, elevators, and aircraft—malfunctioning, or failing to work at all. We've checked aircraft and are looking at the others.

The Department will be greatly affected if our information technology resources, especially our mission critical systems, are not Y2K compliant by late 1999. Because of Interior's far-reaching missions, any resulting failures could greatly impair many functional areas, be widespread, and potentially costly.

Interior has more than 90 mission-critical systems. When the capabilities of mission critical systems are degraded lives or property are threatened, or the Department loses a core capability. The Advanced Budget/Accounting Control and Information System (ABACIS), for example, is critical to several agencies that use it. The accounting system exchanges information with five other internal computer systems in the Department and two external systems. The breakdown of ABACIS would amount to the loss of a core capability—control and disbursement of funds.



Regina Lawrence, an Information Resources Management field coordinator for OSM is organized and Y2K in action. She's been working on the problem since 1996.

Our goal is to have these systems, hardware, and embedded chip technologies Y2K compliant before March of 1999. This will be accomplished through the replacement or modification of existing systems and technology-dependent equipment using the federally adopted six step approach.

The Department's chief information officer, who is a member of the Presidents Special Y2K Council, is responsible for leading Interior's efforts. He is assisted by senior information technology officials, Y2K executives from each bureau, and Interior's Y2K Project Team. He has estimated that Y2K compliance will cost the Department more than \$34 million, most of which has not been formally identified in Interior's budgets for fiscal years 1998 and 1999.

An important first step in meeting the challenge was the development of a *Year 2000 Management Plan* that provides the frame-work for ensuring that the Department is ready to meet the new millennium with its systems and infrastructure intact and fully functional. Failing to protect the nation's resources for the benefit of present and future generations is not an option. As a result, Interior's plan focuses on the resolution of the Y2K problem by providing an overall strategy for managing our mission critical systems and infrastructure. Having adopted this approach, the Department is using the OMB's time lines to track the Y2K project.

Y2K Phases	Assessment Phase	Renovation Phase	Validation Phase	Implementation Phase
Due Dates ==> (no later than)	June 1997	September 1998	January 1999	March 1999

How are We Doing?

The words of Professor Irwin Corey seem appropriate to our efforts

in Y2K: **"If we don't change direction soon, we'll end up where we're going."** Well, many people are changing their direction in solving the problem at Interior. It's impossible to mention everyone or every bureau, but here are a few highlights of people who are developing compliance solutions:

The *Office of Surface Mining's* Y2K project team member is **Regina Lawrence**. OSM primarily functions in a microcomputer environment. About 808 hardware systems are used in the bureau, of which 712 are already Y2K compliant. Of the remaining systems, all will be made compliant by Dec. 1999. Of the non-compliant hardware in the bureau, 66 percent of the microcomputers are projected to be upgraded or replaced by fiscal year 1998; the remainder in fiscal year 1999.

About 98 portable computers were reported in OSM, of which 20 are non-compliant and will be replaced or retrofitted in the next two fiscal years. The LAN (Local Area Network) servers reported noncompliant will be replaced or repaired within the next two fiscal years as well. The bureau is also reviewing several products for upgrading its microcomputers to make them Y2K compliant.

The *Minerals Management Service's* Y2K project team member is **Randy Maples**. MMS staff use client/server-based Pentium-class microcomputers, desktop software suites which are Y2K compliant. For the most part, the Service's installed base of hardware platforms—more than 2,000 microcomputers, a mainframe, and a minicomputer—are already Y2K compliant. Those that are not will be retrofitted for compliance well before March 1999.

The Hitachi EX-90 mainframe will be retired as part of the Department's data center consolidation effort. Also being examined are embedded systems technology—routers, hubs, elevators, telephone systems, and other embedded chip technologies—to ensure they are Y2K compliant. The MMS has already requested compliance notification from several key software vendors—Microsoft, Novell/Corel, Oracle—and major hardware vendors, such as Dell Computers to obtain the necessary compliant upgrades as they become available.

Much has been done, but a great deal remains. Over the coming months, we'll continue to hear rumors and reports on how the scene is shifting within government and private sectors. Preparation is the name of the game. You should know that plans are in place and that many people are working hard to have Jan. 1, 2000 be the quietest and best day yet.

Y2K Personal Awareness Campaign

What! Me Worry? Suppose it's Jan. 1, 2000 and your work-computer no longer runs e-mail. Suppose your bank statement is delayed, or the ATM has a problem. You may think, "Wow, Chicken-Little was right!" But no, an umbrella would have served Chicken-Little very nicely. Your money won't be lost—only possibly delayed. Your personal communications (phone, pager, cell-phone) could go offline briefly. The local power company could temporarily falter.

I'm not suggesting we all become lone-ranger survivalists. But should these inconveniences temporary disrupt our new millennium celebration, you may want to be prepared. To help you do that, the Department will kick off an employee awareness campaign on October 1. The campaign is designed to highlight how the Y2K problem may affect you, both professionally and personally. For more information, contact your bureau's Y2K project team leader or the Office of Information Resources.

Managing Interior People: The Santa Fe Conference

More than 270 of Interior's human resource management professionals met in Santa Fe, New Mexico recently to share ideas, sharpen their management skills, and honor the achievements of employees and partners. The May 11-14 gathering provided an opportunity for personnel specialists, Equal Employment Opportunity officers, and educational program managers to review the Department's strategic planning effort and revitalize Interior's human resources programs.

Assistant Secretary **John Berry** commended participants for their dedication and hard work under difficult circumstances. "In recent years, this group has been hardest hit by the streamlining efforts. Yet, you have consistently provided quality customer service to our varied constituents," he said. "I am particularly impressed by our personnel and human resources management individuals who work in the trenches, often without a lot of recognition."

Setting the tone for the conference, **Mari R. Barr**, deputy assistant secretary for Human Resource Management, told the group, "It is now time to challenge where we are and to revitalize Interior's human resources programs to meet the needs of the future."

The workshops, discussion groups, and plenary sessions focused on workplace violence, alternative dispute resolution, interest-based problem solving, Government Performance Results Act, employee benefits, ethics, telecommuting, educational partnerships, Goals 2000, and workforce diversity.

In her keynote address, **Janice Lachance**, the director of the Office of Personnel Management, discussed refocusing the federal personnel system through a careful review. She touched on the eight federal agencies, including Interior, which her office has reviewed to ensure that personnel management programs are administered in line with merit system principles. Interior bureaus under review by her office are BIA, BLM, BOR, FWS, NPS, USGS, and Office of the Secretary. The evaluation looked at



Office of Personnel Management Director **Janice Lachance** addresses the conference. At center is Assistant Secretary **John Berry**. At right is Deputy Assistant Secretary **Mari Barr**.

workforce diversity, veterans employment, noncompetitive promotion, seasonal employment, reduction in force-priority placement, medical exams, volunteer service, streamlining services, and management accountability.

The conference also provided a forum to share the results of an internal Interior analysis of human resources issues. Aimed at preparing a customer-focused strategy for the future, this review has been under way for the past several months and is headed by Barr, **Carolyn Cohen**—the director of Personnel Policy Management—and bureau executive leaders. The Human Resources Management team also includes **Gabe Paone**, director of Ethics; and **Dolores Chacon**, associate director of PPM and acting director, Office of Educational Partnerships.

A strategic planning panel moderated by Barr, and a subsequent discussion session provided an opportunity to share information from the internal study and gather feedback from conference participants. In facilitated discussion groups, participants identified nine areas of

interest for strategic planning focus: communications, strategic planning process, leadership, accountability, partnership building, professional development, resources identification, vision alignment, and last but not least, opportunity. Many of these key areas also were the focus of conference workshops.

David Montoya, the deputy assistant secretary for Workforce Diversity, moderated a panel of bureau executives who reported on progress and shared successful Interior strategies to further diversity goals. And **Dr. Samuel Betances**, a diversity expert and motivational speaker, discussed diversity challenges and strategies in today's changing workplace in the final plenary session.

"It was gratifying to meet the people who make it all happen in the field," said personnel director Cohen. "I was inspired by their challenges and profound dedication to their customers—our people." Noting that the past years have been difficult for human resources, an Interior participant felt that the conference was extremely upbeat. "I feel we now have people who care and hardconcern for human resources."

VISION AND LEADERSHIP AWARDS

... to recognize significant progress that does not come from bureaucracy but from individuals whose commitment unlocks the doors of imagination, allows vision, and provides us with leadership from which goals turn into success.

Twenty-three **Excellence and Innovation in Human Resources Management** awards were presented at the conference. This new recognition program presented nine awards to bureaus, recognizing team effort. Seven rewarded support for Historically Black Colleges and Universities, Tribal, or Hispanic educational activities. The Outstanding Servicing Personnel Office Award was presented jointly to the National Park Service's Alaska Region and the Mineral Management Service in Washington, D.C.

National Park Service-Alaska Region and Minerals Management Service-Washington, D.C.: Outstanding Servicing Personnel Office

Bureau of Reclamation-Denver, Colorado: Outstanding Support of Executive Order on Historically Black Colleges and Universities-Safety of Dams Training Program

Southern University and A & M College, Baton Rouge, Louisiana: Exemplary Partnering with the Bureau of Reclamation in Support of Executive Order on Historically Black Colleges and Universities-Safety of Dams Training Program

Bureau of Land Management-Washington, D.C.: Outstanding Support of Executive Order on Historically Black Colleges and Universities-Equine Science Program

Florida Agricultural and Mechanical University-Tallahassee: Exemplary Partnering with the BLM in Support of Executive Order on Historically Black Colleges/Universities-Equine Science Program

Bureau of Land Management-Colorado State Office: Exemplary Support and Management of Departmental Education Programs-Adopt a School Program

Bureau of Land Management-New Mexico State Office: Exemplary Support and Management of Educational Programs-Alternative High School Program

Fish and Wildlife Service-Washington, D.C.: Exemplary Support and Management of Educational Programs-Earth Stewards Program



At left, **Dr. Erat Joseph** Chair of Southern University and A & M College, and, at right, **Felix Cook**, Reclamation's director of the Technical Service Center, receive awards For Exemplary Partnering with and Universities-Safety of Dams Training Program. Deputy Assistant Director **Mari R. Barr** is at center.

Elba Garcia-Burke-BLM: Outstanding Support of Historically Black, Hispanic Serving, and Tribal Colleges and Universities-Student Ambassadors Program

Dr. Ricardo Dow y Anaya-New Mexico Highlands University: Exemplary Partnering with the BLM in Support of Historically Black, Hispanic Serving, and Tribal Colleges and Universities-Student Ambassadors Program

Susan M. Marcus-USGS: Outstanding Support of Executive Order on Tribal Colleges-Liaison for American Indian/Alaska Native Issues

Claire Cassel-FWS: Exemplary Support and Management of Educational Programs-Earth Stewards Program

Diane Jung, NPS-Alaska: Exemplary Support and Management of Educational Programs-Bering Land Bridge National Preserve

Wyndeth Davis, NPS-Alaska: Exemplary Support/Management of Educational Programs-Bering Land Bridge National Preserve

Steve Addington-BLM: Outstanding Leadership and Support for the Department's Fort Ord AmeriCorps Project



From left, **Bruce Crespin**, **Bonnie Gallahan**, **Dr. Ricardo Dow y Anaya** (in back row), **Julia Justus**, **Bill Caulkins** (in back row), **Gil Lucero** (holding plaque), **John Matis**, **Elba Garcia-Burke** (in foreground), **Rick Hanks** (in back row), **Bill Nunn** (in back row), and **George DeBai**, in foreground.

Steve Jones-Reclamation: Outstanding Leadership and Support for the Southern California Water Conservation AmeriCorps Project

Larry Ditto-FWS: Outstanding Leadership and Support for the Rio Grande AmeriCorps Project

James Brown-NPS: Outstanding Leadership and Support for the Department's Everglades-South Florida AmeriCorps Project

Wally Hibbard-NPS: Outstanding Leadership and Support for the Youth Environmental Service Project, Big Cypress National Preserve

Donald J. Englehaupt-Reclamation: Outstanding Contributions to the Development of Computer Based Ethics Training Program

Jennifer M. Alder-Reclamation: Outstanding Contributions to the Computer Based Ethics Training Program

Lorin 'Butch' Street-NPS: Outstanding Contributions to the Development of Computerized Financial Disclosure Form

Nominations came from Interior bureau directors and individuals. Several were reviewed by a selection panel of bureau representatives. Direct questions to John Rogers at (202) 208-2154.